Labour is the most common reason for admission at Spanish Hospitals. The 463,249 childbirths registered in Spain in 2005 mean 9.1% of hospital discharges. In 2008 the rate of labour rooms at Spanish hospitals was 742, which mean 1.6 labour rooms every 1000 childbirths.

Hospital care for childbirth is provided at the Hospital Maternity Unit which is defined, from a structural and organizational point of view, as the area in which multidisciplinary care to women, the newborn and the relatives is provided during labour and delivery, with the premises, facilities and equipment necessary to provide and guarantee efficiency, high quality and a safe environment for the development of this activity.

This document includes recommendations on patients’ rights and safety, on organization and management criteria of Hospital Maternity Units, settled by the Quality Agency of the Spanish National Health Service with the support of a group of experts closely related to scientific institutions and to the Spanish National Health Service and within the framework settled by the care strategy to normal childbirth adopted in 2007. These recommendations do not set up a legal document and their main objective is to provide public health administrators, managers of both public and private centres and healthcare professionals with in-depth knowledge of all those elements that contribute to the improvement of the quality and safety conditions of the Hospital Maternity Units.
Hospital Care for Childbirth

Standards and Recommendations for Hospital Maternity Units
Hospital Care for Childbirth
Standards and Recommendations for Hospital Maternity Units
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0. Executive Summary of the Document on Standards and Recommendations for Hospital Maternities.

1. In 2007 the Spanish Ministry of Health and Social Affairs published the “Estrategia de atención al parto normal en el Sistema Nacional de Salud” (Care Strategy to Normal Labour in the Spanish National Health Service, from now on “Estrategia de atención al parto normal en el Sistema Nacional de Salud”) in which a broad range of institutions, colleges, experts and associations of citizens took part. This document on Standards and Recommendations for Hospital Maternities is included within that strategy.

2. Labour is the most common reason for admission at Spanish hospitals. The 463,249 childbirths registered by the Statistics of Inpatient Healthcare Institutions in 2005 mean 9.1% of the total amount of hospital discharges.

3. 25.2% of childbirths in 2005 were abdominal which means an increase in more than 3 points in the percentage of Caesarean sections registered in 2001 (22.45%). The constant rise in the rate of Caesarean sections is worrying as it is a major surgery procedure with higher morbidity and mortality rates than those of a normal labour for the mother and with higher foetal morbidity rate with an increased need of artificial ventilation.

4. In 2005, the average stay after labour at hospitals of the Spanish National Health Systems was 2.8 days for vaginal delivery and 5.6 days for abdominal delivery.

5. Hospital Care for Childbirth is arranged at the delivery suite. In most Spanish hospitals the delivery suite is made of several premises (pre-labour rooms, labour rooms, operating theatre, and rooms at the obstetrics hospitalization area) where the different stages of labour are taken care of. In 2008 the rate of labour rooms at Spanish hospitals was 742; i.e., 1.6 each one thousand deliveries.
6. Within the Hospital Care for Childbirth, the Hospital Maternity (HM) units respond to a management system of a specific unit and they can be defined as: “an organization of healthcare staff who offer multidisciplinary care to women, the new born\(^{(1)}\) and the relatives during labour and delivery and which complies with the specific structural and functional means and resources to ensure efficiency, high quality and a safe environment for the development of this activity”.

7. The HM is a final unit which provides services for a specific process (labour). The delivery suite may be considered as an intermediate unit which, on accounting terms, invoices the final units (HM or, when needed, obstetric unit).

8. Both the State and the Autonomous Regions have issued legislation on the authorization and registration of healthcare centres and institutions, some specific for the HMs.

9. Healthcare centres with HMs should observe and respect the rights of users, NBs and relatives included in the current healthcare legislation and the specific conditions foreseen by the Act 41/2002, November 14th, “básica reguladora de la autonomía del paciente y de derechos y obligaciones en materia de información y documentación clínica” (basic act on patient’s autonomy and on the rights and obligations in relation with information and clinical documentation) and by the European Charter for Children in Hospital.

10. Women decision taking about labour is a right and a key quality aspect of the care process. The owner of that right to information is the user -the woman- though the family will be informed if she gives the consent or if she asks for it. Labour has a family stature which has to be included in the care process.

11. It is recommended that the welcoming information to the HM should include a description of the process of labour including the different stages and warnings and special advices. Pictures of the unit may help to understand how it works. This information should be offered during the follow up of the pregnancy.

12. It is also recommended the existence of a model of an informed consent for the diagnostic and invasive therapeutic procedures (mainly for Caesarean sections) as well as for the administration of treatments that may imply any risk and which are included in the service portfolio of the HM.

13. Women should be able to choose freely the position for delivery, if they want constant or on-off monitoring, if they want to wander around or

\(^{(1)}\) From now on, the NB.
remain seated, if they want to undergo epidural anaesthesia/analgesia or other pain reliever. The possibility to choose is only limited by the availability of the chosen option and the best praxis. Not accepting the prescribed treatment will not imply the compulsory discharge if there are other alternative treatments.

14. A review carried out by the Cochrane Collaboration pointed out that epidural analgesia seems to be useful to relieve pain during the efforts of childbirth. However, women who use this type of pain relief have a higher risk of suffering an instrumental labour. The epidural analgesia mentioned in the review did not have an important repercussion in the risk of having a Caesarean section performed.

15. HMs must have and put into practice the corresponding protocol for the prevention of the neonatal infection with group B *streptococcus agalactiae*. Moreover, and whenever necessary, there should be put into practice the protocols for the prevention of risk of transmission of vertical infections (hepatitis B, HIV, etc.).

16. Recent research proves that washing without scrubbing may be as or even more efficient than washing with traditional scrubbing. The Spanish Ministry of Health and Social Policy has made up a writing which includes and summarizes the guidelines of the WHO on hand hygiene at healthcare.

17. It is advisable that there should be a protocol for the massive obstetric haemorrhage which would include the active collaboration of: anaesthesia, haematology - blood bank, laboratories, obstetrics and nursing. This protocol should be well-known and practiced by all the staff involved and must include diagnostic and therapeutic stages. Moreover, it is recommended a special analytical circuit for those cases of very serious haemorrhages which may allow responding in the appropriate way to the blood loss, which in some cases may be over 150mL/min.

18. In those centres with HM there should be a reliable, unequivocal, universal and unique identification system for patients. HMs should have an unequivocal system for identifying the NBs.

19. There would be obeyed the practices for safety at surgery in those surgical procedures performed at the HM. The document “*Surgical Suite: Standards and Recommendations*” written up by the Ministry of Health and Social Policy includes a set of these practices.

20. There would be created institutional safety guidelines to avoid the theft/change of the NB.

21. Users of the HM should have an active role in the improvement of their safety, obtaining the necessary information, getting involved in their care process and taking an active role in the decisions of their
treatment.

22. Healthcare centres with HMs would have a self protection plan which would arrange the organization of the available human and material resources for the prevention of risks.

23. Risk management must be supervised and coordinated by a management group of the HM which should be headed by a senior consultant (doctor or midwife) and which should include a multidisciplinary representation. It should gather at least every 6 months. A multidisciplinary training on risk management should be carried out.

24. A continuous and proactive assessment of the risks at the HM should be carried out together with a formal assessment of the risk, which should be performed at least every two years. There should be an available registry of events, being a dynamic document which should include all the actions which have been adopted to minimize risks and well as the risks identified on the assessment and the analysis of the registered events.

25. There should be a written risk management system including the sentinel events for the registry of the adverse events. There should be a regular follow up of the obstetric signs such as urgent Caesarean sections and neonatal indicators, resuscitation delays and failures.

26. Sessions to analyze the adverse events belong to the risk management system as well as to the learning process on safety of the patient of the HM. A good communication between staff involved in any event is a key way to reduce possibilities of that adverse event from taking place again. Transparency should be kept in relation with the conclusions obtained from the learning process by means of multidisciplinary sessions and feedback through digital or paper publications.

27. It is fundamental to have the necessary means to document and registry the clinical decisions and incidents. The storage of all the data is vital. The storage of the cardiotocographies, of the results of the labour monitoring and of the anaesthetic sheet has to be compulsory. A person of the HM should be in charge of guaranteeing that the appropriate methods are taken, it is advisable that he/she would be the person in charge of risk management situations.

28. The measures taken as result and the standards have to be adopted, audited and published as an annual report in the line of the best practice. The report must include an assessment of the opinions of women and relatives regarding the care received (satisfaction surveys) and inform on the regular review of the service provided and on the risk management system.

29. Risk during pregnancy can be classified in four different levels. It seems
It is advisable that all cases considered within risk II (high) should be cared at level 3 or 4 services or units (those who deal with more than 1200 childbirths per year) and those cases considered as risk III (very high) at level 4 services or units (more than 2400 childbirths per year).

30. It is recommended that neonatal care should be regionalized.

31. It seems sensible that there should not be HMs in those hospitals that do not have a reference population (or that the market analysis does not foresee one) which may bring up a demand of over 600 childbirths per year, except for those cases in which the time used in the journey or accessibility may recommend so.

32. It is recommended that the NB should be registered as an inpatient as he/she is liable to receive an individualized care, different to the care provided to the mother, which implies caring resources and, that the NB can be attributed a specific load in the use of healthcare resources.

33. At Spanish HMs there can be differentiated two types of units: sequential (pre-labour rooms, labour rooms and postpartum recovery rooms) and integrated (labour, delivery, recovery and postpartum rooms - LDRP-). Even though they are not quite frequent, the LDRP are being quickly introduced in Spain as they interfere less with the requirements of all the processes of labour and offer more comfort and privacy for women and their escorts.

34. According to the needs derived from the care process to labour, there are considered as fundamental requirements of the HM the following:
   - Coordination with Primary Healthcare and, when needed, with the social resources available during the monitoring of pregnancy, puerperium and the monitoring of the NB.
   - The operation of the HM 24 hours a day, 365 days a year.
   - An obstetrician in charge of the unit and a head of midwifery of the HM in each of the shifts.
   - A multidisciplinary committee to review the activity and the protocols.
   - A set of guides and protocols which should be reviewed at least every three years.
   - A risk management team that should meet at least every six months.
   - There should be training sessions at least every six months for all staff members on high risk management and on the interpretation of cardiotocographic results.
   - A service portfolio which should include Outpatient Consultation, A&E services, Day Hospital, conventional Hospitalization, Obstetric Suite and Surgical Suite.
35. The HM should have an organization and management manual.

36. In the same sense as the proposal number 32, it is recommended that the Ministerial Order on “Obligatoriedad del Informe de Alta” (compulsoriness of the discharge report) will also be applied to the healthy NB, who should have a clinical record opened when born and whose discharge should be recorded in the registry for hospital discharges (MDS) of the Spanish National Health Service.

37. Each healthcare centre would have a unique registry of clinical records which will centre all the information related to the activities it performs.

38. The document includes criteria and guidelines regarding the structural and functional conditions of the HMs: functional design programme, equipment and facilities. Annexes 6 and 7 include those aspects related to the resource sizing and a sample of the functional design programme.

39. It is recommended that whenever there are no architectonic determining factors, there should be placed on the HM all the necessary resources for the reception and clinical assessment of the mothers under the suspicion or on labour prodrome, so that, whenever necessary, they may access directly the obstetric suite from the consultations or the exploration area and avoiding, thus, being cared at the A&E service of the hospital.

40. Whenever compatible with the resulting sizing of the estimation of the demand and whenever there are no architectonic determining factors which may prevent it from being built in, it is highly recommended that the surgical area allotted to the obstetric care should be integrated within the physical structure of the HM, included the necessary resources for the preparation of patients, awakening and post-anaesthetic recovery.

41. The role of the midwife is fundamental in the assistance of the woman while normal childbirth, as well as a specialist in obstetrics in the care process of women with complicated or difficult pregnancies and deliveries and in the control and training of the medical staff. Staff (midwives, obstetricians, anaesthesiologists and paediatricians) must work together to reach an agreement in the protocols so as to improve the results both for the mother and the NB, mainly in complicated pregnancies.

42. There should be a specialist in obstetrics and gynaecology in charge of the HM available 24 hours a day. Moreover, the name of the person in charge of the HM and of the person responsible on his/her absence should be registered in the operating regulations of the HM.

43. The experience of midwives lies in the assistance to normal childbirth
and on their diagnostic capacity to identify any possible abnormal development and to refer these cases. Whenever is necessary the participation of an obstetrician or of any other member of the multidisciplinary team, the midwife is still the person responsible for offering global support and for maximizing the continuity of the care and for promoting, whenever possible, pregnancy and labour as a physiologic normal process.

44. The trend would be to guarantee the availability of a midwife who may devote 100% of his/her time to each woman on labour.

45. The role of the gynaecologist and of the obstetrician of the HM is to guarantee a high standard in the care provided to those women and babies that have difficult obstetric or medical needs and to be available for the serious or acute urgent procedures, frequently unpredictable, and which may imply a vital risk.

46. An on duty obstetrician would be guaranteed at the labour room either present or on call duty.

47. As an objective for better practice, more than 95% of women should receive regional anaesthesia for those scheduled Caesarean sections, and more than 85% for urgent abdominal deliveries as regional anaesthesia is safer than general anaesthesia.

48. The trend would be to guarantee the availability of an anaesthesiologist who would be in charge of performing epidural analgesia for those women in labour who may ask for it and of any other techniques of analgesia or anaesthesia, as well as of providing care at the urgent/emergency procedures during labour which may require analgesia/anaesthesia.

49. For those NB born before term, sick or suffering from congenital conditions there should be available staff (midwives, obstetricians or paediatricians) with training on advanced life support (included endotracheal intubation).

50. There should be developed protocols and guidelines for:
   • The identification of the NB who may have any potential health problems or medical problems and of those cases that may imply admission at a neonatology unit.
   • The mechanisms for transfer to neonatal intensive care units.
   • The resuscitation and management of those extremely immature babies or of those who suffer from congenital anomalies.

51. There should be made a medical examination and a screening of the NB in accordance with the protocols and clinical guides of the Health Services.

52. The trend would be to guarantee the existence of a paediatrician-
neonatologist trained in neonatal resuscitation available physically or on call duty and responsible for the care, stabilization and/or transfer of the NB if it were necessary.

53. Medicine and nursing teaching as well as the training of specialists in both areas should include in the following years not only the new caring services but also the trends of current medicine, the efficient and profitable use of technological breakthroughs, quality controls, the make up of clinical pathways and guides...i.e., it must adapt to the new clinical management techniques. In relation with the HM, the following aims should be reached:

- Include systematically in these caring units the practical training of medicine and nursing students.
- Train the future obstetricians, gynaecologists, anaesthesiologist, specialist in resuscitation and nurses for obstetrics and gynaecology in the several aspects which set up the functional network of the HM, taking specially into account the development of the criteria and the recommendations of the “Estrategia de atención al parto normal en el Sistema Nacional de Salud”
- Contribute, taking into account the two previous aims, to spread the basic principles of the managed healthcare.

54. It should be promoted the multi-professional career development and the training for all the members of the HM. Whenever possible, it is recommended the use of simulator. There should be developed abilities and training about any possible complications.

55. The Spanish Society of Gynaecology and Obstetrics recommends that the on duty team should be set up, at least, by an obstetrician every 2000 childbirths or fraction.

56. There must always be an anaesthesiologist on duty available at the HM.

57. It is advisable that the presence of a paediatrician-neonatologist-should be guaranteed at the HM from 2000 childbirths.

58. Taking as a basis the available information, there has been selected a group of indicators relating the specific work of the obstetric suite: technical quality, rate of use and quality perceived by users.

Criteria for the Review and Follow up of the Standards and Recommendations.

- When the “Estrategia de Atención al Parto Normal” would be implemented it will probably bring important changes in the way the attention to labour is organized and managed. This fact, together with the foreseeable changes in the organization and management of the
healthcare system, make it advisable that this document should be reviewed an updated within five years at the most.

- Throughout the process for the writing up of this document, some lacunae have been identified. In order to improve this knowledge as the basis over which the recommendations could be set up, based on evidence or, at least, on experience, it is highly recommended that the next review of the present document will include, apart from the topics it includes, the following:
  - An analysis of the legislation on authorization and registry of the obstetric suite that the regional governments have developed and a proposal of coordination of these rules and of their adequacy to the standards and recommendations included hereby.
  - A model of informed consent which would have the acceptance and agreement of the different scientific societies that have a role in the process of labour.
  - A systematic analysis of the quality indicators of the HMs which may imply the set of indicators recommended in chapter 8 of this document.
  - An analysis of the reasons for the variability of the rates of Caesarean sections.
  - An analysis which would deal with the relation between the rate of activity of the HMs and the rate of Caesarean sections as well as with the perinatal morbidity and mortality.
  - A comparative analysis of the advantages and inconveniences that the integrated care to labour (LDRP) and the sequential, more traditional, model may have in the Spanish Society.
1. Introduction

Labour is the most common reason for admission at Spanish hospitals and it means 9.1% the total number of hospital discharges noted in the Statistics of Inpatient Healthcare Centres. In 2007 the Ministry of Health and Social Policy wrote up, with a great number of institutions, colleges, experts and associations of citizens the “Estrategia de atención al parto normal en el Sistema Nacional de Salud”\(^1\) which reviewed the available data, recommendations and indicators in relation with some clinical practices related to labour.

The “Estrategia de atención al parto normal en el Sistema Nacional de Salud” promotes a deep change in the type of care provided at labour based on scientific evidence and which, therefore, responds to the needs of the woman and of the new born (NB) human being, which respects the process of labour and delivery, which champions for the lower levels of interventionism, for a personalized attention and which defends the principle of autonomy of women.

The consequences that hospital care for childbirth has over the life quality of women and the NB; the recognition of the right of the free choice of women\(^1,2\) once they have received the necessary information; the need, based on scientific evidence, of respecting the whole process of labour\(^1,3\), as well as the need to consider a comprehensive attention to family led to consider which is the better way to organize, manage and therefore to structurally and functionally devise this branch of care. Therefore, the maternity units of hospitals require, as a priority, setting up quality and safety criteria which could work as the bases for the clinical and management decisions within the frame of the aims and procedures gathered in the Quality Plan of the Spanish National Health System\(^4\).

As in any other caring action, the aim is the care excellence in a process with a specific importance from all points of view: personal, family, social and for the maintenance and promotion of the physical, psychical and emotional health of the women and the NB. Quality while labour and delivery determines, apart from the registered morbidity and mortality, other aspects such as discontent with the experience, discredit of the healthcare system when it has provided a unscientific and dehumanized care, attachment difficulties to the baby, rejection or difficulties with breastfeeding, bringing up problems, problems related to artificial feeding, etc.

Law 16/2003, (May 28th), “Cohesión y Calidad del Sistema Nacional de Salud” (Cohesion and Quality of the National Health System) states on
chapters 27, 28 and 29 the need to settle safety and quality guarantees which, once agreed at the Inter-regional Council of the Spanish National Health Service, should be compulsory for the regional regulation and authorization of the opening and bringing into operation of healthcare centres, services and institutions.

The Royal Decree 1277/2003, (October 10th), “por el que se establecen las bases generales sobre autorización de centros, servicios y establecimientos sanitarios” (establishing the general basis for the authorization of healthcare centres, services and institutions) defines and relates the healthcare centres and services which must comply with the requirements that guarantee their safety and quality. The classification of healthcare centres and services was modified by the Ministerial Order 1741/2006. Those units included in the RD 1277/2003 (modified by the above mentioned M.O.) and which are considered at some point in the Standards and Recommendations on Hospital Care for Childbirth are the following:

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<td>U.3 Obstetric and gynaecologic nursing (midwife).</td>
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<td>U.35 Anaesthesia and Resuscitation.</td>
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One of the objectives of the Strategy 7 of the Quality Plan of the National Health System “Acreditar y auditar centros, servicios y unidades asistenciales” (To authorize and audit centres, services and care units) is setting the basic common requirements, and safety and quality guarantees which have to be observed for the opening and coming into operation of health care centres of the Spanish National Health Service.

Since 2007, the Ministry of Health and Social Policy took, within the frame for the development of the Quality Plan of the Spanish National Health Service, the writing up of the safety and quality standards and recommendations for reviewing and updating those documents on Day Surgery Units and making up those on Medical and Onco-Haematological Day Hospital Units. In 2008 there have been written up the quality and safety standards and recommendations on the Surgical Suite, and on the Unit for Highly Complex Patients with Multiple Chronic Conditions.
1.1. Aim of this Document

The aim of this document on standards and recommendations for Hospital Maternities (HM) is to provide public health administrators, managers of both public and private centres and healthcare professionals with the criteria for the organization and management of this unit, contributing to the improvement of the safety and quality conditions, in all ranges of quality including efficiency at service provision, design and equipment. The guide will deal with

a) Users’ Rights and Guarantees.
b) Patient’s Safety.
c) Organization and Management Criteria of the HMs.
d) Physical Structure and Material Resources of the HMs.
e) Human Resources.
f) Care Quality at HMs.
g) Criteria for the Reviewing and Monitoring of the Standards and Recommendations for the HMs.

The Healthcare and Quality Planning Office (Directorate of Spanish National Health System Quality Agency) of the Ministry of Health and Social Policy has monitored the setting up of these standards and recommendations within the frame settled by the Quality Plan of the Spanish National Health System.

The document has been written up by a group of experts selected by the Healthcare and Quality Planning Office and Quality Agency of the Ministry of Health and Social Policy on the basis of their experience and knowledge of the aspects covered in this document. They have also been appointed -under the same criteria- by Colleges and Professional Associations.

The team of Experts work has been coordinated by Dr. Ricardo Santamaría Lozano as scientific coordinator, who has been appointed by the
Furthermore, the Quality Agency of the Spanish National Health System has had a support Group who has assisted the experts in clerical work; monitoring the work; providing technical assistance at meetings; conducting analysis of current situation; proofreading documents written by the experts and analyzed evidence and collaborating with the Quality Agency on the successive drafts and on the final document.

Throughout the document, several bibliographic references considered relevant are provided. Moreover some “strong” recommendations are highlighted, either because they are supported by legal requirements or because they are based, according to the group of experts involved on this writing, on sufficiently sound evidence. These cases will be introduced by the word “recommendation” and highlighted in bold.
2. Hospital Care for Childbirth.

Current Situation

During the last twenty years there has been a deep reduction in the fertility rate in Europe. The most common current family includes a family structure with one or two children. The slight increase that took place in 2000 and 2005 does not cover the rate for generational replacement (2.1 children per woman).

This reduction has been more important in those countries which have experimented high levels of fertility, mainly in Southern countries, which makes a significant contrast with the more moderate fluctuations of countries in the North. Nowadays, Spain, Italy and Germany are the European countries with the lower birth rate being Spain in 2007 in 10.95‰ (figure 2.1.). In Spain the fecundity rate has also gone down on a continuous pattern in 1970 to 1997, recovering slightly in the last decade (figure 2.2.).

![Birth rate graph]

SOURCE: Spanish Institute of Statistics

Figure 2.1. Evolution of the global birth rate in Spain, 1975-2005.
The number of annual births has lower regularly in Spain since 1975, recovering since 1998 due to migrations. In 2006, the number of births in Spain rose to 482,957 (figure 2.3.).

The delay on the average age of maternity is a common phenomena in Europe that is also present in Spain, moving from the age group of 20 to 24
and 25 to 29 at 1975 to 30 to 34 in 2006 (see Table 2.1.). The average age of mothers in Spain in 2006 was 30.9, two years older than in 1975 (28.8) - Spanish National Institute of Statistics.

There is a close relation between the higher age of the mother and the complications during labour (Figure 2.4.). 15% of labours in 2006 were considered as dystocia (abnormal labour); 98.2% were single births and the rest multiple (1.79% twins).

<table>
<thead>
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<td>&lt; 14</td>
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<td>25.13%</td>
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<tr>
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<td>32.18%</td>
<td>36.35%</td>
<td>38.56%</td>
<td>35.13%</td>
<td>28.21%</td>
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<td>20.48%</td>
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<td>8.98%</td>
<td>8.56%</td>
<td>12.00%</td>
<td>17.09%</td>
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<td>40-44</td>
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<td>2.37%</td>
<td>1.77%</td>
<td>1.74%</td>
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<tr>
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<td>0.27%</td>
<td>0.19%</td>
<td>0.11%</td>
<td>0.08%</td>
<td>0.10%</td>
<td>0.22%</td>
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<td>0.02%</td>
<td>0.02%</td>
<td>0.01%</td>
<td>0.00%</td>
<td>0.01%</td>
<td>0.01%</td>
</tr>
</tbody>
</table>

Source: Spanish Institute of Statistics

There is a close relation between the higher age of the mother and the complications during labour (Figure 2.4.). 15% of labours in 2006 were considered as dystocia (abnormal labour); 98.2% were single births and the rest multiple (1.79% twins).

Source: Spanish National Institute of Statistics

Figure 2.4. Age of the mother and rate of complications (Spanish National Institute of Statistics).
The rate of maternal death was in 2006 in Spain in 2.9 deaths every 100,000 childbirths and on a progressive falling trend (figure 2.5.) though it should not conceal the fact that the 14 deaths that occurred in 2006 (18 to 21 in the time range 2003-2005) should be considered, from an epidemiologic point of view, as potentially avoidable by means of cooperative actions of the welfare and healthcare system, apart from the existence of a probable sub-registry.

![Rate of maternal death](image)

**SOURCE:** Spanish National Institute of Statistics

**Figure 2.5. Rate of maternal death (Spanish National Institute of Statistics).**

Perinatal mortality in Spain in 2005 reached 4.9‰ of the babies born alive (14.6‰ in 1981). The rate of hospital admission due to perinatal conditions at the Spanish National Health System was 242 every 1000 NB(2). There is a significant practical unevenness, changing the rate of admissions due to perinatal morbidity from 120 to 370 every 1000 NB born alive between the autonomous regions with lower and higher number of admissions, respectively.

Labour is the most common reason for admission at Spanish hospitals. The 463,249 registered deliveries at the Statistics of Inpatients Healthcare Centres in 2005(3) represent 9.1% of the total number of hospital admissions.

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(3) The Spanish Institute of National Statistics record son that same year 459,265 deliveries, which may explain the difference of the transfers between hospitals.
discharges. The 25.2% of the total number of labours taken care of in 2005 were abdominal deliveries, which means a rise of more than a 3% of the rate of Caesarean sections registered in 2001 (22.45%).

73.5% of childbirths took place at public hospitals. At the Spanish National Health Service, labour and related conditions mean 13.8% of admissions.

The rate of abdominal deliveries at public hospitals was 22% and 8.5% of the NB were underweighted (less than 2500 grams). The rate of abdominal deliveries at private institutions was 33.8% and the rate of underweight NB was 4.9%. The continuous increase of the rates of the Caesarean sections is preoccupying as it is a surgical procedure with a higher morbidity and mortality rate than a normal labour for the mother (6 times higher) and with a higher foetal morbidity with an increased need of mechanical ventilation, which interferes considerably in the set up of mother-child bonds, in the starting and setting of breastfeeding, in the recovery from labour; in other words, in the satisfaction level with the experience.

The average stay at hospitals of the Spanish National Healthy Service was, in 2005, of 2.8 days for vaginal deliveries (deliveries which have required surgical procedures have not been included) and 5.6 days for abdominal deliveries.

Other determining factors for the situation analysis have been pointed out on the “Estrategia de atención al parto normal en el Sistema Nacional de Salud” institutionalized interventionist model; habitual use of medical management of labour; use of obsolete and dangerous practices; high rates of epidural anaesthesia, Caesarean sections, episiotomies, labour inductions and instrumental deliveries; lack of implementation of good practice polices such as eating during labour, freedom of the woman to choose her best position during delivery and skin contact; low prominence of woman and respect of her autonomy; use of common care procedures not based on scientific evidence; lack of conscience of the need of the informed consent of the mother and the father for any care situation of the NB.

Hospital care for Childbirth is structured around the delivery suite (though it is not limited to it). In most Spanish hospitals, the delivery suite is arranged in several premises (pre-labour rooms, labour rooms, operating theatres and rooms for obstetric hospitalization) in which the different stages of labour are taken care off: dilatation, expulsion, Caesarean sections or surgical procedure (when needed) and recovery. The amount of labour rooms at Spanish hospitals in 2005 was 742, i.e., 1.6 every 1000 childbirths.

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However, there are other ways of arranging clinically Hospital care for Childbirth as the units for Labour, Delivery, Recovery and Postpartum, which were devised, among other, by Laufman (“single unit delivery system”)\(^\text{(10)}\) and which require other functional designs which are being progressively introduced at Spanish hospitals\(^\text{(11, 5)}\). Moreover, the need to promote the “Estrategia de atención al parto normal en el Sistema Nacional de Salud”, the recognition of the right of choosing freely after being informed\(^\text{(1, 2)}\) and the scientific evidence which supports the need to respect the stages of labour\(^\text{(1, 3)}\) lead thinking over which is the best way to organize, manage and thus, to conceive structurally and functionally Hospital care for Childbirth.

Within the Hospital care for Childbirth, Hospital Maternity Units respond to a management idea of a specific unit and they could be defined as: “an organization of healthcare staff who offer multidisciplinary care to women, the new born and the relatives during labour and delivery, and which complies with the specific structural and functional means and resources to ensure efficiency, high quality and a safe environment for the development of this activity”.

The HM is a final unit which provides services for a specific process (labour). The delivery suite may be considered as an intermediate unit which, on accounting terms, invoices the final units (HM or, when needed, obstetric unit).

This document on Hospital care for Childbirth introduces the care process to the NB but it does not deal with the neonatology units which will be part of a specific document on standards and recommendations issued by the Quality Agency of the Ministry of Health and Social Policy.

2.1. Standards and Recommendations of Hospital Maternity Units in Spain.

2.1.1. Authorization and registration.

Both the State and all the regional governments have issued legislation on the authorization and registration of healthcare centres. Regulations may be divided into two types: those on authorization and registration, which assess

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\(^{(1)}\) Among other. Functional programme of the Nuevo Hospital Central de Asturias (2003); Functional programme of the Nuevo Hospital de Vigo (2006); Re-design of the Obstetric suite of the Hospital Costa del Sol (Marbella, Málaga, Spain).
healthcare centres before they come into operation, and those on accreditation, for the evaluation of operational centres.

2.1.1.1. Authorization

All regional governments have issued legislation on the authorization of healthcare centres. Since the publication of the RD 1277/2003, 10 regional governments have modified their legislation in order to adapt it to the new regulations, while 7 governments have not updated theirs. Though there are several common contents, relevant differences regarding the criteria for the authorization / registration may be appreciated. In the standards for the authorization and registry issued by the regional governments for caring centres and institutions there are, in some cases, specific mentions to the delivery suite\(^{(6, 7, 8, 9, 10, 11)}\), which in some cases may be considered as minimum requirements. Some of these rules settle the “sequential” care to labour as a minimum condition which, even though it is the most common practice at Spanish hospitals, it responds to a type of care which is not necessary the only one that guarantees a quality care.

2.1.1.2. Accreditation

Accreditation is defined as the voluntary process by which a healthcare centre undergoes external assessment which values and establishes, in accordance to a set of standards the level of such healthcare centre in relation to a set of indicators previously settled, and established in accordance with the experts and adapted to the area of reference. Two regions have established

\(^{(6)}\) Islas Baleares. Ordre de la Conselleria de Sanitat i Consum, de dia 19 de desembre de 2000, per la qual s’estableixen les condicions, requisits i el procediment d’autorització per a la creació, modificació, trasllat i tancament dels hospitals (BOIB 7, de 16/1/2001).
\(^{(7)}\) Canarias. Order June 15, 200 of the Regional Health and Social Policy Department, por la que se establecen las condiciones mínimas que deben cumplir los centros hospitalarios de la Comunidad Autónoma de Canarias (which settles the minimum requirements which must obey the healthcare centres of the Autonomous Regional Government of Canarias) (BOC 107, from 16/8/2000).
\(^{(8)}\) Cataluña. Ordre de 10 de juliol de 1991, per la qual es regula l’acreditació dels centres hospitalaris (DOGC 1472, de 7/8/91)
\(^{(9)}\) Galicia. Orde do 24 de setembro de 1986, pola que se fixan os requisitos e condicións necesarias para a autorización dos centros de asistencia hospitalaria na Comunidade Autónoma de Galicia.
\(^{(10)}\) Order 577/2000, October, 26, of the Health Department of the Comunidad de Madrid, which modifies the technical and healthcare requirements of the units which settles the Annex II of the Order 11-2-1986 (LCM 1986\/850), de requisitos para creación, modificación o supresión de centros, servicios y establecimientos sanitarios e incorpora y define nuevas tipologías (on requirements for the creation, change or closure of healthcare centres, services and institutions and which includes and defines new typologies).
\(^{(11)}\) Basque Country. Order February, 29, 1996 of the Consejero de Sanidad, por la que se regulan las autorizaciones de creación, de realización de modificaciones y de funcionamiento de los hospitales de la Comunidad Autónoma del País Vasco (which rules the authorizations for the opening, alteration and operation of hospital of the Autonomous Region of the Basque Country)
and put into practice accreditation systems for centres after the RD 1277/2003.

Experience of accreditation of healthcare centres and services is still very limited in Spain. Only four regions (Andalusia, Catalonia, Galicia and Extremadura) have legislation and official programmes for the accreditation of healthcare centres based on voluntary external assessment. Some regions have accreditation programmes for specific types of centres, services or activities (i.e., organ transplants, assisted reproduction, haemotherapy, etc.)

Catalonia was the first region to set up an official procedure for the accreditation of healthcare centres. The current system, which is the third which has been developed\(^{(12)}\), rules the accreditation of acute healthcare centres and the authorizing procedures for the evaluation bodies. It additionally provides two accreditations guides which include the settled standards, which make specific reference to labour in relation with pre-defined caring circuits, counts the number of childbirths (Caesarean sections / normal vaginal deliveries / instrumental vaginal deliveries) as well as the number of post-labour complications. Within the specific criteria it establishes that: “The structure and availability of the premises allotted for labour are appropriate for the care needs, ease the work of the staff and allow a rational use of the human resources”.

Andalusia bases its accreditation system on the “Program for the accreditation of centres belonging to the Andalusian Health Service\(^{(13)}\)”. The program is based on a reference criterion which includes a series of characteristic standards of the Andalusian Public Health Service. There are not specific indicators for Hospital care for Childbirth and for the surgical suite.

The region of Galicia settled in 2001 an accreditation system for hospitals, ruled by Decree\(^{(14)}\), which may be applied to all the hospitals which belong to the healthcare system of the Galician Health Service and to any other which may have subscribed or want to subscribe an agreement with them, for which they must obtain accreditation. There is no specific reference to the delivery suite.

\(^{(12)}\) Generalitat de Catalunya: Decret 5/2006, de 17 de gener, pel qual es regula l’acreditació de centres d’atenció hospitalària aguda i el procediment d’autorització d’entitats avaluadores.

\(^{(13)}\) Resolution July 24th 2003 of the General Directorate for Evaluation and Training, “por la que se establece el sistema de acreditación de la calidad de los centros y unidades sanitarias del Sistema Sanitario Público de Andalucía, de acuerdo con el modelo de calidad del sistema sanitario de Andalucía.” (establishing the quality accreditation program for healthcare centres and units of the Andalusian Public Health Service, in accordance with the quality model of the Andalusian Health Service. Ministry of Health for the Andalusian Health Service).

\(^{(14)}\) Galicia. Decree 52/2001, February, 22nd.
In a similar way to the models suggested by Andalusia and Galicia, the system of centre accreditation of 2005 of Extremadura is focused on general inpatient and outpatient centres. It is ruled by Decree and by a subsequent order which develops it\(^{(15)}\).

2.1.2. Unit guides

Both the Spanish Ministry of Health and Social Politics and the regional departments have published guides for some units which, though they are not legal documents, they try to settle the standards and recommendations. The “Estrategia de atención al parto normal en el Sistema Nacional de Salud” which was passed by the inter-regional Health Council and published by the Ministry of Health and Social Policy\(^1\) and which includes a set of recommendations in relation with the following practices:

- Shaving of the perineum. Enema.
- Company during the whole process.
- Dilatation period.
- Pain management during labour.
- Position of the mother during labour and delivery.
- Episiotomy.
- Instrumental deliveries.
- Caesarean sections.
- Early contact mother - NB.
- Immediate postnatal care. Breastfeeding.

The autonomous region of Andalusia published in 2005 the second edition of the Proceso Asistencial Integrado de la Atención al Embarazo, Parto y Puerperio\(^{14}\) (Integrated Care Process to Pregnancy, Delivery and Puerperium) which includes management and organization references for this type of units based in the sequential organization of the common care process to labour at Spanish hospitals.

The Spanish Society of Gynaecology and Obstetrics (Sociedad Española de Ginecología y Obstetricia - SEGO) has made up a set of recommendations for the organization of the obstetrics\(^{15}\) service including the recommendations for the care process to labour. Moreover, members of the Spanish Society of Gynaecology and Obstetrics and the Spanish Society of Anaesthesiology, Resuscitation and Pain Therapy make up, on request of

the former Spanish National Health Institute, a set of recommendations on regional anaesthesia during labour\textsuperscript{17}. The Organization of Associations of Midwives of Spain (Federación de Asociaciones de Matronas de España - FAME) has set up a document of consent on the care strategies to normal childbirth\textsuperscript{18}.

2.2. Standards and recommendations to Hospital care for Childbirth in other countries

2.2.1. Argentina

The Ministry of Health published in 2004 the “Guía para la Atención al Parto Normal en Maternidades Centradas en la Familia”\textsuperscript{19} (Guide to Normal Childbirth Care at Family Focused Hospital Maternity Units) which benefited from the experience, among other participants, of one of the experts who has work on the set up of this document of standards and recommendations (Dr. Maañón) and other members of the Units of Obstetric Clinical Management and Neonatology of the Nuevo Hospital “El Milagro” (Salta, Argentina).

2.2.2. Canada

The Society of Obstetricians and Gynaecologists of Canada together with the collaboration of other scientific Canadian societies has published guides to the care process of labour\textsuperscript{21}, including the use of ultrasounds\textsuperscript{20}.

2.2.3. United States

The American Society of Anaesthesiologists has published clinical practice guides on anaesthesia at obstetrics\textsuperscript{23, 24, 25}. Moreover, the Institute for Clinical Systems Improvement has published a Guide for the Management of Labour\textsuperscript{(16), 26}.

2.2.4. United Kingdom

Within the series of the Health Building Notes, the National Health Service of the United Kingdom published in 1996 the Notes corresponding

\textsuperscript{(16)} http://www.icsi.org/home
to the “Maternity Department” which is focused on the functional programme and on the design of the delivery area, based on management and organization factors. The guide of the NHS on the “Maternity Department” also deals with the neonatology unit. The design of the “delivery suit” which includes the guide of the NHS is based on a comprehensive care to labour on the same room (LDRP: labour, delivery, recovery, and postpartum room).

The Health Department of the United Kingdom has made up, within the “National Service Framework for Children Young People and Maternity Services” the standards for the maternity services. Moreover, the National Health Service for Scotland has published a set of clinical standards for the maternity services. The National Institute for Clinical Excellence (NICE) and the National Collaborating Centre for Women’s and Children’s Health have made up clinical guides for the care to normal childbirth and Caesarean section, as well as the post care guide for the women and the babies.

The Royal College of Obstetricians and Gynaecologists, the Royal College of Midwives, the Royal College of Anaesthetists, and the Royal College of Paediatrics and Child Health have settled a set of minimum standards to delivery. Moreover, the Royal College of Obstetricians and Gynaecologists has written up documents and standards for the planning of the obstetrics service, the informed consent for a Caesarean section, perineum losses and blood transfusions at obstetrics.

2.3. Experience in Spain and abroad

Hospital care for Childbirth in Spain can be considered as an institutionalized interventionist model, cared by medicine and nurse specialized consultants and performed at hospitals, as in other countries such as Ireland, Russia, Czech Republic, France and Belgium.

On the European background there are other alternative care models. On the one side there is the model which is followed up in the Netherlands and in the Scandinavian countries, which is a non-institutionalized pattern (a high rate of deliveries takes place at home under the supervision of independent and qualified midwives). The current English model allows the woman to choose the type of care during pregnancy, delivery and puerperium, though 90% of deliveries are carried out at hospital.
In 1996 it was created in some American countries the Coalition for Improving Maternity Services (CIMS)\(^{(17)}\), a coalition of national and private organizations which main objective is to promote a care attention model for maternities which would improve the result of delivery and would considerably reduce its costs. It has met since 1994 and created the Evidence-based Mother-Friendly Childbirth Initiative organized in 10 stages, similar to the model of the Iniciativa para la Humanización de la Asistencia al Nacimiento y la Lactancia - IHAN (Initiative for the Humanization of the Care to Labour and Breastfeeding) in relation to breastfeeding. It was ratified in 1996 and reviewed in the light of scientific evidence by a group of researchers in 2006 that made up a document which may be downloaded in several languages\(^{(18)}\).

Moreover in 2006, the CIMS worked on the creation of the International Mother Baby Childbirth Organization as an independent organization focussed on responding to the challenges of gathering the initiative at an international level and providing a continuous updating of the scientific evidence and of the tools, in collaboration with the WHO, the UN, etc. for the improvement of the mother-child care at delivery. The WHO has compiled a reduced version of this initiative on its tool for the assessment of hospitals which is currently about to published in an updated version: “Assessment tool for the quality of hospital care for mothers and newborn babies” within its programme called “Making pregnancy safer”. It will be a very useful document for the assessment of good practice and for the internal audit of the results of the obstetrics service at hospitals\(^{38}\).

A determining factor on the care process to labour is the definition of normal childbirth (eutocia). Some of the available definitions are the following:

- **WHO**: Spontaneous low risk labour and which does not show any problem until delivery. The child is born in cephalic position on the 37th to 42nd week. After delivery both the mother and the baby are in good conditions.

- **Spanish Society of Gynaecology and Obstetrics**: Efforts of labour of the mother during pregnancy which begin spontaneously on the 37th to the 42nd week and which, after the process of dilatation and delivery the labour ends with the birth of a normal baby who adapts appropriately to extra-uterine life. Delivery and the immediate puerperium must, as well, evolve in physiologic way. Any delivery

\(^{(17)}\)Coalition for Improving Maternity Services: www.motherfriendly.org.
\(^{(18)}\)http://www.motherfriendly.org/downloads.php
that does not follow these standards is considered dystocia. 70 to 80% of deliveries are considered as low risk at the beginning of the process.

- **Spanish Organization of Associations of Midwives:** Unique physiological process by which a woman ends her full term pregnancy and which involves psychological, social and cultural factors. It begins spontaneously and does not imply any other care than a comprehensive and respectful support\(^{(19)}\).

The Spanish Society of Gynaecology and Obstetrics defines as a **non interventionist birth** (non medicalized, non interventionist labour) the birth that, as it follows the characteristics described in the definitions for a normal childbirth, is assisted without the need of therapeutic procedures that alter its physiology. When providing care at a non interventionist delivery the caring staff (midwife and nurse assistant) have also the fundamental role of controlling the condition of the mother and the foetus as well as providing psychological care to the mother and the family.

There are significant differences between the European Union countries with regard to the length of the average hospital stay after childbirth which do not seem to be related to the type of prenatal care or delivery given in each country (table 2.2.) but to other aspects related to the type of care systems, the hospital management and the practicing of the consultants involved. Those countries that have a similar health system based on “national health services” tend to provide shorter average stays than those systems based on “Social Security systems”. A Cochrane review in relation with the length of the hospital stay after labour proved that the results where not conclusive and that there was not a clear evidence of the complications (mother or NB readmitted) directly related to early discharge policies; however, the methodological limitations of the research included did not allow ruling out this possibility. Three of the reviewed studies provided non conclusive or positive results of the benefits of early discharge in relation to post natal depression. Other of the conclusions drew that it was not clear to which extent the availability of midwives at home affected the safety and acceptance of early discharge after delivery\(^{40}\).

There are also noticed important differences among countries of the European Union on the rate of abdominal deliveries, being Spain within the average standard (table 2.3.)

<table>
<thead>
<tr>
<th>Table 2.2. Average stay after spontaneous labour (days).</th>
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<tbody>
<tr>
<td>2005</td>
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<td>Austria</td>
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<td>Belgium</td>
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<td>Denmark</td>
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<td>Finland</td>
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<td>France</td>
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<td>Germany</td>
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<td>Greece</td>
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<td>Ireland</td>
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<td>Italy</td>
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<td>Luxembourg</td>
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<td>The Netherlands</td>
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<td>Portugal</td>
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<tr>
<td>Spain</td>
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<tr>
<td>Sweden</td>
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<tr>
<td>United Kingdom</td>
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<td></td>
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</tbody>
</table>

Source: OECD-Health- Organization for Economic Cooperation and Development, July 07

<table>
<thead>
<tr>
<th>Table 2.3. Rate of abdominal deliveries (every 100 childbirths)</th>
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<tr>
<td>2005</td>
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<tr>
<td>---------------------------------------------------------------</td>
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<tr>
<td>Austria</td>
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<td>Belgium</td>
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<td>Denmark</td>
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<td>Finland</td>
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<td>Germany</td>
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<td>Greece</td>
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<td>Spain</td>
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<td>Sweden</td>
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<tr>
<td>United Kingdom</td>
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<tr>
<td>Average (%)</td>
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</table>

Source: OECD-Health- Organization for Economic Cooperation and Development, July 07
There are important differences in the rate of maternal death in the countries which belong to the EU-15 which may partly respond to the different registration systems (table 2.4):

<table>
<thead>
<tr>
<th>Country</th>
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<th>Remarks</th>
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<td>3,8</td>
<td></td>
</tr>
<tr>
<td>Belgium</td>
<td>2,5</td>
<td>(2004)</td>
</tr>
<tr>
<td>Denmark</td>
<td>7,7</td>
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<tr>
<td>Finland</td>
<td>3,5</td>
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<td>Germany</td>
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<td>Greece</td>
<td>2,8</td>
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<td>Ireland</td>
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<td>Italy</td>
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<td>(2002)</td>
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<td>Luxembourg</td>
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<td>The Netherlands</td>
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<td>Portugal</td>
<td>8,2</td>
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<td>Spain</td>
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<td>Sweden</td>
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<td>United Kingdom</td>
<td>5,7</td>
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<td></td>
<td>3,3 ± .93</td>
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Source: OECD-Health- Organization for Economic Cooperation and Development, July 07

The series of “Confidential Enquiries into Maternal Deaths in the UK” provides important data to improve the care during pregnancy, labour and puerperium. 60% of maternal deaths in the United Kingdom were due to indirect causes (pre-existent conditions which worsened during labour). The main cause of direct maternal death in the United Kingdom was pulmonary thromboembolism ( eclampsia as the second cause) and heart conditions as the main indirect cause. When there were considered as late deaths (a year after delivery) the main cause for death in the United Kingdom was psychiatric conditions (among them suicide due to puerperal psychosis). A research on maternal death in the United Kingdom proved that 67% of deaths have had a direct cause and that in 36% of those due to indirect causes a “sub-standard” (of lower quality) care had been provided. Moreover, there was a relation between maternal death and social and economic hardship.
Apart from the guides wrote up by the Administrations and the scientific societies included in section 2, there have been published reviews of the Cochrane database referring to elective Caesarean section due to non medical reason in full term pregnancies, foetal monitoring, amniotomy for induction of labour, perineal shaving, enema, use of oxytocin, epidural analgesia, continuity of care givers during childbirth, pain relief, active versus expectant management in the third stage of labour, immersion in water, episiotomy for vaginal birth, vacuum extraction versus forceps assisted vaginal delivery, use of ergotamine, and early discharge. Most of them are dealt with and analyzed at the “Estrategia de atención al parto normal en el Sistema Nacional de Salud” (Ministry of Health and Social Policy, 2007).
3. Users’ Rights and Guarantees

Healthcare centres with maternities should observe and respect the rights of users, NBs and relatives included in the current health legislation and specifically those provided by Act 41/2002, November 14th, básica reguladora de la autonomía del paciente y de derechos y obligaciones en materia de información y documentación clínica (“basic and ruling act on the patient's autonomy, rights and obligations regarding information and clinical documentation”) and on the European Charter for Children in Hospital. The Spanish Caring legislation provides the highest protection to dignity and intimacy of users and their right to receive the appropriate information, to take decisions freely and to choose among the available clinical possibilities.

This chapter includes thorough aspects on the information that has to be provided to women and relatives in these units and, more broadly, to those aspects included in the legislation and which should be taken into account.

3.1. Family Centered Hospital Maternities

Women informed decision taking on labour and delivery is a right and a determining factor in the quality of the care process. The user, i.e., the mother to be, is the owner of that right, even though the family will be informed only if she gives the specific consent or if she asks for it. Delivery has a family range which should be included into the care process. The participation of the family in the care process implies (20):

- Allow an escort being present during obstetric outpatient consultation, neonatal paediatric consultation, image diagnosis, etc.
- Provide all women the unrestricted company of the person of her election during labour and delivery.
- Make feasible the permanence of an escort during the hospital stay of the woman.
- Make possible family visits during hospital stay of the mother and the NB.

(20) From Uranga A et al. Guía para la Atención del Parto Normal en Maternidades Centradas en la Familia.
• Never separate the mother and the baby if he/she is healthy.
• Free access of the mother and the father to the Neonatology service if the NB has to be admitted and accompanied visits for the other members of the family (grandparents, brothers or sisters, etc).

3.2. Information to Women and Relatives. Informed Consent

Women must have the opportunity to take informed decisions about delivery, labour, analgesia and anaesthesia and for that purpose they require appropriate and on time information. The adequate resources (audiovisual information, written information, etc.) should be provided during pregnancy.

A woman who is about to give birth may be in a situation of great physical and psychical vulnerability and may find it difficult for voicing her wishes or needs. Therefore, staff must make a bigger effort to allow making these needs public and to assure that the decisions are taken with the sufficient guarantees as information and freedom to choose refers.

The information which should be provided to the women cared at HM's should include the following:

• General characteristics of the maternity.
• Right to know the attendants.
• Detailed information about the birth process.
• Informed consent which, in those cases required by law, will be written(21).
• Instructions and recommendations.

The information provided at the HM should include all the aspects that allow active involvement of women and their escorts in the care process of labour3, (22). The “Estrategia de Atención al Parto Normal en el SNS” recommends:

(21) “Se prestará por escrito en los casos siguientes: intervención quirúrgica, procedimientos diagnósticos y terapéuticos invasores y, en general, aplicación de procedimientos que suponen riesgos o inconvenientes de notoria y previsible repercusión negativa sobre la salud del paciente” (It will be written in the following cases: surgery procedure, invasive diagnostic and therapeutic procedures and, in general, in those procedures which may imply any risks or inconveniences which may bring up any clear and predictable negative effect on the patient's health). (section. 8.2 Act 41/2002, November 14th, básica reguladora de la autonomía del paciente y de derechos y obligaciones en materia de información y documentación clínica - basic and ruling the patient’s autonomy, rights and obligations in relation to the information and the clinical documentation).

(22) Before admission, it is important to point out the information that is provided to the pregnant woman at the primary care centre in coordination with the specialized care service (pregnancy record).
To assure and guarantee women access and comprehension to the information on the physiological process of labour and on the available data on the different clinical practices scientifically proved in the care process for childbirth.

This information must be comprehensive, must take into account the reasons, the benefits, the risks and the results, it must be adequate to the women needs. The information should be clearly understood as far as the language used and the timing in which the information is provided and it should be supplied in the adequate format.

Information offered to women should be evidence based so as to allow them to take informed decisions in accordance to their needs and their expectations.

All the decisions taken by women in relation to labour should be respected (for example, the birth plan set up during pregnancy) within the safety and quality evidence-based frame.

Guarantee that the mother, the father or the legal guardian have legal right over any decision taken in relation to the NB.

To make available and guarantee that the women or women associations may take part in the evaluation of the care to labour and delivery provided.

To introduce correcting mechanisms of the physical, psychical, linguistic and cultural barriers that may difficult women to take informed decisions.

Allow pregnant women and their partners meet the maternity and its staff before delivery and let them know if there are mother-mother support groups at hospital.

To develop programmes that may encourage women to take decisions in relation to pregnancy, delivery and postpartum.

To study the effective spreading strategies that may allow women access sufficient and relevant information in line with their values and beliefs.

To settle the mechanisms to guarantee that all users make advantage of their right to take informed decision fully aware of the risks and benefits that it may have over their health.

To make public positive experiences of non-medicalized deliveries (videos, women testimonies...).

To settle care education programmes that may bring up the active participation of the community in healthcare topics. Encouraging users associations and promoting their participation.

Putting into practice the preferences of women during the decision
taking process.

- Allowing people with communication impairments access to information and guaranteeing their right to take an active part.
- Involving staff and giving the public the capacity to promote an opinion statement that may contribute to the effective participation and the informed decision taking on healthcare matters.
- Set up a model for decision making and designing instruments that may allow quantifying the participation of users.

The “Estrategia de Atención al Parto Normal” sets up as an indicator the number of HMs which include in their care protocols for labour these recommendations.

3.2.1. Information about the general characteristics of the maternity

It is highly recommended that the welcoming information should (leaflet, booklet) should include, at least, a description of the different stages of labour with recommendations and special warnings. Inclusion of pictures of the unit may help patients to understand is operation. This information should be provided in the monitoring of the pregnancy.

3.2.2. Right to identify patients

“Healthcare staff and the managers of the health care centres will guarantee their patients their right to know the name, qualification and speciality of the staff that are in charge of them” (22).

3.2.3. Detailed information about the stages of labour

It is recommended that the information given to the mother-to-be would include the following information:

- Information on the different stages of labour.

(22) Section. 5.1.e, Act 44/2003, November 21st, “de ordenación de las profesiones sanitarias” (on planning of healthcare professions).
• Information on the different pain relief possibilities available in the centre. 100% of parturients should be offered some type of pain relief during labour either with non pharmacologic agents as systemic analgesia or neuroaxial analgesia, which will be provided on an individual basis depending on the preferences, the obstetrical circumstances and the medical conditions(23).
• Information about the condition of the foetus.
• Information to relatives / partner during labour so that they may offer a caring care.

3.2.4. Instructions and recommendations

The user should be provided with the following written information(24):

• Instructions prior to admission to the HM (obstetric outpatient consultation /primary healthcare centre).
• Form with the preferences of the mother in relation to labour and delivery.
• Instructions and recommendations during the stay at the HM of the mother, partner and/or escorts.
• Charter of users’ rights and obligations.
• Instructions and recommendations for immediate puerperium.
• General information on the first care for the healthy NB(25) and advices and assessment on breastfeeding and, when available, contact with breastfeeding support groups.
• Information about access to care resources related to the HM

3.2.5. Informed consent

Apart from the reference made at section 3.2 on the information about delivery, the performance of invasive diagnostic and therapeutic procedures (mainly Caesarean sections), as well as the administration of treatments that may imply any risks will imply the information and written informed consent, in accordance with the current legislation(26).

(23) The information about the epidural analgesia technique must be provided in advance. If the patient wants more information, she should be offered an “anaesthetic visit” mainly in those cases in which there are risk factors involved: obesity, tattoos in the lumbar area, irregularities in the lumbar spine, difficulties in case intubation should be needed.
(24) As a general basis, this information should be provided before the patient is admitted, at primary healthcare, by the midwife and in cooperation with the HM.
(25) The Spanish Society of Neonatology (Sociedad Española de Neonatología - SEN) (http://www.se-neonatal.es) has informative guides on these matters.
(26) The Spanish Society of Gynaecology and Obstetrics (http://www.sego.es —for members only—) has set up some models of informed consent for several procedures.
As any other user, the parturient has the right to reject any treatment or procedure ("Informed rejection"). Her denial will be in written.

The mother to be will have the possibility to choose freely the position she prefers for delivery, if she wants constant or partial monitoring, if she prefers walking around or remain lying in bed, if she prefers epidural anaesthesia/analgesia or any other type of pain relief. The capacity to choose will be only limited by the availability of the chosen option and the good praxis. Not accepting the prescribed treatment will not imply discharge when there are other alternative treatments.

A Cochrane Review points out that epidural analgesia seems to be useful to relief pain during the efforts of labour. However, women who use this type of pain relief are at higher risk of suffering an instrumental delivery. The epidural analgesia dealt with in the above mentioned review did not have a statistic aftermath in the risk of suffering a Caesarean section, in the mother satisfaction in relation with pain relief and in suffering from lumbago in the long term, and did not seem to have an immediate effect in the neonatal state of the baby, according to the Apgar score. Apart from the higher risk of instrumental delivery, epidural analgesia has a very low rate of adverse effects (epidural haematoma, deep epidural infection, permanent or transitory neurological damage).

If sterilization is performed during a scheduled Caesarean section, the written informed consent should be obtained before the scheduled date for the procedure.

3.3. Ensuring Patient’s Rights

Healthcare centres with HMs should keep the following documentation and procedures, in addition to those more specific included in section 3.2:

a) Service portfolio.
b) Reception programme.
c) Code of ethics.
d) Clinical practice guides, pathways or protocols.
e) Written clinical trial procedures.
f) Price list.
g) Clinical records.
h) Complaints and suggestions forms.
i) Medical discharge reports.
j) Protocols ensuring safety, confidentiality and legal access to patient data.
k) Liability insurance policy.
l) Policies archive.

Mothers to be and people related by family and factual ties should have guaranteed access to these documents in accordance with the corresponding legislation, except for those indicated in points d), e) and j).

Below there is more detailed information on some aspects relating to these rights. Points a) Service portfolio, g) Clinical records and i) Medical discharge reports will be dealt with at chapter 5 - Organization and Management.

3.3.1. Reception programme

Hospitals should have a reception programme for inpatients. The HM should have a specific reception programme which would include the general information provided in sections 3.1.1 and 3.1.2 as well as the information incorporated on the above mentioned list of user’s rights and obligations.

3.3.2. Code of ethics

Healthcare centres with HM should have a code of ethics adapted to its speciality that would include the set of ethical principles and rules that would guide its activity in accordance with the professional deontology and mainly with the “Convenio para la protección de los derechos humanos y la dignidad del ser humano con respecto a las aplicaciones de la Biología y la Medicina - Convenio de Oviedo” (Agreement for the protection of human rights and the dignity of the human being in relation to the Biological and Medical applications - Agreement of Oviedo), April, 4th, 1997; the “Código de Ética y Deontología Médica de la Organización Médica Colegial” (Ethical Code and Medical Deontology of the professional association of Doctors), and the “Código Deontológico de la Enfermería Española” (Deontological Code of the Spanish Nursing).
3.3.3. Clinical practice guides

HMs will have demonstrable documented record of the clinical practice guides, pathways and protocols used, together with the evaluations and, when appropriate, modifications and adaptations.

3.3.4. Clinical trial procedures

All clinical trials must comply with the conditions and guarantees established in their correspondent legislation.

3.3.5. Price list

All healthcare centres with HM must have price lists available to users; this information must also be notified to the competent authorities in accordance with the applicable legislation on this matter.

3.3.6. Complaints and suggestions

1. Healthcare centres that have HMs will have complaints and suggestions forms available to allow users to record any complaints, claims, initiatives or suggestions they may wish to communicate in connection with its operation.
2. The existence of these forms will be clearly signalled and the forms will be easily available to allow their identification and use.
3. Complainers are entitled to receive written replies from the manager or any other authorized person to the complaints posted, besides their referral to the competent authority in accordance with the provisions of regional applicable legislation.
4. Complaints, claims, initiatives and suggestions should be periodically reviewed.

3.3.7. Liability insurance policy

1. All healthcare professionals working in the private sector and all private bodies or corporate persons providing healthcare services of any kind must have the mandatory liability insurance or financial guarantee to meet any compensation claims that may derive from eventual harm caused to persons as a result of these services.
2. Private healthcare centres that have HMs must have the necessary liability insurance policy to cover any possible compensation to harm caused to patients.

3.3.8. Policies archive

Centres and, where appropriate, independent healthcare professionals should keep a copy of the documents which certify the mandatory liability guarantees.
4. Patient’s Safety

This chapter deals with those criteria and guidance related to the safety of the mother and the NB during their stay at the HM.

4.1. Nosocomial Infections

1. HMs would have an infection control and prevention programme adapted to its specific characteristics and activities. The programme will ensure that patients at risk and risky procedures are identified and that the necessary information is provided to the corresponding authorities in accordance with all applicable legislation.

2. To such effects, a protocol shall be set up, which will include aspects related to hand hygiene, use of alcohol-based hand cleansers, antiseptics, antibiotic prophylaxis, prevention and handling of incidents related to blood exposure; patients’ health; types of preventive measures, and infection risks at invasive procedures. A recent Cochrane review suggests that scrubbing hands with alcohol-based solutions is, at least, as effective as brushing. This review did not prove any evidence on the advantage of specific alcohol based solutions over other similar ones. Available evidence suggests that brushing with chlorhexidine based solutions is more efficient than with povidone-iodine.

4.2. Prevention of Neonatal Mother Transmitted Infection

HMs must have and use the protocol for the prevention of neonatal infection caused by Group B Streptococcus Agalactiae (see annex 1).

Moreover, and whenever necessary, there should be put into practice the protocols for the prevention, at risk situations, of vertically transmitted infections (hepatitis B, HIV, etc.).

(27) To avoid secondary infections in neuroaxial analgesic techniques, the blockade should be performed after the disinfection of the lumbar area with a chlorhexidine based solution, and leaving the solution act for at least 2 minutes. The anaesthesiologist will then clean/disinfect hands and will perform the blockade wearing cap and mask, sterile gloves and at a sterile field.
4.3. Epidemiological Alerts

Healthcare centres with HMs shall have epidemiological alert systems connected to the adequate health authorities, in accordance with present legislation.

4.4. Drugs Management

1. At the HMs there would be a specific guideline on the medicine storing, packaging, identification, handling and prescription, paying special attention to the handling and administration of high risk medication and to their use by date.
2. Healthcare centres with HM will follow the specific obligations settled by the drug law.
3. It is recommended the setting up of a set of rules, similar to those used at the operating theatres, for the safekeeping of toxics at the labour room / Labour, Delivery, Recovery and Postpartum room (LDRP), as well as for the use of perfusion pumps which may prevent their being operated by users or relatives.

4.5. Blood Products Management

1. Management and safe storing of blood products is competence of the transfusion service of the centre, which must have an accreditation for that purpose(28).
2. Identity of the receptor should be unmistakably guaranteed prior to sample taking and blood and blood product transfusion(29).
3. It is advisable the availability of a massive obstetric haemorrhage protocol which would include the active collaboration of

(28) Royal Decree 1088/2005, September 16th, “por el que se establecen los requisitos técnicos y condiciones mínimas de la hemodonación y de los centros y servicios de transfusión” (technical requirements and minimum conditions for blood product donation and for the transfusion centres and services), and Royal Decree 1301/2006, November 10th, “por el que se establecen las normas de calidad y seguridad para la donación, la obtención, la evaluación, el procesamiento, la preservación, el almacenamiento y la distribución de células y tejidos humanos y se aprueban las normas de coordinación y funcionamiento para su uso en humanos” (which settles the quality and safety standards for donating, extracting, evaluating, processing, preserving, storing and distributing human cells and tissues and accept the coordination and operation rules for its being use in human beings).
(29) “La administración de una transfusión de sangre o de alguno de sus componentes deberá ir precedida de la comprobación inequívoca, por parte de la persona que la realiza, de los datos de identificación del paciente y de los datos de identificación de la unidad de sangre o componente sanguíneo a él destinado” (The blood or a blood product transfusion must be preceded by the unequivocal check, from the person in charge of the procedure, of the identification data of the patient, the identification data of the blood unit or the blood product assigned) Section 19.1 Royal Decree 1088/2005.
anaesthesia, haematology, blood bank, laboratory, obstetrics and nursing. This protocol must be well known and rehearsed by all the involved staff and it must include different diagnostic and therapeutic steps. Moreover, it is advisable the existence of a special analytic circuit which would be able to respond to those cases of serious haemorrhages which may imply blood losses over 150 ml/min. The blood bank should also rely on that same circuit in cases of massive haemorrhage.

4.6. Identification of the Mother and the NB

1. **Centres with HM sill have a reliable, unequivocal and unique patient identification system.**
2. The system would allow checking the identity of the patient before performing any risky procedure and/or administering any medication and blood products and prior to any diagnostic procedure.
3. **HMs should have an unequivocal identification system of the NB**\(^65\) (30, 31).
   The foot or sole print on its own does not guarantee identification as the difficulty of obtaining a proper one makes it useful in less than 30% of the cases and, what is more, it does not allow mother-child identification.

4.7. Safety Management

1. Healthcare centres with HMs should look after the fulfilment of safety and quality measures as well as after the technologic adequacy and the risks management for patients.
2. In the surgery procedures performed at the HM the surgery safety practices will be obeyed\(^{32}\).

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\(^{30}\) “Las sustituciones de un niño por otro que se produjeran en centros sanitarios o socio-sanitarios por imprudencia grave de los responsables de su identificación y custodia, serán castigadas con la pena de prisión de seis meses a un año” (Substitution of children at healthcare centres or a public health centres due to the negligent acting of the person in charge of his/her identification and custody would be punish with six months to one year jail imprisonment.) (Section 220.5 Constitutional Law 10/1995, November 23rd, Penal Code).

\(^{31}\) As safety systems, there has been recommended:
   a) Bracelet identification (mother-child) and stickers with bar codes + plantar prints record + NB blood drop (from the cord) in the print card\(^67\).
   b) Identification by means of bracelets and stickers with bar codes and mother and child finger print taken by means of a biometric system at a PDA, whenever the economic investment is possible (Neonatal Identification and Custody System).

3. At healthcare centres classified as C.1 (Hospitals) at the Royal Decree 1277/2003, and depending directing from the managing direction of the hospital there would be a commission or, when necessary, a unit in charge of the identification and registry of the adverse events that may occur as a result of the healthcare provided, as well as of the implementation and assessment of the actions for improvement directly related to them.

4. **There would be settled institutional safety guidelines to prevent the theft/change of babies.**

5. **Users of the HM must have and active role in the improvement of their safety, getting informed and taking part in the care and in the decisions about their treatment.**

4.8. Self Protection Plan

1. Healthcare centres with HMs will have a self-protection plan implemented which will settle the arrangement of human and equipment resources available for fire prevention or for other equivalent risks, for guaranteeing evacuation and the immediate intervention in any possible catastrophe, either internal or external.

2. The self-protection plan will include risk evaluation, protective measures, the emergency plan and the implementation and updating of measures, being among them the staff training on these emergency situations.

4.9. Biological Waste Management

1. Healthcare centres with HMs will have a medical and biological waste management system in accordance with current legislation(33). These centres will have the necessary means for the adequate handling, removal, storage, transportation, treatment and disposal either in the centre or outside the centre.

2. Specifically, the above-mentioned medical waste in those centres with HMs is the waste that included in group III - medical waste with biological risk (anatomic waste, as the placenta) and in group IV - specific medical waste (recognizable anatomical human remains as result of abortions or surgical procedures).

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(33) In Spain, Directive 78/319/CEE, March, 20th, on Toxic and Dangerous Waste was replaced by Act 20/1986, May, 14th, Constitutional Act on Toxic and Dangerous Waste which at the same time was substituted by Act 10/1998, April 21st on Waste, which, together with the Royal Decrees which develop them and the regional rules set up the current legislation
3. **Healthcare centres with HMs will obey the current legislation on donation, removal, assessment, process, preservation, storage and distribution of cells and human tissues, specifically as far as the umbilical cord**\(^{(34)}\) refers.

4.10. **Risk Management**\(^{35}\)

Good practices on patient’s safety imply an organization for safety management. Healthcare centres must develop efficient systems that guarantee, through the clinical direction, safe healthcare and a learning process from their own and others’ practice. Key points to this policy are risk management processes, including the review of cultural organization, risk assessment, training, protocols, communication, audits and learning from adverse events and complaints. **Risk management has to be supervised an coordinated by a management team which belongs to the HM, directed by a “senior” consultant (doctor or midwife) and made up of members of several disciplines which should meet, at least, every 6 months. There must be multidisciplinary risk management training.**

**There should be a proactive and continuous risk assessment within the HMs and a formal one which should be carried out at least every two years. An occurrence available registry should exist from the risk assessment procedure; it should be a dynamic document which should include all the actions taken to reduce the risks, the acknowledge events and the analysis of the registered adverse events.**

It is necessary to set into operation systems to register any possible adverse events with specific guidelines about which adverse events should be informed about.

When an adverse event occurs, the HM must take into consideration the causes and the consequences of the acknowledge problems. The adequate analysis of the underlying problems with an appropriate action plan must be part of the training and change implementation process. **Risk management procedures must be written down, including the sentinel events for the registry system of adverse events. There must be regular audits of the obstetric indicators, such as urgent Caesarean sections and neonatal indicators as resuscitation failures and delays.**

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\(^{(34)}\) Royal Decree 1301/2006, on November 10th, “por el que se establecen las normas de calidad y seguridad para la donación, la obtención, la evaluación, el procesamiento, la preservación, el almacenamiento y la distribución de células y tejidos humanos y se aprueban las normas de coordinación y funcionamiento para su uso en humanos” (which settles the quality and safety standards for the donation, removal, assessment, process, preservation, storage and distribution of cells and human tissues and passes the rules for the coordination and operation into human beings). (Spanish Official Gazette -BOE- nº. 270, from 11/11/2006).
Meetings to analyze adverse events are part of the risk management system and of the training process at the HM. Good communication among the professionals involved on an occurrence is an important mechanism to prevent adverse events from happening again. Training results should be utterly transparent by setting multidisciplinary meetings and providing feedback by means of digital or paper printed documents.

While many reviews will identify the need of some changes on practices and systems which will improve the results without having to raise costs, some may require some actions that may imply higher assets. People in charge of the administration and management of centres must be informed of these requirements.

It is important that a consultant should document appropriately the adverse events. Abbreviations may be used at times when, once the information has been provided in full words, the abbreviation is placed in inverted commas. It is fundamental, not only for medical and legal reasons, but also to improve clinical practice, to have a system to document and registry all clinical decisions and adverse events. Data archive is vital. The archive of cardiotocographies, labour monitoring and anaesthesia sheets must be compulsory. A member of the staff of the HM, if possible the person in charge of risk management, must be responsible for guaranteeing that the appropriate methodology is observed.

Standards and results rules should be adopted, audited and published as a yearly report in line with the best practice on an online document which would include best practices. The report must include an assessment of the opinions of the women and relatives on the care received (satisfaction surveys) and must provide information about the regular review of the service provided and the risk management system.
5. Organization and Management

Hospital Maternities are defined as an organization of healthcare staff that provides multidisciplinary care to the parturient, the NB and the family during labour and delivery and that obeys functional, structural and organizational requirements so that it offers the appropriate safety, quality and efficiency conditions for the performance of this activity. Hospital care for Childbirth is based on a multidisciplinary work which includes midwives, nurses, and obstetric, neonatology and anaesthesiology specialists.

This chapter deals with the criteria and guidelines specifically aimed at the different characteristics of the HM: cooperation of the HM with other units, either within the hospital, healthcare centre or caring institution or, when necessary, with other services (public health, educational, etc.); service portfolio; organization and management of the HM and those aspects relating to patient management.

5.1. Different Care Levels at Hospital care for Childbirth.

Hospital care for childbirth means an end to pregnancy and is followed by the care process during puerperium, which begins after delivery. During the monitoring of the pregnancy, there must be a close cooperation between the primary healthcare level and the specialized care. There have been mentioned, in section 3.2., some aspects that are directly related to delivery and the right of women to choose during delivery. Moreover, during the pregnancy monitoring carried out at primary healthcare there should be identified if there is any risk during pregnancy or which may develop at labour, as the risk level will condition which HM must monitor and care the women during labour as well as the obstetric urgent procedures that may require transfer to hospital.

Risk during pregnancy may be classified in four different levels\textsuperscript{15}:

- **Low risk.** This group will be made up by the pregnant women in whom none of the risk factors that are defined in the following
sections may be identified. To consider a woman as “low risk” all risk factors should be appropriately investigated.

- **Type I risk or medium.** Within this group there will be included the pregnant women who show low sensibility and specificity risk factors (see annex 2). Risk factors of this type are rather common and are not generally associated with a negative result of pregnancy; however, their presence makes more probable the crop up of complications. These women do not need, as a general rule, highly specialized resources though they should be closely controlled at the outpatient pre-term obstetric consultation. Moreover, there are also included in this group some risk factors with higher sensibility and specificity but the pregnant women do not require close and personalized attention until the third quarter or even until labour. To control and monitor these pregnancies, it is generally enough with the staff and the equipment of the obstetric service of the primary healthcare centres. At exceptional circumstances or situations, pregnant women could be transferred to third level consultation.

- **Type II risk or high.** Pregnant women with rare risks but which show a great specificity and/or sensibility (annex 2). An increase on the possibility of complications of these women is rather high either during pregnancy or labour. Moreover, they generally need caring resources which are not generally available at primary healthcare and thus the whole process of monitoring should be carried out by a High Risk Obstetric Service or third level service since the beginning of the pregnancy or since the moment in which the risk factor is detected.

- **Type III risk or very high.** Pregnant women with very unusual risk factors but with high levels of sensibility and/or specificity. The conditions to which this group refers have been mentioned in previous risk groups (annex 2). However, these women generally require special care, high technology care resources, monitoring by the High Risk Obstetric Service and nearly constant hospitalization.

The classification of centres /HMs used by the “Estrategia de atención al parto normal en el Sistema Nacional de Salud” is based in the annual number of labours they care.

- Level 1: Centres with less than 600 childbirths.
- Level 2: Centres with more than 600 childbirths and less than 1200.
- Level 3: Centres with more than 1200 childbirths and less than 2400.
- Level 4: Centres with more than 2400 childbirths.

Within the Spanish National Health Service there seem not to be any relevant differences between the size and the typology of the hospital and the rate of abdominal deliveries and the rate on deliveries considered as “without any complication” (DRG 373)

<table>
<thead>
<tr>
<th>Table 5.1. Activity indicators, rate of Caesarean sections and of deliveries without complications of the Spanish National Health System. Hospital size.</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 200 beds</td>
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<tr>
<td>---</td>
</tr>
<tr>
<td>Cases</td>
</tr>
<tr>
<td>Total nº of stays</td>
</tr>
<tr>
<td>Av. stay</td>
</tr>
<tr>
<td>% Abdominal delivery</td>
</tr>
<tr>
<td>% Normal vaginal delivery (373)</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Table 5.2. Activity indicators, rate of Caesarean sections and of deliveries without complications of the Spanish National Health System. Hospital size.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Cases</td>
</tr>
<tr>
<td>Total nº of stays</td>
</tr>
<tr>
<td>Av. stay</td>
</tr>
<tr>
<td>% Abdominal delivery</td>
</tr>
<tr>
<td>% Normal vaginal delivery (373)</td>
</tr>
</tbody>
</table>


It seems advisable that those cases considered as risk II will be taken care by level 3 or 4 services and units, and risk III by level 4 services.

Analyzing the MDB of the Instituto de Información Sanitaria (Institute for Healthcare Information) of the Spanish Ministry of Health and Social Policy, there seems to be a negative relation between the lower
number of deliveries per year and one of the most relevant quality indicators for the HMs: the rate of Caesarean sections:\(^{(35)}\):

The comparison, depending on the hospital levels, of the rate of Caesarean sections, produces the following results (Student’s t-test, in bold the statistics values under 0.05) \(^{(36)}\):

<table>
<thead>
<tr>
<th>Hospital Level</th>
<th>Total no of hospitals</th>
<th>Total nº of hospitals</th>
<th>Rate % of C. sections</th>
<th>SD (+/-) % of C. sections</th>
<th>(&lt; 600: 600 - 1.200)</th>
<th>(&lt; 600: 1.200 - 2.400)</th>
<th>(&lt; 600: &gt; 2.400)</th>
<th>(600 - 1.200: 1.200 - 2.400)</th>
<th>(600 - 1.200: &gt; 2.400)</th>
<th>(1.200 - 1.400: &gt; 2.400)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 600</td>
<td>600-1200</td>
<td>1200-2400</td>
<td>&gt; 2400</td>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total no of hospitals</td>
<td>53</td>
<td>41</td>
<td>58</td>
<td>47</td>
<td>199</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rate % of C. sections</td>
<td>26,13</td>
<td>21,82</td>
<td>20,30</td>
<td>18,62</td>
<td>21,70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD (+/-) % of C. sections</td>
<td>10,60</td>
<td>5,34</td>
<td>4,98</td>
<td>4,62</td>
<td>7,35</td>
<td></td>
<td></td>
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<tr>
<td>&lt; 600: 600 - 1.200</td>
<td>0,01</td>
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<tr>
<td>&lt; 600: 1.200 - 2.400</td>
<td>0,0004</td>
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<tr>
<td>&lt; 600: &gt; 2.400</td>
<td>0,00001</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>600 - 1.200: 1.200 - 2.400</td>
<td>0,14</td>
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<td></td>
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<tr>
<td>600 - 1.200: &gt; 2.400</td>
<td>0,004</td>
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<td></td>
<td></td>
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<tr>
<td>1.200 - 1.400: &gt; 2.400</td>
<td>0,07</td>
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</tbody>
</table>

\(^{(35)}\) There have not been included, to make the comparison between hospitals, the DRG 650 and 651 (high risk Caesarean sections without complications) and DRG 652 (high risk vaginal delivery with sterilization and/or dilatation and curettage).

\(^{(36)}\) The analysis carried out at tables 3 and 4 has not included the data of the (6) hospitals with less than 10 childbirths per year.
The comparison, depending on the hospital levels, of the rate of eutocic deliveries, produces the following results (Student’s t-test, in bold the statistics values under 0.05)

| Table 5.4. Rate of eutocic labours depending on the hospital level. |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                                 | < 600           | 600-1200 <      | 1200-2400       | > 2400          | Total           |
| Total nº of hospitals           | 53              | 41              | 58              | 47              | 199             |
| Rate % of C. sections           | 56,32           | 60,75           | 58,78           | 55,00           | 57,66           |
| SD (+/-) % of C. sections       | 20,73           | 9,31            | 8,07            | 11,03           | 12,97           |
| < 600: 600 - 1,200              | 0,19            |                 |                 |                 |                 |
| < 600: 1,200 - 2,400            | 0,05            |                 |                 |                 |                 |
| < 600: > 2,400                  | 0,70            |                 |                 |                 |                 |
| 600 - 1,200: 1,200 - 2,400      | 0,28            |                 |                 |                 |                 |
| 600 - 1,200: > 2,400            |                 |                 | 0,011           |                 |                 |
| 1,200 - 1,400: > 2,400          |                 |                 | 0,05            |                 |                 |


The results produced by tables 3 and 4 show a higher rate of Caesarean sections (and a higher level of scattering) at hospitals with less than 600 childbirths per year than in other hospitals.

The “Estrategia de atención al parto normal en el Sistema Nacional de Salud”¹ foresees the set up of a study on the variability of the rate of Caesarean sections. It is recommended that on the next review of this document on standards and recommendations there should be carried out a report that would study the relationship between the volume of activity and the rate of Caesarean sections, and between the volume of activity and the perinatal morbidity and mortality.

In the United Kingdom and in Canada there is a different classification that includes the specific characteristics of the type of care and the staff availability:

- Level I: Rural hospital that provides care to normal labour without any risk factor and which generally does not have specialized staff.
- Level II: Regional hospital that cares low and high risk labours with the help of specialists. At these hospitals and at level I hospitals, consultants on call must show up in 30 minutes.
- Level III: Tertiary hospital that deals with high and low risk cases, with continuous physical presence, 24 hours, of staff of the service
of neonatology and anaesthesia.

According to the American College of Obstetricians and Gynaecologists, any hospital providing obstetric care should:

- Have available with the necessary promptness a specialist in anaesthesiology with the capacity to apply the regional and general anaesthesia techniques, whenever necessary.
- Have available an anaesthesiologist who will keep the vital signs in case of an obstetric emergency.
- Have the capacity to perform a Caesarean section in less than 30 minutes. In some specific cases, the specialist in anaesthesia should be available immediately, which will be established according to the different cases (local settlement).

At the same time, it is highly recommended the regionalization of neonatal care\(^{67, 68}\). The need to provide quality obstetric, neonatal and anaesthetic care with experienced staff (specialist in obstetrics, midwives, in neonatology and in anaesthesiology) during labour, Caesarean sections and the complications that may arise, forces to consider the benefits of providing the public with a care service versus the risks of a great volume of activity that does not guarantee an optimal quality of service.

It seems advisable not to provide with HM\(^{(37)}\) those hospitals that do not have a reference population (or with a market research that does not foresee it) that may bring up a request over 600 childbirths per year, except in those cases in which due to the length of the journey or to the accessibility may recommend it. Moreover, it is also advisable to review the quality indicators of the HMs with less than 600 childbirths per year and study the options (clinical management tools- guides, protocols and pathways-, care regionalization, better selection of the cases for their transfer to centres of a higher level, etc.) so as to correct those maternities that do have sub-optimal standards.

There should be transferred, on an urgent basis, to an obstetric unit:

- Preterm rupture of membranes.
- Genital blood loss.
- Suspicion for ectopic pregnancy.

\(^{(37)}\) There are experiences in Germany and in Great Britain, in small centres, run by midwives. The resource sizing of these centres, the equipment and the staff is not considered in this document on Standards and Recommendations for Hospital Maternities.
- Threat of preterm labour.
- Serious hypertension.
- Suspicion of foetal death.
- Persistent vomiting not responding to treatment.
- Temperature over 38ºC/100ºF without clear focuses.
- Strong and constant abdominal pain.
- Serious trauma.
- Other conditions that may bring up hospital admission.

When the mother and the NB are discharged from hospital their transfer to community care services should be planned so that they may have effective continuous care.

5.2. Service Portfolio

Service portfolio is defined as the “set of techniques, technologies and procedures, considering such as each of the methods, activities and resources based on knowledge and scientific experimentation, which make effective healthcare services”(38). A way of approaching the service portfolio of a hospital unit is to define the procedures it deals with, in accordance with the diagnosis and procedures codification of the International Classification of Diseases - DRG- used by the Instituto de Información Sanitaria (Institute for Healthcare Information) of the Spanish Ministry of Health and Social Policy which settles the weights of the DRG (AP DRG version 18). It has been decided to include the DRG 629, which refers to normal NB, who does not require admission at the unit of neonatology, as these processes are taken care of at the HM (annex 3).

This document recommends that the NB should be considered as a normal admission as the baby is liable to receive individualized care, independent from the care provided to the mother, requires caring resources and therefore should have a weight on the use of healthcare resources(39).

Another way, which may be a complement to the previous one, of specifying the service portfolio of the unit is to refer to the different caring possibilities and making specific reference to the most relevant techniques and procedures within them. An example of the obstetric service portfolio (Integral Management Area of the Obstetrics and Gynaecology service of the Costa del Sol Hospital) which is arranged by the different healthcare

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(38) Art. 2.1 of the RD 1030/2006, September 15th, “por el que se establece la cartera de servicios comunes del Sistema Nacional de Salud y el procedimiento para su actualización” (which settles the common service portfolio of the National Health Service and the procedures for its update).
(39) The Hospital Episode Statistics of England gathers these processes within the category of “Pre-term baby with a minor diagnosis and pre-term baby with several minor diagnosis”.

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*Hospital Care for Childbirth*
5.3. Criteria for Patient Admission

The criteria for the admission of the pregnant women in the maternity try to identify those women who are on active labour progress (regular uterine dynamics, cervical effacement > 50% and dilatation from 3-4 cm). To do so it may be useful the setting up of an action protocol so as to identify false labour prodrome and reduce unnecessary and early admissions of low risk pregnant women.

Exploration of the women who go under labour suspicion or labour prodrome may be carried out at the A&E service, though an increasing number of hospitals transfer these patients, as well as the other obstetric urgent procedures, to the HM, where there are located the consultations and the exploration cubicles, on direct circulation with the delivery area (maternity suite) being this behaviour advisable and so as to avoid, thus, their being cared at the hospital A&E service. The care process for emergency procedures at the delivery area includes the following sub-stages:

1. **Reception, registry and confirmation**: it includes the reception of all women who seek urgent healthcare at the delivery service and the registry or confirmation of the administrative information for the appropriate identification of the user.
2. **Classification**: it gives priority to the urgent processes according to the type of condition and its seriousness.
3. **Diagnosis and treatment stage** (caring): three circuits of care derived from the classification of processes as: critical, medical-surgical urgent conditions (urgent) and first level urgent conditions (care may be delayed and minor conditions are observed).
4. **Observation stage** (at beds and chairs at the labour room): it includes admission criteria of women in this area, with a maximum stay of 4 hours.
5. **Discharge stage**: it makes reference to the close up of any episode at the emergency service and it includes transferring the women to her home, hospital admission or transfer to any other centre.

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6. **Support to diagnosis and treatment**: interconsultation procedures, image diagnosis and analytic laboratory tests.

5.4. Structure and Typologies

Within the HMs in Spain there can be differentiated two types of units, depending on the way they clinically manage the caring process of labour and which condition the organization and management of staff as well as their physical structure and equipment:

- **Sequential**, defined by the different stages in which labour is divided (dilatation, expulsive and delivery) as well as the recovery, which are carried out in specific areas: pre-labour rooms, labour rooms, postpartum recovery rooms and maternity/puerperal wards. This is the typology adopted in Spain and the most frequent.

- **Integrated**, the whole process of labour (dilatation, expulsive, delivery and recovery) is carried out in an integrated area: the labour, delivery, recovery and postpartum rooms (LDRP). This type of area is not common in Spain though it is being quickly\(^{41}\) introduced, as it interferes less with the requirements of all the processes of labour and offer more comfort for women and their escorts. LDRP are the most common type of areas in the United States and in the United Kingdom\(^{11, 28}\).

In the United Kingdom, the **LDRP** (*Labour, Delivery, Recovery and Postpartum rooms*) are designed to accommodate the woman, the NB and the escort until the woman is discharged from hospital, generally 36 to 48 hours after delivery (though there are some experiences of early discharges - 8 hours). The LDRP which have been designed in Spain have been conceived to accommodate the women until delivery, the adaptation of the NB to extra uterine life, the skin-to-skin contact and the first feed, as well as for a stage of 1-2 hours of maternal recovery until being transferred to a bed at conventional hospitalization at the obstetric unit.

\(^{41}\) Among other: Functional programme of the new Hospital Central de Asturias (2003); Functional Programme of the new Hospital de Vigo (2006); Redesign of the obstetric suite of the Hospital Costa del Sol (Marbella).
5.5. Organization and Management of the HM

The description and organization of the HM is arranged in relation to the care process to the woman and the NB:

- Care to woman: access to the unit, stages of labour (dilatation, expulsion and delivery); recovery and discharge.
- Care to the NB: birth, recovery and discharge.

5.5.1. Access to the HM

The women may access the HM on an urgent basis (the most frequent) when recognizing the first signs of labour or transferred from other units. When scheduled, they may access the HM for birth induction or scheduled Caesarean section. Section 5.3. refers to the process of accessing the HM.

When admitted, the woman will undergo the usual clinical and obstetric assessment:

- Particulars/identification of the women.
- Assessment of the obstetric conditions.
- Risk assessment.
- Assessment of the emotional situation of the woman, needs, existence or not of a form of preferences in relation to labour and birth and selection of escort.
- Vital signs check up.
- Vaginal exploration, if there are not any contraindications
- Check up of the foetal situation.
- Check up of previous tests and carry if necessary the appropriate research (group and Rh, serologic tests, etc.)

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(42) The NB suffering from any condition is cared at the unit of neonatology which is not included in the HM, even though it must be physically closed to it. On the HMs placed at centres in which there is not a unit of neonatology it should be foreseen: 1- those risk deliveries, so that they may be cared at a high risk HM (see section 5.1), at hospitals with units of neonatology; and 2. a system for urgent transfer to hospitals with units of neonatology, for those unforeseen cases.

(43) See, for example, the NICE Clinical Practice Guides31,32.

(44) See, for example, the NICE Clinical Practice Guides31,32.

(45) Coagulation tests are not necessary to healthy women without any previous symptom of coagulopathy or blood dyscrasia.
5.5.2. Labour 15, 16, 31, 32, 35

Hospital Maternities must have a caring protocol which will vary depending on each type of delivery, the way it evolves and the structural and management characteristics of each centre, which will allow establishing the planning and the actions of all the staff related to the care to the pregnant woman.

Under the “Estrategia de atención al parto normal en el Sistema Nacional de Salud” it is being drawn up the “Guía de Práctica Clínica (GPC Asistencia al parto)” (Clinical Practice Guide [CPG - Labour care practice). The guide to labour works as a monitoring system of the whole labour process at the HM and, thus, of the physical resources and of the equipment and staff it requires. In September, 2007, the NICE published a clinical guide of labour29, 30 which is currently being updated. The mentioned guides, as well as the several rules and standards included in this document, may, among any other sources, work as reference for the HMs staff for preparing their own protocols, guides and pathways to the caring process to normal childbirth, to the complications of delivery, Caesarean sections and its complications, as well as to the attention to the NB. Annex 5 includes these recommendations as far as some perinatal practices included in the “Estrategia de atención al parto normal en el Sistema Nacional de Salud” are concerned.

The clinical pathways are a clinical management instrument that each hospital must develop for the most frequent processes, among them delivery and Caesarean section.(46).

Parturient women must receive labour pain relief possibilities, either by means of non pharmacologic methods, or by means of systemic or neuroraxial analgesia, depending on the woman and on her preferences, on the availability of the method at the hospital, on the obstetric circumstances and on the medical conditions.

In 2007 a group of experts of the American Society of Anaesthesiologists published at Anaesthesiology a set of guidelines for the practice of obstetric anaesthesia and whose main conclusions may be used in our environment(69).

5.5.3. Caesarean sections and other surgical procedures

Either under schedule or after being considered on an urgent basis during labour, the Caesarean section is a surgical procedure which should be carried out at the operating theatres integrated in the unit where other surgical procedures related to labour are performed. What is more, the HM should count with an operating theatre for urgent procedures which could be used on an urgent basis. It is recommended to keep the NB with the mother on skin-to-skin contact as soon as possible.70 Whenever possible, the father or escort would be allowed by the mother at the operating area, during the whole process and with the appropriate safety measures.

5.5.4. Recovery at the ward34

Apart from the caring model most common in the United Kingdom where healthy mothers and NB are discharged directly from the LDRP rooms, at the Spanish HMs, either on a sequential basis (pre-labour room, labour room, and recovery room) or on an integrated model (LDRP) once the delivery has finished (two hours after delivery) or from the post-anaesthesia care unit (Caesarean sections, other surgery procedures) both the mother and the healthy NB are transferred to conventional hospitalization obstetric ward. At this unit the mother recovers from the efforts of labour and receives the necessary care: vital sign monitoring and clinical signs (bleeding, uterine involution…); the support for the start and holding of the breastfeeding and on the interaction mother-NB; the early diagnostic of puerperal infections; and, when needed, the necessary care on the episiotomy or the wound of the laparotomy is provided.

At the unit for obstetric hospitalization, the mother and the father or the escort will be encouraged to take care of the NB with the help of the caring staff, so that they may acquire the necessary abilities and may have an important role on the care process of their son/daughter from the first moments of his/her life at an intimate and family atmosphere.

Special attention will be provided at the beginning of breastfeeding and the first contact mother-NB will not be interfered so as to prevent complications such as chaps, ingurgitation, mastitis and hypogalactia.

Wandering will be encouraged as soon as possible and the necessary advices on hygiene, breastfeeding and care will be provided, by a personal/group oral explanation and by means of leaflets which could be easily understood.

The caring activity at the different premises of the Obstetric Unit
implies an appropriate coordination with the Central Services as well as with the other hospital services and especially with the service of Anaesthesiology and the Unit of Neonatology.

At the hospitalization ward there should be protocols including the following:

- Reception and introduction to the mother.
- Operation rules.
- Form filing.
- Criteria for the identification of the parturient, the NB, the record and the Baby’s Health Record.
- Assessment of the condition of the mother and the NB.
- Care during immediate and early puerperium: clinical assessment (uterine involution, condition of the lochia, haemorrhage, blood pressure, pulse and temperature and assessment of the condition of the episiotomy, if needed) and evaluation of the state of mind of the mother.
- Promotion of breastfeeding: activities for the early promotion and support, healthcare education and self-care.
- Active role of the father in the care of the NB.
- Care to the mother and the NB.
- Early discharge criteria agreed by the services of Paediatrics and Gynaecology.
- Information about family planning and monitoring of child’s health at Primary Healthcare.
- Coordination and monitoring after being discharged.

5.5.5. Care to the NB at the ward\textsuperscript{16, 71}

The length of the hospital stay after delivery will not be any longer than necessary and during the stay the unit of neonatology will be in charge of the NB, planning his/her later care and carrying out the corresponding screening tests (hearing, congenital metabolic failures, congenital hypothyroidism, phenylketonuria, etc.). There will be the necessary resources available to carry out all the tests and examinations in front of the parents, when possible, as rules the Charter for Children in Hospital\textsuperscript{(47)}.

There would be caring protocols to the NB that would include the following:

• Clinical assessment of the NB.
• Hypacusia screening.
• Metabolic diseases screening.
• Vitamin K and gonorrhoeal ophthalmia prophylaxis.
• For mother carriers of HBsAg, administer specific gamma globuline.
• Administer, all NB, the first dose of the Hepatitis B\(^{(48)}\) vaccine.
• Encourage and provide instructions for breastfeeding and provide help on the first feeds.
• Issue the Baby’s Health Record.
• Coordination and post-discharge mechanisms. Recommendations so that the NB receives medical care in the first 5-7 days of his/her life.

The American Academy of Paediatrics has published a set of requirements for the discharge of the healthy NB within the 48 hours after normal childbirth\(^{73}\).

5.5.6. Discharge from the HM

The mother and/or the father will receive the necessary information and training before being discharged on the following:

• General hygiene.
• Rest of the mother.
• Aid to breastfeeding, if the baby is on breastfeeding.
• Exercises for the recovery of the perineum and circulatory and abdominal exercises.
• When necessary, episiotomy care instructions.
• Sexual activity.
• Birth control and appointment for the family planning programme and early diagnosis of cervix cancer, if necessary.
• Weight of the NB when discharged and care instructions.
• Sampling for metabolic screen.
• Appointment for the vaccine programme and child health monitoring.
• Risk assessment and transfer, if needed.

\(^{(48)}\) Interregional Board of the Spanish National Health Service. Recommended Vaccine Agenda. Passed by the Interregional Board of the Spanish National Health Service, at the meeting on October, 10th, 2007. There may be some differences depending on the regions.

(http://www.msc.es/ciudadanos/proteccionSalud/infancia/vacunaciones/programa/vacunaciones.htm)
When discharged:

- Handling of the discharge report, Baby’s Health Report, and sheet of care continuity.
- Provide information about the puerperal visit to primary healthcare services.
- Encourage the relation with primary healthcare services for the post-labour monitoring and for the monitoring of the NB, the home puerperal visit, the family programme planning, the Baby’s Health programmes, vaccines and metabolic diseases.
- Encourage mothers to get in touch with breastfeeding support groups.

A continuous medical care purveyor is identified for the mother and the child. An appointment must be settled for the control of the NB 48 hours after discharged. The aim of that control is:

- To weight the NB, assess his/her general health condition, hydration, jaundice, identify any new problem, review the feeding pattern and technique, including the observation of one of the feeds and obtain a pattern record of urination and defecation.
- Assess the quality of the interaction mother/father/child in the care of the baby, mainly as far as feeding is concerned.
- Review the results of the test carried out before discharge.
- Perform screening test settled by healthcare authorities.
- Verify the baby care plan (check ups, vaccines, etc.)

5.6. Organization and management structure of the HM

On the basis of the needs derived from the care process to delivery, there are considered as fundamental requirements of the HMs the following:

- The coordination with the primary healthcare level and, when needed, with the social resources available, for the monitoring of the pregnancy and of the puerperium and for the check up of the NB.
- The operation of the HMs 24 hours a day, 365 days per year.
- The presence of an obstetrician in charge of the unit with a work load not under 35 hours/week. Moreover, there will be a Head of Midwifery of the HM.
5.7. Organization and operation manual

The HM should have an organization and operation manual including:

a) Organizational chart of the unit.
b) Service portfolio.
c) Details of the physical layout of the unit and its structural resources and equipment.
d) Regulations and operations manual on:
   - Care protocol to “normal childbirth”, epidural anaesthesia, labour complications, scheduled Caesarean section, etc, as well as the post-labour care, both for the mother and the NB34.
   - Description of every of the actions of the caring process, with the involvement of each consultant in every of the stages. The manual will observe the general organization requirements previously described.
The manual should be open and subject to review and update, incorporating any changes made in the service portfolio or, when required, any structural and functional changes.

A. Organizational chart

There will be a head of the doctors and a head of the midwifery.
Responsibilities, hierarchies, tasks and competences of each of the staff members of the HM should be clearly defined (see chapter 7)

B. Service portfolio

The service portfolio of the HM may be settled in two complementary ways:

- Care possibilities offered (See example, annex 4).
- Procedures it carries out.

C. Physical layout of the unit

The organization and operation manual must include:

- The physical layout of the HM and its relationship with other areas of the hospital.
- Structural resources available at the HM and the equipment available.

D. Regulations manual

The HM must have a regulations manual adapted to the organizational requisites that orderly describes each stage of the care process, the necessary protocols, the point of introduction on the circuit and the reporting chains of each action.

Below, there are provided the structural and organization requisites and the protocols that take part on the care process following the patient flow scheme described in section 5.5:
Table 5.3. HM healthcare regulations.

<table>
<thead>
<tr>
<th>Stage of the process</th>
<th>Action</th>
<th>Structural requisites</th>
<th>Protocols</th>
<th>Staff</th>
</tr>
</thead>
</table>
| Access               | • Reception of the mother at hospital.  
                     • Go with the mother and relatives to the area of obstetric emergencies.  
                     • Reception at the ward of obstetric emergencies. | • Reception\(^{(49)}\).  
• Computers.  
• Computer net.  
• Common CR.  
• Direct phone.  
• Intercom with on-duty staff. | • Admission.  
• Clinical record. | • Orderly.  
• Administrative assistant.  
• Midwife.  
• Nurse assistant. |
| Clinical assessment of the mother | • Obstetric examination: abdominal examination and, if needed, assessment of the uterine dynamics.  
• Foetal auscultation.  
• Vaginal palpation, if needed.  
• Amnioscopy, in accordance with the labour protocols.  
• Data registry at the clinical record. It should be included, at least, group and Rh, HBsAg, group B streptococcus detection at vagina - rectum and coagulation test for epidural analgesia\(^{(50)}\).  
• Informed consent (if needed).  
• Clinical assessment for diagnosis and treatment.  
• Encourage discharge at latent stage or pre-labour at the beginning of labour at normal pregnancies.  
• Hospital admission advice. | • Consultation and examination.  
• Day Hospital. | • Normal childbirth.  
• Medicalized labour.  
• Other. | • Midwife.  
• Obstetrician. |

\(^{(49)}\) The Emergency Room of the HM is generally placed by the obstetric suite, so that the parturient women do not have to stay at the general emergency room of the hospital.  
\(^{(50)}\) Suitably controlled during pregnancy.
If admitted: **to LDRP, to pre-labour room or to the surgical suite.**

<table>
<thead>
<tr>
<th>Stage of the process</th>
<th>Action</th>
<th>Structural requisites</th>
<th>Protocols</th>
<th>Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>To LDRP</strong></td>
<td>• Dilatation, expulsion, immediate recovery and care to the NB in the same premises.</td>
<td>• LDRP rooms.</td>
<td>• “Normal” labour.</td>
<td>Midwife. Obstetrician. Anaesthesiologist. Neonatologists. Consultants.</td>
</tr>
<tr>
<td></td>
<td>• Discharged and transferred to conventional hospitalization.</td>
<td>• By the surgical suite, the obstetric suite or the general hospitalization.</td>
<td>• Medicalized labour.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• If necessary (complications) transfer to the surgical suite.</td>
<td>• Protocol for analgesia.</td>
<td>• Complications.</td>
<td></td>
</tr>
<tr>
<td><strong>To pre-labour room</strong></td>
<td>• Reception and preparation of the mother for the dilation stage.</td>
<td>• Pre-labour room.</td>
<td>• “Normal” labour.</td>
<td>Midwife. Obstetrician. Anaesthesiologist. Neonatologists. Consultants.</td>
</tr>
<tr>
<td></td>
<td>• Apply pain relief protocols.</td>
<td></td>
<td>Medicalized labour.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Dilatation.</td>
<td></td>
<td>Labour with epidural analgesia.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Assessment of the mother and the NB: problem identification, care planning, information and clinical surveillance.</td>
<td></td>
<td>Protocol for analgesia.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• If necessary (complications) transfer to the surgical suite.</td>
<td></td>
<td>• Complications.</td>
<td></td>
</tr>
<tr>
<td><strong>Labour room</strong></td>
<td>• Care on expulsion stage.</td>
<td>• Labour room</td>
<td>• Care protocol to the NB.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• If necessary (complications) transfer to the surgical suite.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>• Care to the NB.</td>
<td></td>
<td></td>
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<tr>
<td><strong>Post-labour control room</strong></td>
<td>• Care to immediate postpartum.</td>
<td>• Post-labour control room</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>• Discharged to conventional hospitalization.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• If necessary (complications) transfer to the surgical suite.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage of the process</td>
<td>Action</td>
<td>Structural requisites</td>
<td>Protocols</td>
<td>Staff</td>
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<tr>
<td>----------------------</td>
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</tr>
<tr>
<td>To surgical suite</td>
<td>• Scheduled surgical procedures (scheduled Caesarean sections), or urgent procedures (from the obstetric emergencies area or derived form vaginal delivery).</td>
<td>• Surgical suite (includes awakening and Post Anaesthesia Care Unit).</td>
<td>• Protocols of specific surgical procedures.</td>
<td>• Obstetrician.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Anaesthesiologist.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Nurses.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Nurse assistants.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Other consultants (surgical or not).</td>
</tr>
<tr>
<td></td>
<td>• Care to the NB.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Care to the NB.</td>
<td></td>
<td></td>
<td>• Neonatologist.</td>
</tr>
<tr>
<td></td>
<td>• Neonatologist.</td>
<td></td>
<td></td>
<td>• Midwife.</td>
</tr>
<tr>
<td>Conventional hospitalization</td>
<td>• Admission at puerperal hospitalization ward.</td>
<td>• Nursing areas at conventional hospitalization (if possible, single bed rooms).</td>
<td>• Immediate care to post-labour protocol.</td>
<td>• Midwife.</td>
</tr>
<tr>
<td></td>
<td>• Care delivery during immediate puerperium.</td>
<td></td>
<td>• Care protocol to the NB.</td>
<td>• Obstetrician.</td>
</tr>
<tr>
<td></td>
<td>• Care to early puerperium.</td>
<td></td>
<td>• Maternal breastfeeding protocol.</td>
<td>• Neonatologist.</td>
</tr>
<tr>
<td></td>
<td>• Quality control of analgesia.</td>
<td></td>
<td>• Discharge of puerperal woman and of the NB protocol.</td>
<td>• Anaesthesiologist.</td>
</tr>
<tr>
<td></td>
<td>• Care to the NB.</td>
<td></td>
<td></td>
<td>• Nurses and nurse assistants.</td>
</tr>
<tr>
<td></td>
<td>• Discharge.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5.8. Patient management

5.8.1. Admission

Admission will be part of the general admission procedures of the centre. However, activities and functions related to it should be, ideally, performed by the administrative support units of the HM. All aspects relating to the clinical records, discharge report and data protection belong to the general hospital the HM is related to.

5.8.2. Documentation and clinical record

Clinical documentation refers to the documents resultant from the care process, regardless their format or medium. Among others it will be included: clinical record of the mother and of the NB, registries during labour and procedures performed, discharge of the women and of the NB and care continuity plan.

It is recommended that the Ministerial Order on “Obligatoriedad del Informe de Alta” (compulsoriness of the discharge report) will also be applied to the NB who should had a clinical record opened and whose discharge should be registered in the registry of discharges (MDB) of the Spanish National Health Service.

Clinical documentation will be handled by the admission and clinical documentation unit or equivalent. Handling will involve creation, safekeeping, lending, copying, follow-up and processing of any clinical document.

Clinical documentation must be kept so as to ensure correct and safe conditions for an appropriate period of time, and at least for five years from the date of completion of the corresponding care process.

5.8.2.1. Clinical record

Each patient must have and individual clinical record which would be shared between medical staff, healthcare centres and healthcare units. Moreover, it should respond to the technical compatibility requirements established by each regional health authority.

Clinical records may be in paper, digital, electronic or telematic format; they must guarantee complete access to all information at all times. As far as the design, minimum content, requisites, guarantees and uses of clinical records are concerned, the provisions of the Act 41/2002 (November 14th) on “Autonomía del Paciente y de Derechos y Obligaciones en Materia
de Información de Documentación Clínica” (Patient Autonomy Rights and Obligations regarding Clinical Documentation and Information) shall apply.

Each healthcare centre must have a unique clinical record register which will centralize all the data of the activities performed at the centre. This register will be managed in accordance with a protocol that guarantees that the information can be traced and located, and that it includes written criteria on document filing, safekeeping and access.

5.8.2.2. Discharge report

Upon completion of the care process or transfer to another healthcare centre, the woman is entitled to receive the medical discharge report, issued by the HM, contemplated in the “Ley reguladora de la autonomía del paciente y de derechos y obligaciones en materia de información y documentación clínica(51)” (Act on Patient Autonomy Rights and Obligations regarding Clinical Documentation and Information). It is recommended that a discharge report will be issued for the NB.

5.8.3. Health data protection

5.8.3.1. Obligations and rights

Personal data related to the health of the mother and the NB are classified as special protected data in contemplation of the Organic Law 15/1999, December 13th on “Protección de Datos de Carácter Personal, LOPD” (Persona Data Protection).

Healthcare centres shall take all the organization, procedural and technical measures necessary to guarantee the safety, confidentiality and integrity of all data regarding patient health and to facilitate the exercise of the right to access, rectification and cancellation of such information.

5.8.3.2. File manager

Centres and institutions shall ensure that all files, automated or not, are kept safely and in good condition.

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(51) Single transitory provision. Discharge report. “El informe de alta se regirá por lo dispuesto en la Orden del Ministerio de Sanidad, de 6 de septiembre de 1984, mientras no se desarrolle legalmente lo dispuesto en el artículo 20 de esta ley”. (Discharge reports shall be governed by the provisions of the Ministerial Order of the Ministry of Health of September 6th 1984, until the provisions of article 20 of the present law are developed).
All healthcare centres shall designate a file manager to be in charge of files, appointment which will be notified to the corresponding authorities. The file manager as well as those involved at any point with the processing of patient data shall comply with the professional secrecy rule.

5.8.3.3. Data confidentiality

Any woman and any child are entitled to confidentiality about their health state according to the provisions of the “Ley Reguladora de la Autonomía del Paciente y de Derechos y Obligaciones en Materia de Información y Documentación Clínica” (Act on Patient Autonomy Rights and Obligations regarding Clinical Documentation and Information).

5.8.3.4. Data transfer

Any transfer of patient data needs the express content of the people involved with the exemptions contained in the health and data protection legislation.

5.8.4. IT system

IT system will be part of the hospital general IT system and it should meet the HM requirements:

- Patient management:
  - Type of insurance.
  - Appointment.
  - Admission.
  - Discharge and codification.
  - Clinical record management.
- Clinical workstation:
  - Electronic patient record.
  - Departmental applications (laboratory, image diagnosis...).
  - Within the departmental applications there are obstetric monitoring systems as well as perinatal information systems.
- Economic and administrative general services management ( ):
  - Storeroom (supply agreements, inventory management, purchase orders, etc.).

(52) Economic and administrative management will be centralized, though some administrative procedures will be carried out at the HM.
• Pharmacy (Electronic prescription system; unit-doses; conciliation system).
• Accounting.
• Sterilization.
• HR management (short-term disabilities, incidents, leaves, substitutions, etc.).

• Assessment (management):
  • Costs per procedure (cost accounting).
  • Satisfaction surveys.
  • Activity indicators.
  • Quality indicators.
  • Performance indicators.
6. Physical Structure and Material Resources

This chapter is dedicated to the criteria and recommendations related to the structural and functional conditions of the HMs: its functional programme, its equipment and its facilities. Annexes 6 and 7 of this document on Standards and Recommendations provide some aspects closely related with this chapter: resource sizing (annex 6) and an example of a functional design programme (annex 7).

6.1. Functional Design Programme for the Obstetric Suite

Each HM should have its own functional programme defined in accordance with the organization structure which has been described in chapter 5 of this document.

The functional programme will include the identification of the necessity criteria of the different healthcare possibilities included in the service portfolio of the unit, including the following aspects:

- Demographic analysis of the surrounding area (with special reference to the population included in the patient source area and the selection criteria of its users).
- Study of the theoretical demand of each of the care possibilities of the HM. For recently created centres it should be taken into account the unit’s market penetration capacity once it is fully operational.
- Analysis of the architectural infrastructure where the activities of the HM will be carried out (either for the settlement of a new structure or for the modification of a previously existing one).
- Analysis of the production capacity, depending on higher or lower levels of efficiency.
- Study of the requirements of staff and equipment, depending on demand, on the foreseen activity and on the service portfolio of the hospital where the HM is settled.
• Definition of the functioning criteria with specific references to the regulations manual, and itemizing the circulation flows of patients, staff, relatives and supplies.

• Set up of the caring flows - functional arrangement (access of patients, clinical assessment of patients, care at labour room/LDRP and flow within the HM, care to the NB, conventional hospitalization, discharge, etc.) and the functional relationship with the other units of the hospital.

• Functional programme, depending of the sizing and the specific characteristics of its organization.

• Economic study which will include not only the amount of the foreseen investment for infrastructure and equipment, but also the calculation of the common operational expenses for staff, supplies and maintenance necessary for the appropriate development of its activities, and the economic and healthcare impact of its operation on the healthcare organization on which it depends.

6.1.1. General remarks

The aim of the functional design programme will be to set up a specific environment, appropriate to the characteristics of the users cared at the unit and to the type of care they have to receive, with the equipment and facilities suitable to its service portfolio and which will allow scheduling its activities in the adequate way to optimize the care provided.

The structural characteristics of the HMs are determined by its caring objective. It should thus be considered as a unit that provides multifunctional care to the parturient, the NB and the family on labour and delivery and that obeys a set of functional, structural and organizational requirements so that the appropriate safety, quality and efficiency conditions for the performance of this activity are observed. As it has been mentioned on section 5.4 of this document of standards and recommendations, there are different ways to manage clinically the caring process for labour, each being different as far as physical, structural, facilities and necessary equipment is concerned. In Spain, the typology includes, basically, two different models, sequential and integrated, and which provide different functional solutions for the same sequence of clinical acts and which thus imply a different architectonical set up. The criteria and recommendations for the functional programme of the HM which is provided below correspond to the organization and management included in section 5.5 of this document and involve, in
principle, both types of care possibilities to delivery so that, when necessary, there are clearly specified the differences between both of them and the particular requirements, advantages and disadvantages.

The care process to delivery is, thus, the point of reference for the development of the physical structure of the HM, whichever its typology. As it has already been pointed out, it includes the following stages:

- Admission in the unit.
- Clinical assessment of the pregnant mother with the suspicion of being into labour.
- Labour:
  - Dilatation.
  - Delivery.
  - Expulsive.
- Caesarean section and other surgical procedures, when needed.
- Recovery of the mother.
- Care process to the NB.
- Discharged from the unit.

According to this functional programme, the care process to the mother and the NB needs appropriate areas for:

- Admission and clinical assessment of the mother that attends the HM under the suspicion of being into labour or with labour prodrome.
Access to the HM may be scheduled or urgent. In the first case the woman will arrive to the unit for birth induction or scheduled Caesarean section; in the second case, the most common, she will arrive under her own consideration, after recognizing characteristics signs of active labour progress or transferred from other units.

Even though the examination of the woman who arrives to the unit with the suspicion of being in labour might be carried out at the A&E service, hospitals more frequently tend to have at the HM the necessary resources available for these users, as well as for the other obstetric urgent procedures, so that, and without being detrimental to the promptness of care, that in most of these cases has to be provided, a comprehensive care to labour may be offered.
Labour, which includes the stages of dilatation, expulsive, delivery and recovery.

For those cases in which admission for labour has been recommended, the woman will access directly to the obstetric unit, whose structure will be determined by the type of care process to labour:

- Sequential: there will be premises specially allotted for the different stages of labour: pre-labour rooms, labour rooms and recovery rooms.
- Integrated: the whole process will be carried out in the same physical area: the LDRP rooms.

Whichever the organization model, it will be “ideally (...) that the whole process will occur on a single architectonic area so that the woman is not bothered and to avoid her transfer in a very delicate moment at a hormonal and emotional level, which is the beginning of the expulsive”72.

Taking into account this point of view, even in an obstetric suite on a sequential basis, the expulsive may be conducted at the pre-labour rooms, if labour is eutocic, or, in case of complication, at a labour room or an operating theatre, if needed.

Obstetric suites with LDRP rooms give the possibility that all aspects relating to dilatation, delivery and postpartum may be carried out on the same room, which provides some advantages in relation to the traditional system: unnecessary circulations are avoided, the whole process is simplified, and, above all, the environmental conditions of the mother improve.

- Caesarean sections and other surgical procedures.

An important number of the mothers cared at the HM need surgical procedures. Caesarean sections, either scheduled or prescribed on an urgent basis during labour, is the most common procedure, even though other mayor procedures are also performed directly related to labour.
Therefore, the availability of a surgical area is a key factor of the necessary resources of the obstetric care that, in principle, might be integrated within the physical structure of the unit or be located within the general surgical suite to which, once surgery is prescribed, the mother should be transferred. To this respect, it should be taken into account that, apart from the frequency of the surgical episodes of the conditions dealt with at the HMs, most of them are urgent and they can occur at any time and, in many occasions, require immediate care.

The design of the surgical area must allow the functional flow and arrangement so that other circuits and processes related to pregnancy might be easily managed and thus the circuit of the normal flow is not influenced with the management of mourning or with any other process.

- Recovery of the mother and of the healthy NB.
  At the hours after labour, or once the mother who has undergone Caesarean section has left the Post Anaesthesia Care Unit (PACU), the care that the mother and the baby need do not require, unless there are any complications, other resources different from the habitual ones provided at conventional hospitalization.
  At the sequential obstetric suites, women and healthy NB have to stay necessarily at a conventional hospitalization obstetric unit, as the suite does not have the resources for their care during puerperium. At the integrated suites, however, it may be considered the possibility of setting up LDRP units (labour, delivery, recovery and postpartum) where both may stay until discharged\(^{(53)}\) or LDRP units

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\(^{(53)}\) As it has been mentioned before, the LDRP rooms are the most common model in the United Kingdom.
(labour, delivery and recovery) and thus they will have to be later admitted at a unit for conventional obstetric hospitalization.

Whichever the disposition of the obstetric suite, the units for conventional obstetric hospitalization will be preferably located at the hospitalization area, and will have similar conditions to the multi-purpose units, even though they will be distributed in such a way that, when possible, there are encouraged the recommendations on early mother-NB contact and the post-labour practices of the “Estrategia de atención al parto normal en el Sistema Nacional de Salud”, mainly the eradication of the baby wards at hospitals(54).

This set up implies some determining factors that condition the ideal location of the HM in a general acute hospital. On the one hand, the reception, directly on the unit, of the mothers that go into hospital under the suspicion of labour or with labour prodromes implies making access from the outside easy. On the other hand, it should be taken into account that those users cared at the HMs need, often, diagnostic and/or therapeutic resources which are not included in the service portfolio of the unit implying their being transferred to other units or services of the hospital in a situation in which it is advisable to reduce circulations so as to guarantee promptness, should the need arise. It is particularly important, too, the proximity of the obstetric hospitalization and neonatology areas.

The design of the HM should encourage a relaxing and quiet atmosphere appropriate to keep the intimacy and dignity of the woman and to allow, whichever the type of the obstetric suite, the circulation of users among the different caring areas. The easiness of circulations around the unit is also necessary for staff and for the distribution of supplies, and the main flows should be planned in such a way that circulations are minimized, avoiding, whenever possible, unwanted possible crossings and time loss.

The obstetric suite should be well signposted, easily accessed from the outside, both for users and escorts and for healthcare staff, supplies and support services; and it should be well communicated with the units for obstetric hospitalization, neonatology and the main diagnosis areas.

6.1.2. Structural aspects of the HMs.

These units need, as it has already been stated, a series of structural resources, facilities and equipment which will be directly related with the characteristics of the clinical activity included on its service portfolio and

(53) As it has been mentioned before, the LDRP rooms are the most common model in the United Kingdom.
with the necessary level of autonomy, in relation to the existing resources of other services and units of the hospital.

This section includes the general criteria for the functional design programme of the HMs while on annex 7 of this document there is a “standard” functional design programme for a unit with integrated premises for delivery, with a theoretical resource sizing of 2000 childbirths/year.

The physical structure of the HM should adapt to the set of activities described in the previous section, even though the functional solution will be different depending on the typology of the obstetric suite, if it is a sequential unit or an integrated one. Below it is included a description of the main structural and functional characteristics of the physical areas in which these activities are carried out, based on the ideal circulation of users and in the sequence of acts carried out in each of the mentioned models\(^{(55)}\). This sequential model, depicted on the schemes provided below, should be the guideline of the architectonic design of the unit even though it will obviously adapt to the previous structures from which it starts but keeping, whenever possible, the circulation flows that set up the basis for a well planned unit.

\[\text{Figure 6.1. Sequence of activities of a HM with an integrated obstetric suite.}\]

\(^{(55)}\text{The functional programmes provided hereby include the recommendations provided in the previous section:}\)

1. The pregnant women with the suspicion of being on labour attends directly the obstetric suite, where the reception and the necessary resources for the clinical examination are located.
2. If after their clinical examination admission is recommended, the parturient enters directly to the LDRP rooms or to the pre-labour rooms, depending on the sizing of the suite, from the consultation or the examination cabinets.
3. The surgical area allotted for obstetric care, includes all the necessary resources for preparing the women, for their awakening and for the recovery from anaesthesia are integrated within the physical structure of the obstetric suite.
4. The unit for conventional obstetric hospitalization is placed in the hospitalization area and has similar conditions to those of polyvalent units, even though they will be distributed in such a way that, whenever possible, there are encouraged the recommendations on the early mother-NB contact and the post-labour practices of the “Estrategia de atención al parto normal en el Sistema Nacional de Salud”, mainly the eradication of the baby wards at hospitals.
As it might be seen, there are two physically differentiated areas, though closely related: the obstetric suite and the conventional hospitalization unit. The functional design of each identifies homogeneous zones depending on the type of activities to which they provide support, gives specific details about the premises they are made up of, and specifies the most important physical and functional characteristics.

6.1.2.1. Obstetric suite

It is considered as the physical area in which care to the mother who is about to give birth is provided, and it includes the admission and clinical assessment of the mothers that go to hospital with the suspicion of being in labour or with labour prodrome, the examination and the control to the parturient, the dilatation and delivery, as well as the process of care and resuscitation to the NB and the immediate postpartum. All the obstetric urgent procedures will be taken care of at the obstetric suite, and there will be an area for surgery allotted with the necessary resources to respond to the surgical procedures related with delivery and included in the service portfolio of the HM.

As it has been stated before, the structural requirements of the obstetric suite are different depending on its typology. The schemes shown on figures 6.3 and 6.4 illustrate the areas which comprises the obstetric suite at an integrated HM and at a sequential HM.
When designing the obstetric suite, the following specific aims are taken into account:

- Get a nice atmosphere, non-medicalized and comfortable where the woman might feel relaxed and safe instead of exposed and observed.
- Minimize the distances and circulations on the different stages of pre-labour, labour and post-labour, as well as reduce the distances with the obstetric conventional hospitalization and neonatology.
- Start actions that belong to the current demand, included within the document “Estrategia de atención al parto normal en el Sistema Nacional de Salud” as water pools\(^{(56)}\).
- Avoid work overload on certain premises and areas that suffer strong pressure as pre-labour rooms, admission, and areas for relatives and other areas which are not enough exploited by means of a functional organization that will not interfere in the user’s circuit.
- Encourage mothers to meet as a means of support to immediate postpartum.

\(^{(56)}\) Women should be informed that there is insufficient high-quality evidence to either support or discourage living birth in water. (Intrapartum care. Care of healthy women and their babies during childbirth. National Institute for Health and Clinical Excellence. NICE clinical guideline 55. September 2007, pg. 20).
Reception

It is used for the entrance into hospital of those mothers on the suspicion of being in labour or with labour prodrome and for the reception, admission and classification of the users. It also includes the waiting times of the users until they are taken care of and of their escorts while they are at the obstetric suite.

This area will have the following characteristics:

- **Access:**
  - Signposting on the outside will give easier access to hospital so that users and their escorts may find easily the obstetric suite.
  - It is advisable that the unit should be placed at the closest level to the street as possible, and on any case, with the better possible accessibility conditions, considering the great number of users and the promptness in which in some cases urgent care may be provided.
  - The design will respond to the current accessibility legislation for disabled people and the “Código Técnico de la Edificación - DB-SU” (Spanish Technical Building Code - Basic Document - Specific Safety Regulations).
  - The unit staff flow and the supplies flow (supplies, equipment, food, pharmacy, linen, waste, etc.) will be clearly separated.
  - The obstetric suite will be a semi-restricted access area to care staff, users and their escort. Within the suite, access to the surgical area will be restricted to the caring staff appointed to it. The other premises of the suite will be designed in such a way that circulation between the non-related services and the public will be hindered, but for the visiting hours.
  - Access to the obstetric suite from the entrance hall or from the main circulation corridor should be made through automatic doors that shall allow visibility in both directions.
  - The entrance hall will be wide enough to allow circulation to the reception-admission desk, avoiding masses that may make access difficult.

- **Admission:**
  - It is advisable to have a specific area for reception and a specific area for admission.
  - This area will have the necessary room to pay attention to the pregnant women and their escorts (it should be taken into account
that a certain degree of privacy is needed) during the process of reception, admission and, when necessary, appointment scheduling, etc.

- The administrative area will work 24 hours a day and will have the necessary equipment to carry out efficiently its activity (office and computer equipment, e-mail, telephones, fax) and foresee the necessary furniture to store specific information: protocols, information leaflets, etc.
- The admission desk will be designed in such a way that it might be easily accessed from the main entrance and quickly found out by the pregnant women and their escorts; the reception staff should be able to see the entrance door and the public circulations. It will have an area that will allow paying attention to the public without any architectonic barrier and with the users seated in a chair.
- It is recommended that all the administrative paperwork will be performed, whenever possible, in the reception desk, avoiding nearby offices. For newly designed units, it is believed that the information area should be in charge of all activities, apart from the administrative ones, including the management of the clinical documentation.
• **Waiting/resting room:**
  - By the admission area. There must be a specific waiting and resting room for relatives and users, which may be part of the resting room used on while deliveries or surgical procedures. It will be a comfortable room and will have toilets, public telephone, television, a cold water fountain and a food and cold drinks vending machine.
  - The sizing of the waiting area will depend on the theoretical volume of activity and on the social and cultural characteristics of the population of reference and it should have 1.5 comfortable chairs (waiting times may be lengthy) for each woman that might be cared at any area of the unit.
  - The waiting/resting room will have, if possible, direct access from the entrance hall and will allow visual contact with the reception desk, it will access directly the examination area, where the clinical assessment of the pregnant women is carried out. Moreover, it will have two visually separate atmospheres: one for those who are waiting while being admitted and one for those who are waiting for clinical assessment.

• **Examination cabinet:**
  - By the admission area and allotted for the classification of users so as to give priority to urgent procedures depending on their conditions, determining the necessary care time and the most appropriate resource in each situation.
  - Classification is a preliminary assessment of the urgent/serious condition based on the causes for the consultation and on the existence or not of other signs or clear symptoms that do not require medical diagnosis. Thus, the design of this room will try to meet intimacy and comfort conditions appropriate to the activity, will allow immediate care and users to rotate.

• **Information office:**
  - Set up so that healthcare staff may provide relatives and escorts details of the clinical situation of the woman on the appropriate privacy conditions.

• **Toilets:**
  - By the main waiting room there will be a toilet area for the public, included a disabled toilet, with basin and WC. Its sizing will be in direct proportion with the sizing of the waiting room.
<table>
<thead>
<tr>
<th>Area</th>
<th>Purpose</th>
<th>Structural characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTRANCE</td>
<td>Allows access to admission and waiting room.</td>
<td>• Appropriate signposting.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• At street level, if possible.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Different flow from supplies and equipment.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Short distances if entrance is shared.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Disabled friendly.</td>
</tr>
<tr>
<td>ADMISSION</td>
<td>Care to the user and escorts during admission and registry.</td>
<td>• Appropriate sizing.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• It should guarantee some level of privacy.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Adequate equipment: office and computer equipment, telephone, answering machine, fax, etc.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Easy to find.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Open 24 hours.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Should allow reception staff, while seated, have a good control of the entrance of the unit and the waiting room</td>
</tr>
<tr>
<td>RESTING ROOM / WAITING ROOM</td>
<td>For users and escorts in the best comfort conditions</td>
<td>• Comfortable (possible lengthy waits).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 1.5 comfortable seats for each patient that may be in any area of the unit.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Two different atmospheres visually separated: one for those who wait for admission and another one for those who wait for clinical examination.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• It might be common to the resting room used while delivery of surgery procedures.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Toilets.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Public telephone and television.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Cold water fountain.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Drinks and food vending machines</td>
</tr>
<tr>
<td>EXAMINATION CABINET</td>
<td>To give priority to urgent procedures depending on the conditions, determining the necessary care time and the most appropriate resource in each situation</td>
<td>• Intimacy and comfort conditions.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Appropriate to minimize waiting times and to allow users to rotate.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Does not need means for medical diagnosis.</td>
</tr>
<tr>
<td>INFORMATION OFFICE</td>
<td>Information to users and relatives.</td>
<td>• Office with the appropriate privacy conditions.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Accessible from the waiting room.</td>
</tr>
<tr>
<td>TOILET</td>
<td>For users and escorts during waiting times.</td>
<td>• With toilet and basin.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Must include a toilet for disabled.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• In a proportional number to the sizing of the waiting room.</td>
</tr>
</tbody>
</table>
**Exploration area**

Once the users that have gone to the obstetric suite with the suspicion of being in labour or with labour prodrome are classified, they are allotted to the corresponding resource depending on the emergency or serious situation of their condition. Section 5.5.1 of this document on Standards and Recommendations has already detailed the importance of the common clinical and obstetric assessment before labour and which determines the physical characteristics of the premises on the exploration area.

The physical resources and the diagnostic means that have to be allotted to this area also allow the clinical examination, when necessary, of those women who have been admitted on schedule for birth induction or Caesarean section and, depending on the way the obstetric care is organized at the hospitals, of those pregnant women who may need urgent care due to pregnancy complications (foetal pathophysiology).

This area will have the following characteristics:

- **Consultation room:**
  - The clinical assessment of the women, once their admission has been prescribed, includes, as it has already been stated, different levels, depending on their urgent or serious condition. The consultation room is the physical area where the exploration and the examination is carried out to assess the possible risks and to make a decision on the monitoring options for labour that are less complex (obstetric exploration, foetal auscultation, etc). Apart from this, it is necessary to provide the user with the essential information and obtain her consent.
  - The number of consultations will be determined by the theoretical volume of activity on a continuous operation timetable of 24 hours a day.
  - It is assumed that the consultation must allow, in a single room, the combined performance of these activities, so that the intimacy conditions will be optimized if there is a single door, and thus higher versatility will be attain in an area which is much more flexible, functionally speaking.
  - The consultation room must have an appropriate size to hold the consultant and the necessary healthcare staff, depending on the support requirements resulting from the diagnosis procedures that have to be performed, the user and, when needed, an escort.
  - Apart from office furniture (table, armchair and chairs) it will be
necessary to have a gurney for obstetric examination, accessible on both sides and which could be conveniently isolated by means of curtains or separating walls, an exploration lamp, oxygen and vacuum intakes and clinical furniture to hold the disposable material and the equipment which will be used during the consultation. On both sides of the exploration gurney there should be enough room to hold an ultrasound monitor to be used on when necessary.

- Space distribution will provide privacy during consultation and communication with the adjacent consultation rooms to allow circulation of the healthcare staff.
- There will be a toilet in the consultation room for users, with basin and WC.

![Figure 2 Room for obstetric consultation and examination](image)

- Observation:

  - On some occasions, clinical assessment prior to the prescription of admission implies more than one consultation. During the time between consultations, the women who do not show any sign of complications remain in an observation area for monitoring their evolution and receiving the care they need before their review in the consultation.
  - It is a common area with comfortable chairs and with the possibility of carrying out external monitoring.
Examination and techniques cabinet / Foetal Health Unit:

- More complex diagnostic procedures and mother-foetal treatments (cardiotocographic monitoring, ultrasound, amniotic liquid puncture, etc.) will be carried out at examinations cabinets that will be placed by the consultation rooms. Circulation between both resources should be guaranteed.
- Examination cabinets may be located in common wards or in individual rooms. When they are located in common wards they have clearly organization and economic advantages but users’ privacy and comfort should not be conditioned. The requirements of such cabinets are similar to the cubicles located in common wards.
- The cubicle at common wards should take up, at least, an area of 3x2.5m and they should be separated by means of curtains or folding screens or, when necessary, partitions, being the main support equipment comfortable beds or armchairs, placed around a table where meals may be served to the women.
- Each cubicle will have, also, vacuum and oxygen intakes, a table with enough room to leave the personal belongings of the users and a flap for trays, as well as enough space to use cardiotocographic, ultrasound and telemetric monitors and an extra chair (for an escort, if necessary).
- Each cubicle will have all the necessary electric facilities necessary for lighting and for the electromedical equipment. It will also be considered the suitability of TV sets and, at any case, the user will have a manual control system that will allow her to alert the nursing staff, to control the lighting and to use the remote TV control.
- It is particularly interesting the location of windows. Whenever possible, users should be under natural lighting and with a view of the outside, though always guaranteeing the necessary privacy when treatment administration may imply the user being undressed.
- As well as the consultation rooms, the exploration cabinets will have toilets for the users, with basin and WC.
### Table 6.2. Structural and functional characteristics of the exploration area.

<table>
<thead>
<tr>
<th>Area</th>
<th>Purpose</th>
<th>Structural characteristics</th>
</tr>
</thead>
</table>
| CONSULTATION ROOM             | Clinical assessment of parturient mothers and other users cared at the obstetric suite, before admission, when necessary. Apart from the consultation, it includes the procedures that are less complex (obstetric exploration, foetal auscultation, ultrasound, etc.). | • Number of consultation rooms will be determined by the theoretical volume of activity on a continuous operation timetable of 24 hours a day.
• With the appropriate size to hold the consultant, the necessary healthcare staff, the user and, when needed, an escort.
• Apart from office furniture (table, armchair and chairs) it will be necessary to have a gurney for obstetric examination, accessible on both sides and which could be conveniently isolated by means of curtains or separating walls, an exploration lamp, oxygen and vacuum intakes and clinical furniture to hold the disposable material and the equipment which will be used during the consultation. Medium range ultrasound monitor.
• Space distribution will provide privacy during consultation and communication with the adjacent consultation rooms to allow circulation of the healthcare staff.
• Toilet for users, with basin and WC. |
| OBSERVATION                   | Monitoring of the evolution of the women who wait for the next consultation for clinical assessment and, when necessary, for admission. | • Comfortable chairs at a common ward.
• Possibility of external monitoring. |
| EXPLORATION AND TECHNIQUES CABINET | Clinical assessment of the parturient and other users cared at the obstetric suite, before being, when necessary, admitted: more complex diagnostic procedures and mother-foetal treatments (cardiotocographic monitoring, ultrasound monitoring, amniotic fluid puncture, etc.). | • Located, preferably, at common wards, with the appropriate privacy and comfort conditions.
• Isolated by means of curtains, folding screens or partitions, being the main support equipment comfortable beds or armchairs, placed around a table where meals may be served to the women.
• With vacuum and oxygen intakes, a table with enough room to leave the personal belongings of the users and a flap to leave trays, as well as enough space to use cardiotocographic, ultrasound and telemetric monitors and an extra chair (for an escort, if necessary). |
Labour, delivery, recovery and postpartum rooms (LDRP)

From a functional point of view, the LDRP rooms are a choice to the classical approach to labour where any of the stages is performed in different premises: pre-labour room, labour room and recovery room.

It meets a conception aimed at the humanization of labour and that tries to centre the process of the families, focussing it on the needs of the woman and NB and sustained by the belief that labour has to be considered a normal event instead of a medical-surgical situation and, whenever possible, the presence of the family should be compatible with the access to supporting technology whenever its operation may be appropriate.

LDRP rooms are individual rooms designed as bedrooms with charming furniture and decoration appropriate with the atmosphere. Therefore, it is advisable that screens or pictures will hide the service board placed at the headboard of the bed, common at conventional hospitalization rooms and with electric and vacuum and oxygen intakes. Windows will allow the parturient being under natural light as much as possible and with a view to the outside.

There will be a double-lighting circuit: one indirect and adjustable, so that it may be adjusted depending on the women wishes, and the other one, artificial working light, according to the lighting standards of hospital rooms, should complications arise. Ambient temperature will also be adjustable; depending on the needs of the woman as in each stage of the process, she may need different room temperatures.

The bed must allow the parturient placing herself in the most comfortable position and it must provide multiple positions, turning from horizontal position into the position of an obstetric chair, suitable for standing delivery, with the back at 90 degrees and into an intermediate position with the back at 120 degrees. It must have wheels to permit transfers to the surgical suite if it were necessary and back to the room after the procedure.

However, there may be women who may not want to give birth in bed.

<table>
<thead>
<tr>
<th>Area</th>
<th>Purpose</th>
<th>Structural characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>Purpose</td>
<td>Structural characteristics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• With all the necessary electric facilities necessary for</td>
</tr>
<tr>
<td></td>
<td></td>
<td>lighting and for the electromedical equipment.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• With a manual control system that will allow users her to</td>
</tr>
<tr>
<td></td>
<td></td>
<td>alert the nursing staff, to control the lighting and to use</td>
</tr>
<tr>
<td></td>
<td></td>
<td>the remote TV control.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• With toilets for the users, with basin and WC.</td>
</tr>
</tbody>
</table>

Reports, Research and Investigation 2009
Therefore, there should be designed so that it may be easy to move furniture according to individual preferences.

![Figure 3 LDRP room with natural light](image)

The design of the LDRP room should adapt to:

- Normal childbirth on a bed for labour. Nearby there can be located the table and the equipment for resuscitation of the NB. Around the bed, which will have the appropriate furniture, there should be, too, area for the escort and for the operation of up to three members of the healthcare staff.
- Standing normal delivery, leaning on a piece of furniture, crouching or in an obstetric chair.
- Instrument delivery should be preferably performed at the operating theatre, with the mother on lithotomy position, with local or epidural anaesthesia and with the medical care of the obstetrician, midwife and anaesthesiologist, with enough room to carry out any resuscitation procedure, if needed.
- The use of ultrasound monitors, foetal and maternal telemetric monitoring and intravenous therapy, that may be stored near the room and moved into it whenever necessary.

The LDRP rooms must also have a basin for hand washing with non
hand operation surgical taps, antiseptic dispensers and automatic hand dryer; the rooms must have acoustic insulation so that the woman might feel at ease to make any noises during labour; ventilation system for gas pollution control; protection against electric risks and the fire-safety systems ruled by the current legislation.

LDRP rooms must be wide, with an approximate surface of 22-25m². They will also have a toilet with basin, WC, bidet and shower, so that the woman may benefit from the soothing effects of hot water during dilatation. The toilet door must always open into the room.

There is the possibility to have a free-standing bath in the room, so that the woman may use it if she wants to during the dilatation and expulsive stages.

![Figure 4 LDRP with free-standing bath.](image)

<table>
<thead>
<tr>
<th>Table 6.3. Structural characteristics of the LDRP room</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Area</strong></td>
</tr>
</tbody>
</table>
| LDRP | Care to the mother during all the stages of vaginal labour (dilatation, expulsive, delivery and recovery) and the healthy NB who does not need to be admitted at the neonatology unit. | • Placed at the obstetric suite with easy access to the surgical area so that the transfer of the parturient, should a complication arise, could be as quick as possible.  
• Designed as bedrooms with charming furniture and decoration appropriate to the atmosphere. Screens or pictures will hide the service board placed at the headboard of the bed. Windows will allow the parturient being under natural light and with a view to the outside. |
As it has already been stated, women cared at the obstetric suite may need surgical procedures, either scheduled or urgent while on labour.

The surgical area of the obstetric suite gathers the premises for surgery preparation, the operating theatre and the awakening area, as well as the area for supplies and medicines.

<table>
<thead>
<tr>
<th>Area</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Double-lighting circuit: one indirect and adjustable, so that it may be adjusted depending on the women wishes, and the other one, artificial working light, should complications arise. Ambient temperature will also be adjustable; depending on the woman’s needs.</td>
</tr>
<tr>
<td></td>
<td>• The bed must allow the parturient placing herself in the most comfortable position; it must have wheels to permit transfers to the surgical suite in case of Caesarean sections. Obstetric chairs for standing deliveries may also be used.</td>
</tr>
<tr>
<td></td>
<td>• Appropriate for normal and instrumental delivery under local or epidural analgesia. It must have enough space to carry out resuscitation procedures, if necessary as well as for the use of ultrasound monitors, foetal and maternal telemetric monitoring and intravenous therapy, that may be stored near the room and moved into it whenever necessary.</td>
</tr>
<tr>
<td></td>
<td>• With basin for hand washing, acoustic insulation, ventilation system for the gas pollution control; protection against electric risks and the fire-safety systems ruled by the current legislation.</td>
</tr>
<tr>
<td></td>
<td>• With toilet with basin, WC, bidet and shower, so that the woman may benefit from the soothing effects of hot water during dilatation. The toilet door must always open into the room.</td>
</tr>
<tr>
<td></td>
<td>• Necessary means and resources for initial care and neonatal resuscitation if necessary.</td>
</tr>
<tr>
<td></td>
<td>• Area for supplies and medicines.</td>
</tr>
</tbody>
</table>
necessary premises to support surgical activity. The admission standards, the circulations and transfers will be the common ones to surgical environments.

The criteria for its location within the suite have already been defined with the structural details of the area for reception, exploration and LDRP rooms with which it is closely related from a functional point of view, being the promptness of care for urgent and serious conditions the reason that justifies the need of proximity and the facility of access between these resources.

The physical and functional characteristics of the surgical area of the obstetric suite are the following:

- **Operating theatre:**

  The operating theatre of the obstetric suite has, in principle, the same facilities and equipment requirements of those of the general surgical suite:

  - Minimum serving surface of 40m², with a minimum free height of 3 metres and with a measurement that would allow making a 6 metre diameter circle around the operating table.
  - Walls and ceiling will be made of hard, nonporous, waterproof, washable and fire-resistant materials; they would not have cracks and they would be continuous and without gloss. There will be neither rails nor elements that could gather dirt; wall elements will be built-in.
  - The floor will be washable, semi conductive, earth wired, without items and angles between vertical and horizontal walls.
  - There will be no windows. Doors will have a minimum of 1.5m wide, preferably automatic and sliding on an external rail.
  - If there is more than one operating theatre, each will have two identical switchboards for the gas intakes, each will have nitrogen protoxide intakes, medicinal compressed air, oxygen (2), vacuum, and an anaesthetic gas extraction system (AGES). In each operating theatre, there would be a board for the gas pressure control with an alarm system.
  - There would be insulated light sources for room lighting of the theatre. If fluorescent lamps are used, the necessary measures will be taken to avoid interferences between the ignition equipment and the electro-medical equipment.
  - Each operating theatre will have, at least, twelve earth wired single-phase intakes with 16 amps. There would also be, at least, in each operating theatre, an electrical single-phase earth wired 20 amps
intake for radiodiagnosis equipment and laser, if necessary. It will be clearly identified.

- There would be preferably used swivel articulated arms for anaesthesia and surgery.
- There would be anchorages for lamps. Protection devices against electrical risks. 1000 lux minimum room lighting and 25000 lux at the surgical table.
- Air conditioning requirements will obey the Spanish standard UNE 100173 (instalaciones de acondicionamiento de aire en hospitales - air conditioning systems at hospitals), the ASHRAE Standards and Guidelines, and the requirements of the AIA. It will also have the technical conditions of a general operating theatre regarding the Spanish “RITE” (Regulations on Building Heating Installations).
- There would be special protection for X-rays and it would be advisable to have tables which would allow making radiographies.
- Cardiff wedge.
- The area allotted for the facilities equipment should be placed on a different level from the suite, if possible on the roof.
- There would be data and voice access points, and there would be a clinical station to have access to the information net.
- Moreover, the general equipment will be the same as the one in the operating theatres of the surgical suite (table, surgical lamps, anaesthetic equipment, monitors, electrical scalpel, instruments for surgery and anaesthesia, surgical instruments, etc.) The specific equipment includes the foetal monitor and the intrauterine pressure monitor as well as the specific instrument for obstetric procedures.
- Apart from the necessary room and equipment for the mother, it should be considered the area for the reception and resuscitation of the NB, including an incubator for neonatal transfers.

Post-Anaesthesia Care Unit (PACU)

- Each cubicle at the common ward will have enough space for the bed, the monitors, for the staff to carry out any necessary procedures and for the anaesthesiologist and the nursing staff to take care of the patients. The cubicles will have electric, medicinal compressed air and vacuum intakes.
- In this area the monitoring of the vital functions will be carried out until a level of consciousness is reached and the vital signs allow transferring the user.
The surgical area will have the necessary utility rooms that allow the right operation of the surgical activity: staff changing rooms, area for the preparation of surgeons, nurse station, sterile supplies store room, general store room, equipment store room and the utility rooms. Its number will depend on the general sizing of the obstetric suite and if there is the possibility of sharing them with other areas of the unit, depending on the level of activity and on the resource sizing.

<table>
<thead>
<tr>
<th>Area</th>
<th>Purpose</th>
<th>Structural characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPERATING THEATRE</td>
<td>Anaesthetic procedures and surgical procedures.</td>
<td>• Similar to those of an operating theatre of a general surgical suite.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Specific equipment: foetal and intrauterine pressure monitor and obstetric equipment.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Apart from the room and the necessary equipment for the mother, it should be taken into</td>
</tr>
<tr>
<td></td>
<td></td>
<td>account that it is necessary to consider the means for the reception and the resuscitation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>of the NB, including an incubator for neonatal transfer.</td>
</tr>
<tr>
<td>POST-ANAESTHESIA RECOV</td>
<td>Monitoring of vital signs and vital functions until reaching a certain</td>
<td>• With enough space for the bed, the monitors, for the staff to carry out any necessary pro-</td>
</tr>
<tr>
<td>ERY UNIT (PACU)</td>
<td>level of consciousness that may allow transferring the patient.</td>
<td>cedures and for the anaesthesiologist and the nursing staff to take care of the patients.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The cubicles will have electric, medicinal compressed air and vacuum intakes.</td>
</tr>
<tr>
<td>UTILITY ROOMS</td>
<td>Support activities to surgery.</td>
<td>• The area will have the necessary utility rooms depending on the general sizing of the ob-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>stetric suite and if there is the possibility of sharing them with other areas of the unit,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>depending on the level of activity and on the resource sizing.</td>
</tr>
</tbody>
</table>
**NB resuscitation**

The areas for neonatal resuscitation must be located on the labour rooms or at the operating theatre. It is recommended that in each labour room there should be a specific place to carry out the stabilization and the resuscitation of the newborn. The Spanish Society of Neonatology recommends a list of supplies and medication that should be available at all labours. These supplies must be easily accessible and ready to use. Whenever possible early contact mother-child will be encouraged.

**Nurse station and general utility rooms**

It includes the general physical resources allotted to the observation and care of the users while they are at the obstetric suite, to the care planning and to the other administrative nurse tasks as well as the necessary utility rooms needed for the proper functioning of the suite (drugs, supplies, equipment, linen and food management and storing).

The physical and functional characteristics of the surgical area of the obstetric suite are the following:

- **Control (desk and staff working area):**
  - The obstetric suite will have a control for the nurse staff work that will be placed in an area closed to the outside access and by the centre to the unit, to minimize the circulations and to allow the access to the exploration area, to the LSR rooms and to the surgical area. It will have nearby areas necessary for the development of support activities placed around the control desk, distributed depending on the way staff works.
  - The control will have a desk with enough area to write and for the set up of the communication devices, including the nurse call centre and the area to store working material, apart from the staff working area, which will include a clinical work station with the access to the hospital information system and, when available, for working with the electronic clinical record.
The utility rooms area around the nurse station will have the following premises:

- Nurse resting room, by the station, so that staff may rest and keep monitoring the unit and with a quick access to the users, in case of necessity.
- Clean utility room, to prepare and arrange the necessary drugs so that medication might be handled.
- Linen, disposable material and equipment store room.
- Dirty utility room and waste disposal.
- Kitchen.
- Cleaning equipment store room.

When possible, it is advisable to introduce all available advances for utility rooms on logistics (i.e. pneumatic tubes, double-box multi-storage system, automatic medicine dispensers, or, failing that, unit-doses devices), catering (i.e., isotherm trays, rethermalisation of food prepared on cook-chill units) and waste disposal.

As it has been stated before, the distribution and sizing of the utility room will depend on the volume of activity of the obstetric suite and the possibility of sharing them with other areas.
Administrative area and staff utility rooms

There are included, within this area, the necessary premises for offices and unit’s staff meeting rooms, so that caring activities as well as teaching activities and rest can be carried out appropriately.

This area will have the following characteristics:

- **Offices:**
  
  - The number of meeting rooms will be in a proportionate number to the dimensions of the unit’s staff, specifically to the consultants whose activity may imply the use of an office, either individual (e.g. medical and nurse managers offices) or common (working rooms, library).
  
  - Offices will be provided with ergonomic furniture; they will guarantee privacy and promote team work. They will have IT systems and access to the data networks as well as working units with the clinical unit applications.

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### Table 6.5. Functional and structural characteristics of the nurse station area

<table>
<thead>
<tr>
<th>Area</th>
<th>Purpose</th>
<th>Structural characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURSE CONTROL</td>
<td>Nursing staff work: patient observation while on treatment and recovery, care planning and other nursing administrative tasks.</td>
<td>• Placed in the middle of the hospitalization area. To minimize circulations.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Desk with an area to write and to have communication equipments installed, including the nurse call centre and the area to store working material.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Working area with access to patient management tools and clinical station.</td>
</tr>
<tr>
<td>UTILITY ROOMS</td>
<td>For support</td>
<td>• Nurse resting room</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Clean utility room for drug preparation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Linen, disposable material and equipment storeroom.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Dirty utility room and waste disposal.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Kitchen.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Cleaning equipment store room.</td>
</tr>
</tbody>
</table>
• Staff resting room:

  • Its size will be proportionate to the size of the unit; it will have specific toilets as well as changing rooms, according to its organization and to the existence of additional close-by staff rooms.

<table>
<thead>
<tr>
<th>Area</th>
<th>Purpose</th>
<th>Structural characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFFICES</td>
<td>Clinical documentation, study and management tasks.</td>
<td>• With ergonomic furniture, they will guarantee privacy and promote team work.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• With IT systems and access to data networks.</td>
</tr>
<tr>
<td>RESTING ROOM</td>
<td>For staff rest.</td>
<td>• Resting room.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Staff toilets.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Changing rooms.</td>
</tr>
</tbody>
</table>

6.1.2.2. Obstetric hospitalization

In accordance with the LDRP scheme suggested for the obstetric suite, the puerperium stage will undergo at a conventional hospitalization unit. Thus, after having recovered from labour, or, once the mother has left the post anaesthesia recovery room, the mother and the NB will be transferred to a unit of conventional hospitalization at obstetrics which will be placed, preferably, at the hospitalization area, and it will have similar conditions to polyvalent hospitalization units.

Minimizing the circulations between the obstetric suite and the neonatology unit must be considered as a priority. The design of the unit will allow fulfilling the recommendations on early mother-child contact and the postnatal practices of the “Estrategia de atención al parto normal en el Sistema Nacional de Salud”, mainly on the elimination of the baby-wards at hospitals. Space distribution of the unit must allow group activities on health education.

A fundamental characteristic of this unit is to accommodate the healthy NB by their mothers; there could also be admitted into it those pregnant women with conditions that justify this decision. The number of beds allotted to each of these groups must be flexible to adapt to the needs, which
may be changing.

It is also convenient to gather women depending on the reason for admission and on the risk level (as it has been stated before, there should not be together a woman under puerperium with a NB with another one whose foetus is dead). Taking into account the type of cases care at, special attention should be paid to separate clean areas to septic ones.

The management advances in the clinical procedures that imply hospitalization are far away the scope of this document\(^{(57)}\). Therefore, it has been included in this section a series of individual premises, appropriate for the most frequent caring support activities performed at obstetric hospitalization, so that the proposed design may seem compatible with any of the management solutions that may be put into practice.

The basic resource for conventional hospitalization is the bed, so the definition of the caring activities performed around it will define the physical characteristics of the necessary premises for the care procedures of the admitted users and of their children and will settle the necessary support procedures.

The unit for obstetric hospitalization will have the following characteristics:

- **Orientation.** Whenever possible, it is advisable that all rooms would have the best orientation, with natural light. Staff working areas should also have natural light.
- **Views.** Rooms overlooking the outside should be taken into account so that it may serve as a way of relaxing from anxiety and making possible, whenever possible, having views from the headboard of the bed (height of the open areas of the façade).
- **Noises.** The location of the unit will depend on the level of existent noises that might be foreseen in the different areas of the allotted space.
- **Internal circulations:** There are two types of circulations: for those visits of relatives and escorts and for internal circulation (users in bed, staff, supplies and support services). Both circulations should be independent and the unit should not work as a means to acceding to other units. The location of the control must be close to the users’ access from the outside (escorts and relatives), while the internal circulation may be located a bit further from the control.

\(^{(57)}\) It falls on the document on Standards and Recommendations for the Conventional Hospitalization Units which drawn up, within this same series, has already foreseen the Quality Agency of the Ministry of Health and Social Policy.
• Emergency equipment: cardiac arrest and cardiopulmonary resuscitation, appropriate for adults and for NB.

**Area for users and relatives**

• Rooms for users

  • Even though single bedded, rooms will have double capacity. They will have enough room for the crib of the NB, either conventional or joint or bed-side crib, to encourage accommodation, together and interruptedly, of the father and escort and even with a bed for his/her own. In each room there should be a changing table and a bath were the mother may bath her child and the paediatric routine check-ups be carried out.

  • The number of caring activities performed at the bed or in the user’s room, by the bed, is getting higher during a hospital stay whose length is getting smaller and smaller. Depending on the mother’s degree of dependence (or in general, of the woman admitted at the unit) the movements of the healthcare staff around the bed might be frequent and it might be necessary the use of electromedical equipment and other support instruments. Therefore, the rooms must be wide so that providing care to the users around the bed might be possible (including headboard) for at least three people, as well as for the equipment (e.g. ultrasound monitors, breast milk pumps and arrest carts).

  • The activities carried out at the room of the admitted woman may be divided in the following categories:
    • Clinical treatment and care to the mother and the healthy NB or, in other cases, to the pregnant woman whose condition has justified hospital admission.
    • Consultation and check-up.
    • Medical procedures, nursing care and observation.
    • Teaching and training the mother and the father.
    • Personal care.
    • Feeding.
    • Personal hygiene.
    • Leisure and entertainment.
    • Visits.
    • Feed back activities.
    • Preparation for diagnostic or therapeutic procedures.
    • Clinical records.
Communications.

Healthcare staff training.

To carry out these activities it is necessary to have in the room, apart from the areas already mentioned, the following equipment:

- The area around the bed should have at least:
  - Bed, with wheels, articulated and adjustable, preferably electric or pneumatic.
  - Crib made of acrylic material or bed-side crib for the healthy NB.
  - Wardrobe.
  - Table with overbed frame.
  - Reclining chair for the woman.
  - Armchair for the carer or escort (appropriate for lengthy stays, including for overnight rest).
  - Table for the patient with enough room to store personal belongings.
  - Light in the headboard.
  - Integrated call and communication system which should include:
      - Electric intakes for electromedical equipment.
      - Light control.
      - Nurse call communication system with light.
      - Audiovisual aids control systems (radio, TV, video, earphones...).
      - Voice and data network intake (telephone, internet...) appropriate both for staff at a clinical unit as for patients and/or escorts).
      - Oxygen and vacuum intakes with flowmeter and vacuometer.

- Rooms will have a toilet that will be adapted for disabled patients in wheelchairs with the help of staff of the unit. They will have a shower (low entry shower tray, wide and non-slip), basin, toilet and a bedpan cleaner. Noise created by these elements will be taken into consideration. Toilets would have utility ducts that would provide independence within the unit and which would be easily accessed from the outside to make maintenance easier.
• Information office:
  
  • For healthcare consultants and staff to provide users’ relatives and escorts detailed information of the care process with the adequate privacy conditions.

• Resting room for admitted mothers:
  
  • Common meeting rooms for mothers and NB where they can share their doubts and experiences of the first days and receive practical help talks on breastfeeding and paediatrics. With the necessary equipment to provide rest and comfort during lengthy stays.
  • The room must allow enough space to place plain tables with chairs and to be used as dining hall. The room may keep on working 24 hours as common area with vending machines with drinks or as breastfeeding rooms for those women who prefer leaving their room when there are any visits.

• Relatives resting room:
  
  • Common area for the relatives of admitted women. With the necessary equipment to provide rest and comfort during lengthy stays and with an area in relation with the number of beds of the unit.

• Toilets for visits:
  
  • With basin and WC and in an appropriate number adequate to the theoretical number of escorts and visitors.

<table>
<thead>
<tr>
<th>Area</th>
<th>Purpose</th>
<th>Structural characteristics</th>
</tr>
</thead>
</table>
| HOSPITALIZATION ROOM      | Stay of the mothers and of the healthy NB since their recovery from labour or procedure until discharged. Also for pregnant women whose situation implies hospitalization. | • Single bedded though with capacity for two.   
                              |                                                                         | Enough area for the crib of the NB (joint and uninterrupted accommodation) and, on occasions, with bed for the father or the escort. |
|                           |                                                                         | • With changing table and bath for the NB.                                                   |
|                           |                                                                         | • With enough room to access and to provide care through both sides of the table, including the sufficient space for circulations and use of medical equipment and gurneys or transfer chairs. |
Nurse station

It includes the set of material resources allotted to the observation of the women while they are hospitalized and/or they receive care and recover from them, to the care planning and to other nurse administrative tasks, as well as the necessary utility rooms (management and, when needed, storing of drugs, materials, equipments, linen and food).

This area has the following characteristics:

- Control:
  - Desk and staff working area. The characteristics of the nurse control of the conventional hospitalization unit at obstetrics will be similar to those described for the nurse control at the obstetric suite. Its sizing will depend on the number of beds of the unit and the theoretical activity volume and the staff that has been allotted to work at that area at the same time.

<table>
<thead>
<tr>
<th>Area</th>
<th>Purpose</th>
<th>Structural characteristics</th>
</tr>
</thead>
</table>
| OTHER FACILITIES FOR USERS AND ESCORTS | For providing care to the users and her escorts outside the hospitalization room. | • Information office.  
• Resting room for inpatients: common meeting room for mothers and NB that may work as dining hall, room with vending machines, breastfeeding rooms (for women who prefer leaving the room when there are any visits) and for group meetings.  
• Relatives resting room.  
• Toilets for visits. |
• Utility rooms:

• The utility rooms around the nurse station will have the necessary premises for carrying out the additional activities to the nursing care. The premises, whose functional and physical characteristics are, as a general rule, similar to those described for the utility rooms of the nurse station of the obstetric suite, will include:
  • Minor surgery room and procedures room, with the necessary equipment to provide care to the women.
  • Milk bank. This room will be allotted with a fridge, hospital bottle warmer and the additional necessary material to store and keep maternal milk. In this area, those mothers who have some problems with breastfeeding may be met, though it is preferable to carry out this type of attention as well as pumping in the rooms.
  • Nurse resting room, by the station, so that staff may rest though keep monitoring the unit and with a quick access to the users, in case of necessity.
  • Clean utility room, to prepare and arrange the necessary drugs so that medication might be handled.
  • Linen, disposable material and equipment store room.
  • Dirty utility room and waste disposal.
  • Kitchen.
  • Cleaning equipment store room.
  • Area for storing wheelchairs.

As well as in the utility room area of the nurse station of the obstetric suite, it is advisable to introduce all available advances for utility rooms on logistics, catering and waste disposal.

Table 6.8. Functional and structural characteristics of the nurse station for the hospitalization area

<table>
<thead>
<tr>
<th>Area</th>
<th>Purpose</th>
<th>Structural characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURSE STATION</td>
<td>Nurse staff work: patient observation during treatment and recovery, care planning and other administrative nursing tasks.</td>
<td>Similar to the nurse station of the obstetric suite.</td>
</tr>
</tbody>
</table>
Administrative area and staff utility rooms

There are included in this area all the necessary premises for offices and unit staff meeting rooms so that the healthcare, teaching and resting activities may be adequately carried out.

This area will include an area with for offices and a resting room with similar characteristics to those of the obstetric suite.

Table 6.9. Functional and structural characteristics of the administrative area and the staff utility rooms.

<table>
<thead>
<tr>
<th>Area</th>
<th>Purpose</th>
<th>Structural characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>UTILITY ROOMS</td>
<td>Minor surgery and other procedures. Drug and food preparation, cleaning and waste disposal and storage.</td>
<td>• Similar to the utility rooms of the obstetric suite.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• There will also be a minor surgery room and a milk bank.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Area</th>
<th>Purpose</th>
<th>Structural characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFFICES</td>
<td>Clinical documentation, study and management activities.</td>
<td>• Similar to those of the obstetric suite.</td>
</tr>
<tr>
<td>RESTING ROOMS</td>
<td>Staff resting room.</td>
<td>• Similar to those of the obstetric suite.</td>
</tr>
</tbody>
</table>

Functional design programme

The functional design programme (a specific example of a HM is included in annex 7 of this document) will include the following\(^{(58)}\):
### Table 6.10. Functional design programme I. Obstetric suite

<table>
<thead>
<tr>
<th>Area</th>
<th>Premises</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RECEPTION</strong></td>
<td></td>
</tr>
<tr>
<td>1. Entrance</td>
<td></td>
</tr>
<tr>
<td>2. Admission - reception</td>
<td></td>
</tr>
<tr>
<td>3. Waiting/resting room</td>
<td></td>
</tr>
<tr>
<td>4. Classification cabinet</td>
<td></td>
</tr>
<tr>
<td>5. Information desk</td>
<td></td>
</tr>
<tr>
<td>6. Toilet</td>
<td></td>
</tr>
<tr>
<td><strong>EXPLORATION</strong></td>
<td></td>
</tr>
<tr>
<td>7. Consultation</td>
<td></td>
</tr>
<tr>
<td>8. Observation</td>
<td></td>
</tr>
<tr>
<td>9. Exploration and techniques cabinet</td>
<td></td>
</tr>
<tr>
<td><strong>LDRP</strong></td>
<td></td>
</tr>
<tr>
<td>10. LDRP</td>
<td></td>
</tr>
<tr>
<td>11. Toilet at LDRP</td>
<td></td>
</tr>
<tr>
<td><strong>SURGICAL AREA</strong> (59)</td>
<td></td>
</tr>
<tr>
<td>12. Surgery team preparation</td>
<td></td>
</tr>
<tr>
<td>13. Operating theatre</td>
<td></td>
</tr>
<tr>
<td>14. Post anaesthesia care unit</td>
<td></td>
</tr>
<tr>
<td>15. Dirty utility room and waste disposal</td>
<td></td>
</tr>
<tr>
<td>16. Supplies store room (sterile material, anaesthesia, equipment, etc.)</td>
<td></td>
</tr>
<tr>
<td>17. Staff toilets and changing rooms</td>
<td></td>
</tr>
<tr>
<td><strong>NURSE STATION AND UTILITY ROOMS</strong></td>
<td></td>
</tr>
<tr>
<td>18. Desk and staff working area</td>
<td></td>
</tr>
<tr>
<td>19. Nurse resting room</td>
<td></td>
</tr>
<tr>
<td>20. Clean utility room</td>
<td></td>
</tr>
<tr>
<td>21. Kitchen</td>
<td></td>
</tr>
<tr>
<td>22. Disposable material store room</td>
<td></td>
</tr>
<tr>
<td>23. Linen store room</td>
<td></td>
</tr>
<tr>
<td>24. Equipment store room</td>
<td></td>
</tr>
<tr>
<td>25. Area for storing wheelchairs</td>
<td></td>
</tr>
<tr>
<td>26. Dirty utility room and waste disposal</td>
<td></td>
</tr>
<tr>
<td>27. Cleaning equipment room</td>
<td></td>
</tr>
<tr>
<td><strong>ADMINISTRATIVE AREA AND STAFF AREA</strong></td>
<td></td>
</tr>
<tr>
<td>28. Manager’s office</td>
<td></td>
</tr>
<tr>
<td>29. Multi-purpose working room</td>
<td></td>
</tr>
<tr>
<td>30. Meeting room</td>
<td></td>
</tr>
<tr>
<td>31. Staff resting room</td>
<td></td>
</tr>
<tr>
<td>32. On duty doctor resting room</td>
<td></td>
</tr>
<tr>
<td>33. Staff toilets and changing rooms</td>
<td></td>
</tr>
</tbody>
</table>

(59) The surgical suite will have the necessary utility rooms for the operation of the surgical activity, depending of the general allotment of the obstetric suite and the possibility of sharing them with other areas of the unit, apart from the theoretical level of activity and the resource sizing.
6.2. Equipment and facilities

Annex 6 of this document provides the resource sizing criteria and annex 7 the functional programme of a HM for an area of 250000 people. The criteria and recommendations included in both annexes 6 and 7 together with the main technical characteristics and the list of the necessary equipment in each of them provided in the functional design programme below, may be considered as a help to plan the equipment of a HM(60).

(60) Specific data are not provided as they depend on the specific number of physical resources and on the characteristic sizing of the proposed areas.

<table>
<thead>
<tr>
<th>Area for Patients and Relatives</th>
<th>Premises</th>
</tr>
</thead>
<tbody>
<tr>
<td>34.</td>
<td>Room at the obstetric hospitalization area.</td>
</tr>
<tr>
<td>35.</td>
<td>Toilet at the room of the obstetric hospitalization area.</td>
</tr>
<tr>
<td>36.</td>
<td>Information desk.</td>
</tr>
<tr>
<td>37.</td>
<td>Rest room for admitted users.</td>
</tr>
<tr>
<td>38.</td>
<td>Rest room for relatives.</td>
</tr>
<tr>
<td>39.</td>
<td>Toilets for visits.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nurse Station and Utility Rooms</th>
<th>Premises</th>
</tr>
</thead>
<tbody>
<tr>
<td>40.</td>
<td>Desk and staff working area.</td>
</tr>
<tr>
<td>41.</td>
<td>Minor surgery room.</td>
</tr>
<tr>
<td>42.</td>
<td>Milk bank.</td>
</tr>
<tr>
<td>43.</td>
<td>Staff resting room.</td>
</tr>
<tr>
<td>44.</td>
<td>Clean utility room.</td>
</tr>
<tr>
<td>45.</td>
<td>Kitchen.</td>
</tr>
<tr>
<td>46.</td>
<td>Supplies store room.</td>
</tr>
<tr>
<td>47.</td>
<td>Linen store room.</td>
</tr>
<tr>
<td>48.</td>
<td>Equipment store room.</td>
</tr>
<tr>
<td>49.</td>
<td>Area for wheelchairs.</td>
</tr>
<tr>
<td>50.</td>
<td>Dirty utility room and waste disposal.</td>
</tr>
<tr>
<td>51.</td>
<td>Cleaning equipment room.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Administrative Area and Staff Utility Rooms</th>
<th>Premises</th>
</tr>
</thead>
<tbody>
<tr>
<td>52.</td>
<td>Supervisor desk.</td>
</tr>
<tr>
<td>53.</td>
<td>Multi-purpose medical work room.</td>
</tr>
<tr>
<td>54.</td>
<td>Meeting room.</td>
</tr>
<tr>
<td>55.</td>
<td>Staff resting room.</td>
</tr>
<tr>
<td>56.</td>
<td>Staff toilet and changing room.</td>
</tr>
</tbody>
</table>
Table 6.12. Relation of equipment/premises.

<table>
<thead>
<tr>
<th>Premises</th>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I. OBSTETRIC SUITE</strong></td>
<td></td>
</tr>
<tr>
<td><strong>RECEPTION</strong></td>
<td></td>
</tr>
<tr>
<td>1. Access.</td>
<td></td>
</tr>
<tr>
<td>- Signposting on the outside will facilitate access. It is advisable that the unit should be placed at the closest level to the street at possible. Design will respond to current legislation for disabled people and to the Spanish Technical Building Code - Basic Document - Specific Safety Regulations. Staff and supplies (supplies, food, pharmacy, linen, waste, etc.) circulations will be clearly separated.</td>
<td>- The obstetric suite will be a semi-restricted access area to care staff, users and their escort. Within the suite, access to the surgical area will be restricted to the care staff appointed to it. The other premises of the suite will be designed in such a way that circulation between the non-related services and the public will be hindered, but for the visiting hours. - Access to the obstetric suite from the entrance hall or from the main circulation hall should be made through automatic doors that shall allow visibility in both directions. - The entrance hall will be wide enough to allow circulation to the reception-admission desk, avoiding masses that may make access difficult.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Without specific equipment</td>
</tr>
<tr>
<td>2. Admission - reception.</td>
<td>• Desk.</td>
</tr>
<tr>
<td>For the admission of users and relatives. Administrative tasks of registry and discharge. With a desk with the appropriate height to pay attention to users on wheelchairs. With computers and telephone.</td>
<td>• Ergonomic chairs with wheels.</td>
</tr>
<tr>
<td>3. Resting/waiting room.</td>
<td>• Fax.</td>
</tr>
<tr>
<td>Equipped for stays of several hours and with a capacity appropriate to the sizing of the unit. With phone connections and background music. Cold drinks and food vending machines.</td>
<td>• Shelves.</td>
</tr>
<tr>
<td>4. Examination cabinet.</td>
<td>• Telephone.</td>
</tr>
<tr>
<td>For the classification of women who are admitted into the obstetric suite on an urgent basis. With computer and telephone connections.</td>
<td>• Working stations / computers</td>
</tr>
</tbody>
</table>
### Premises

#### RECEPTION

5. Information desk.
   - To inform users and relatives. With computer and phone connections.
   - Chair.
   - Ergonomic chairs with wheels.
   - Modular desk with drawers.
   - Picture.
   - Telephone
   - Working stations / computers.

   - Toilets for visits and users. With basin and WC. At least one toilet will be disabled friendly.
   - 25L swing lid waste bin.
   - Coat stand.
   - Mirrors.
   - Paper dispensers.
   - Paper towel dispensers.
   - Soap dispenser.
   - Toilet brushes.

### Equipment

#### EXPLORATION

7. Consultation room.
   - For exploration and examination of users so as to assess the possible risks and to make a decision on the monitoring of labour that are less complex (obstetric exploration, foetal auscultation, etc.).
   - Area for examination and office-consultation room. Consultation room unit, stainless steel worktop, washbasin and elbow mixer taps with thermostat control.
   - Individual lighting in exploration bed.
   - Computers and telephones. Oxygen and vacuum connections.
   - Space distribution will provide privacy during consultation and communication with the adjacent consultation rooms to allow circulation of the healthcare staff.
   - There will be a toilet in the consultation room for users, with basin and WC.
   - 25L swing lid waste bin.
   - Auxiliary cart.
   - Biauricular stethoscope.
   - Chair.
   - Consultation room cabinet.
   - Ergonomic chair with chairs.
   - Exploration lamp.
   - Flowmeter.
   - Frontal light.
   - General medium range ultrasound monitor and gynaecologic monitor.
   - Laser printer.
   - Metallic display cabinet with sliding doors.
   - Mirror.
   - Modular desk with drawers.
   - Negatoscope(61).
   - Non-rolling obstetric tape.
   - Obstetric exploration gurney.
   - Obstetric instruments.
   - Paper towel dispenser.
   - Pen torch.
   - Phonendoscope.
   - Picture.
   - Pinard's stethoscope / Foetal heart beat detector.
   - Portable digital sphygmomanometer.

---

(61) Only if there is not digitalized radiological image available from the clinical station.
<table>
<thead>
<tr>
<th>Premises</th>
<th>Equipment</th>
</tr>
</thead>
</table>
| **EXPLORATION** | | • Soap dispenser.  
| | • Specula.  
| | • Standing scale and height meter.  
| | • Stool.  
| | • Telephone  
| | • Toilet brushes.  
| | • Vacuometer.  
| | • Working stations / computers  
| 8. Observation. | 25 L swing lid waste bin.  
| - Monitor during waiting times of the evolution of those women whose clinical assessment before the prescription for admission requires more than one consultation. | • Bi-auricular stethoscope.  
| - Comfortable chairs, at a common ward, placed in such a way that they can be directly seen from the nurse station, with the possibility of being closed for privacy. | • Blood pressure monitor with different wrist models.  
| - With basin for staff. Oxygen and vacuum connections. Computer and telephones. | • Chair (without wheels).  
| | • Chairs for treatment.  
| | • Coat stand.  
| | • Equipment (stands for intravenous drips, ceiling hooks, etc.).  
| | • Flowmeter.  
| | • Laser printer.  
| | • Mirror.  
| | • Multi-parameter monitor.  
| | • Paper dispenser.  
| | • Paper towel dispenser.  
| | • Pinard’s stethoscope / Foetal heart beat detector.  
| | • Soap dispenser.  
| | • Table with overbed frame.  
| | • Telephone.  
| | • Toilet brushes.  
| | • TV.  
| | • Vacuometer.  
| | • Vascular /foetal portable Doppler.  
| | • Working stations / computers  
| - Clinical assessment of the parturient and of the other patients cared the surgical suite; before, when needed, the prescription for admission and for more complex maternal-foetal treatments (cardiotocographic monitoring, ultrasound, amniotic liquid puncture, etc.). | • Arrest cart.  
| | • Blood pressure monitor with different wrist models.  
| | • Cardiotocographic monitor  
| | • Chair without wheels.  
| | • Chairs for treatment.  
| | • Coat stand.  
| | • Defibrillator with adult paddles and paddles for NB.  
| | • Echo-doppler.  
| | • Electric beds with accessories.  
| | • Emergency medication cart.  

**Reports, Research and Investigation 2009**
### EXPLORACIÓN
- Cubicles at an open ward, distributed in such a way that they can be directly seen from the nurse station, with the possibility of being closed for privacy (though not risking patient's safety). With comfortable bed or armchair. Windows with the possibility of being blocked and positions that allow its cleaning. Headboards with electric, oxygen and vacuum intakes. With integrated communication system with the nurse. TV and music preinstalled facilities. Computer connections. With basin for staff. Oxygen and vacuum intakes. Computers and telephones.

### Equipment
- Equipment (stands for intravenous drips, ceiling hooks, etc.).
- Equipment for cardiopulmonary resuscitation.
- Equipment for punctures.
- Flowmeter.
- Gurneys for transfer.
- High range ultrasound monitor.
- Laser printer.
- Medium range ultrasound monitor.
- Mirror.
- Multi-parameter monitor.
- Paper dispenser.
- Paper towel dispenser.
- Perfusion pump.
- Pulse oximetre.
- Self-inflatable resuscitation balloons.
- Soap dispenser.
- Table with overbed frame.
- Telephone.
- Toilet brushes.
- TV.
- Vacuometer.
- Ventilator for transfers.
- Working stations / Computers.

### LDRP
10. LDRP
- Care to the parturient throughout the whole process of vaginal delivery (dilatation, expulsion, delivery and recovery) and to the healthy NB who does not need to be admitted at the unit of neonatology.
- Placed at the obstetric suite with an easy access to the surgical area so that the parturient may be quickly transferred in case of complications.
- Designed as bedrooms with charming furniture decoration appropriate with the atmosphere. With service panel on the headboard of the bed hidden behind screens or pictures; windows allowing views to the outside and natural light.

### Equipment
- Air, oxygen and vacuum intakes specific for neonatal resuscitation.
- Air/oxygen mixer.
- Arrest cart.
- Cart for minor surgery.
- Changing table with bath and exploration area.
- Cold light lamp.
- Decoration.
- Defibrillator with adult paddles and paddles for NB.
- Digital blood pressure monitor with different wrist models.
- Equipment (stands for intravenous drips, ceiling hooks, etc.).
- Flowmeter.
- Foetal pulse monitor.
- FSbC2 Intrapartum cardiotocograph with telemetric monitor.
- Gynaecologic instrument.
- Intrapartum cardiotocograph with telemetric monitor.
- Labour room lamp (two reflectors).
### Premises

- Artificial illumination with a double lighting circuit: indirect and adjustable, this might be adjusted depending on the woman’s wishes, and working artificial light, according to the lighting standards of hospital rooms, should complications arise.
- Room temperature will also be adjustable, depending on the woman’s needs.
- The bed must allow the parturient placing herself in the most comfortable position. It must have wheels to permit transfers to the operating theatre in case of abdominal delivery.
- Appropriate for normal or instrumental delivery under local or epidural anaesthesia; there should be enough place to carry out resuscitation procedures, if necessary, as well as to use of ultrasound monitors, foetal and maternal telemetric monitors and intravenous therapy, which should be stored near the room and moved into the room when necessary.
- Rooms will have a basin for hand washing, acoustic insulation, ventilation system for gas pollution control, protection against electric risks and fire safety systems ruled by current legislation.
- Rules for asepsis before epidural analgesia: there should be disinfected a wide area of the skin before the epidural procedure is performed, if possible with an alcohol based chlorhexidine solution, which will be left on the skin for at least two minutes. Before the puncture, a surgical hand wash should be carried out and the puncture should be performed wearing cup and mask.

### Equipment

- Multi-parameter monitor.
- Multiple labour intrapartum cardiotocograph with telemetric monitor.
- NB crib.
- Neonatal resuscitation equipment.
- Neonatal resuscitation incubator.
- Neonatal support ventilation system with the possibility of functioning autonomously for transfers
- Neonatal transfer monitor.
- Paper dispensers.
- Perfusion pump.
- Personal communication call system.
- Pre-labour, labour bed.
- Pulse oximetre.
- Reclining chair for patient.
- Reclining chairs for escorts.
- Self-inflatable resuscitation balloons.
- Side table.
- Standing digital scale and height meter for NB.
- Table with overbed frame
- Telemetric unit (at control station).
- Thermal crib with neonatal exploration lamps.
- Vacuometer.
- Ventilator for transfers.
- Volumetric respirator.
- Wardrobe.
- Working stations / computers.
### Premises

#### LDRP

11. Toilet at the LDRP.
   - With basin, WC, bidet and shower so that the woman on labour may benefit from the soothing effects of hot water during dilatation. The toilet door must always open into the room.
   - Optionally, there would be a free-standing bath in the room, so that the woman may choose to use it during the dilatation and expulsive stages. In these cases the bath at the bathroom may be uncomfortable for the staff who provides care during labour, and thus it could be placed in the room.

<table>
<thead>
<tr>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 L swing lid waste bin.</td>
</tr>
<tr>
<td>Coat stand.</td>
</tr>
<tr>
<td>Mirror.</td>
</tr>
<tr>
<td>Paper towel dispenser.</td>
</tr>
<tr>
<td>Soap dispenser.</td>
</tr>
<tr>
<td>Toilet brushes.</td>
</tr>
</tbody>
</table>

### SURGICAL AREA

12. Surgeon preparation
   - Disinfection and placing of gloves and masks.
   - With direct access to the operating theatre. Continuous basin with three water inlets, with automatic water system and sterile equipment. With a clock.

<table>
<thead>
<tr>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic hand dryer.</td>
</tr>
<tr>
<td>Clock.</td>
</tr>
<tr>
<td>Metallic shelf.</td>
</tr>
<tr>
<td>Surgical brushes dispenser.</td>
</tr>
<tr>
<td>Surgical soap dispenser.</td>
</tr>
<tr>
<td>Surgical thermostatic photocell hand-washes.</td>
</tr>
</tbody>
</table>

13. Operating theatre
   - Facilities and equipment requirements similar to those of a general surgical suite:
   - Service surface of 40m², with a minimum free of 3 metres and with measures that would allow making a 6 metre diameter circle around the operating table. Walls and ceiling will be made of hard, non-porous, waterproof, washable and fire-resistant materials; they would not have cracks, and they would be continuous and without gloss. There will be neither rails nor elements which could gather dirt and wall elements will be built-in.
   - The floor will be washable, semiconductive, earth wired, without items and angles between vertical and horizontal walls.

<table>
<thead>
<tr>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airway intubation equipment and cart with devices for difficult airways.</td>
</tr>
<tr>
<td>Anaesthetic gas board.</td>
</tr>
<tr>
<td>Anaesthetic perfusion pump.</td>
</tr>
<tr>
<td>Arrest cart.</td>
</tr>
<tr>
<td>Aspiration system.</td>
</tr>
<tr>
<td>Auxiliary table.</td>
</tr>
<tr>
<td>Board for surgical gases.</td>
</tr>
<tr>
<td>Caesarean section instrument box.</td>
</tr>
<tr>
<td>Changing table with bath and exploration area.</td>
</tr>
<tr>
<td>Clock.</td>
</tr>
<tr>
<td>C-shaped instrument table.</td>
</tr>
<tr>
<td>Defibrillator with adult paddles.</td>
</tr>
<tr>
<td>Electric scalpel.</td>
</tr>
<tr>
<td>Flowmeter.</td>
</tr>
<tr>
<td>Foetal pulse monitor.</td>
</tr>
<tr>
<td>Gas extraction system.</td>
</tr>
<tr>
<td>Intrapartum cardiotocograph with pulsemeter.</td>
</tr>
<tr>
<td>Intrapartum cardiotocograph with telemetric monitor.</td>
</tr>
</tbody>
</table>
Premises

**SURGICAL AREA**

- There will be no windows. Doors will have a minimum of 1.5m wide, preferably automatic and sliding on an external rail. If there is more than one operating theatre, each will have two identical switchboards for the gas intakes, each will have nitrogen protoxide intakes, medicinal compressed air, oxygen (2), vacuum, and an anaesthetic gas extraction system (AGES). In each operating theatre, there would be a board for the gas pressure control with an alarm system.

- There would be insulated light sources for room lighting of the theatre. If fluorescent lamps are used, the necessary measures will be taken to avoid interferences between the ignition equipment and the electro-medical equipment.

- Each operating theatre will have, at least, twelve earth wired single-phase intakes with 16 amps. There would also be, at least, in each operating theatre, an electrical single-phase earth wired 20 amps intake for radiodiagnosis equipment and laser, if necessary. It will be clearly identified.

- There would be preferably used swivel articulated arms for anaesthesia and surgery.

- There would be anchorages for lamps. Protection devices against electrical risks. 1000 lux minimum room lighting and 25000 lux at the surgical table.

- Air conditioning requirements will obey the Spanish standard UNE 100173 (instalaciones de acondicionamiento de aire en hospitales - air conditioning systems at hospitals), the ASHRAE Standards and Guidelines, and the requirements of the AIA. It will also have the technical conditions of a general operating theatre regarding the Spanish “RITE” (Regulations on Building Heating Installations).

- There would be special protection for X rays.

- The area allotted for the facilities equipment should be placed on a different level from the suite, if possible on the roof.

- There would be data and voice access points, and there would be a clinical station to have access to the information net.

---

**Equipment**

- L-shaped instrument table.
- Mayo table.
- Neonatal transfer incubator.
- Obstetric vacuum.
- Operating room lamp (3 elements: main + satellite).
- Self-inflatable balloon with O2 reservoir.
- Site preparation table.
- Specific material (forceps, etc.).
- Supplies and specific medication for procedures cart.
- Surgical table for obstetric procedures.
- Suture cart.
- Telephone.
- Universal surgical table with accessories.
- Vacuometer.
- Ventilator.
- Working stations / computers.
- Neonatal resuscitation area with equipment: thermal crib, air/oxygen mixer and support breathing system, monitor with neonatal pulse meter (with the possibility of being, all of the instruments, portable).
<table>
<thead>
<tr>
<th>Premises</th>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SURGICAL AREA</strong></td>
<td></td>
</tr>
<tr>
<td>Oxygen and vacuum intakes. Clinical furniture with basin and storing</td>
<td>• Arrest cart.</td>
</tr>
<tr>
<td></td>
<td>• Clinical unit with basis and above store area.</td>
</tr>
<tr>
<td></td>
<td>• Defibrillator with adult and paediatric paddles.</td>
</tr>
<tr>
<td></td>
<td>• Electric bed with accessories.</td>
</tr>
<tr>
<td></td>
<td>• Flowmeter.</td>
</tr>
<tr>
<td></td>
<td>• Medication cart.</td>
</tr>
<tr>
<td></td>
<td>• Multi-parameter monitor.</td>
</tr>
<tr>
<td></td>
<td>• Paper towel dispenser.</td>
</tr>
<tr>
<td></td>
<td>• Perfusion pump.</td>
</tr>
<tr>
<td></td>
<td>• Self-inflatable resuscitation balloon.</td>
</tr>
<tr>
<td></td>
<td>• Soap dispenser.</td>
</tr>
<tr>
<td></td>
<td>• Sterile glass cabinet.</td>
</tr>
<tr>
<td></td>
<td>• Vacuometer.</td>
</tr>
<tr>
<td></td>
<td>• Wall cupboard for disposable material.</td>
</tr>
<tr>
<td></td>
<td>• Working stations / computers.</td>
</tr>
<tr>
<td>15. Dirty utility room and waste management.</td>
<td>• 25 L swing lid waste bin.</td>
</tr>
<tr>
<td>Dirty linen and waste store room. Water inlet.</td>
<td>• Double sink unit and waste disposal.</td>
</tr>
<tr>
<td></td>
<td>• Paper towels dispenser.</td>
</tr>
<tr>
<td>16. Supplies equipment (sterile equipment, anaesthesia, equipment, etc.).</td>
<td>• Metal shelves.</td>
</tr>
<tr>
<td>For several supplies.</td>
<td></td>
</tr>
<tr>
<td>17. Staff toilets and changing rooms.</td>
<td>• 25 L swing lid waste bin.</td>
</tr>
<tr>
<td>Air locked. For the unit’s staff. With similar characteristics to the</td>
<td>• Coat stand.</td>
</tr>
<tr>
<td>visitor’s toilet.</td>
<td>• Mirrors.</td>
</tr>
<tr>
<td></td>
<td>• Paper dispensers.</td>
</tr>
<tr>
<td></td>
<td>• Paper towel dispenser.</td>
</tr>
<tr>
<td></td>
<td>• Soap dispenser.</td>
</tr>
<tr>
<td></td>
<td>• Toilet brushes.</td>
</tr>
<tr>
<td><strong>NB RESUSCITATION</strong></td>
<td></td>
</tr>
<tr>
<td>18. NB resuscitation.</td>
<td>• Arrest cart.</td>
</tr>
<tr>
<td>At the operating theatre and by the surgical table. Clinical unit with</td>
<td>• Blood gas meter.</td>
</tr>
<tr>
<td>underneath storing area. Electrical intakes and specific gas intakes.</td>
<td>• Defibrillator with paddles for NB.</td>
</tr>
<tr>
<td>Water outlet. Computer and telephone connections.</td>
<td>• Flowmeter.</td>
</tr>
<tr>
<td></td>
<td>• Individual adjustable light.</td>
</tr>
<tr>
<td></td>
<td>• Instruments.</td>
</tr>
<tr>
<td></td>
<td>• Monitor for heart rate, breathing, pulse meter, and invasive and non-invasive blood pressure.</td>
</tr>
<tr>
<td></td>
<td>• Neonatal breathing support system.</td>
</tr>
<tr>
<td>Equipment</td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td></td>
</tr>
<tr>
<td>NB RESUSCITATION</td>
<td></td>
</tr>
<tr>
<td>* Oxygen and air mixer.</td>
<td></td>
</tr>
<tr>
<td>* Perfusion pump.</td>
<td></td>
</tr>
<tr>
<td>* Pulse oximetre.</td>
<td></td>
</tr>
<tr>
<td>* Self-inflatable resuscitation balloon.</td>
<td></td>
</tr>
<tr>
<td>* Telephone.</td>
<td></td>
</tr>
<tr>
<td>* Thermal crib for neonatal resuscitation.</td>
<td></td>
</tr>
<tr>
<td>* Work units / computers.</td>
<td></td>
</tr>
<tr>
<td>* Worktop.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURSE STATION AND UTILITY ROOMS</td>
</tr>
<tr>
<td>19. Desk and staff working area (control)</td>
</tr>
<tr>
<td>* Care management PDA’s.</td>
</tr>
<tr>
<td>* Chairs.</td>
</tr>
<tr>
<td>* Coat stand.</td>
</tr>
<tr>
<td>* Counter.</td>
</tr>
<tr>
<td>* Cupboard with shelves.</td>
</tr>
<tr>
<td>* Ergonomic chairs with wheels.</td>
</tr>
<tr>
<td>* Filing cabinet.</td>
</tr>
<tr>
<td>* Laser printer.</td>
</tr>
<tr>
<td>* Metal shelves.</td>
</tr>
<tr>
<td>* Modular desk with drawers.</td>
</tr>
<tr>
<td>* Picture.</td>
</tr>
<tr>
<td>* Tel DECT type, communication system.</td>
</tr>
<tr>
<td>* Telephone.</td>
</tr>
<tr>
<td>* Waste bin.</td>
</tr>
<tr>
<td>* Working stations / computers.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>20. Nurse resting room</td>
</tr>
<tr>
<td>* 25 L swing lid waste bin.</td>
</tr>
<tr>
<td>* Central table.</td>
</tr>
<tr>
<td>* Chairs.</td>
</tr>
<tr>
<td>* Coat stand.</td>
</tr>
<tr>
<td>* Floor and wall cupboards.</td>
</tr>
<tr>
<td>* Paper towel dispenser.</td>
</tr>
<tr>
<td>* Pictures.</td>
</tr>
<tr>
<td>* Reclining chairs.</td>
</tr>
<tr>
<td>* Telephone.</td>
</tr>
<tr>
<td>* Worktop with sink, microwave and refrigerator.</td>
</tr>
<tr>
<td>Premises</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>NURSE STATION AND UTILITY ROOMS</strong></td>
</tr>
</tbody>
</table>
| 21. Clean utility room. Staff for the clean supplies and drug preparation. Water outlet for double sink unit. | • Fixed 60 cm stool.  
• Clinical unit with double sink and above storage space.  
• Soap dispenser.  
• 25 L swing lid waste bin.  
• Paper towel dispenser.  
• Wall-mounted glass case 80 x 90 x 35 cm.  
• Refrigerator.  
• Unit-dose dispenser. |
| 22. Kitchen Arrival of food carts and preparation of food. Adapted to the hospital food cooking and distribution technologies. With double sink and draining board and an area for storing carts. | • Kitchen cupboard.  
• Refrigerator.  
• Microwave.  
• Double sink and draining board, and waste disposal unit.  
• 25 L swing lid waste bin.  
• Paper towel dispenser. |
| 23. Disposable material store room For daily use small material. Area for supplies carts by means of periodic reposition. Surfaces must be washable. Modular desks higher than the carts. With an area appropriate for the storage of saline solutions. | • Metal shelves.  
• Single-box unit store system. |
| 24. Linen store room. For clean linen.  
| 25. Equipment store room. For monitors and equipment.  
| 27. Dirty utility room and waste disposal. For storing dirty linen and waste. Water inlet.  
| 28. Clean utility room. For cleaning equipment and products | • Metal shelves.  
• Clean laundry trolleys.  
• Metal shelves.  
• Metal shelves  
• 25 L swing lid waste bin.  
• Double sink ad waste disposal unit.  
• Paper towel dispenser.  
• Metal shelves |
<table>
<thead>
<tr>
<th>Premises</th>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ADMINISTRATIVE AREA AND STAFF UTILITY ROOMS</strong></td>
<td></td>
</tr>
<tr>
<td>29. Manager office.</td>
<td>• Chair, without wheels.</td>
</tr>
<tr>
<td><em>With computers and telephones.</em></td>
<td>• Coat stand.</td>
</tr>
<tr>
<td></td>
<td>• Cupboard with shelves.</td>
</tr>
<tr>
<td></td>
<td>• Ergonomic office chair with wheels.</td>
</tr>
<tr>
<td></td>
<td>• Filing cabinet.</td>
</tr>
<tr>
<td></td>
<td>• Ink jet printer.</td>
</tr>
<tr>
<td></td>
<td>• L-shape executive desk with drawer.</td>
</tr>
<tr>
<td></td>
<td>• Picture.</td>
</tr>
<tr>
<td></td>
<td>• Round circular table.</td>
</tr>
<tr>
<td></td>
<td>• Telephone.</td>
</tr>
<tr>
<td></td>
<td>• Wall-mounted blackboard.</td>
</tr>
<tr>
<td></td>
<td>• Waste bin.</td>
</tr>
<tr>
<td></td>
<td>• Working stations / computers.</td>
</tr>
<tr>
<td>30. Multipurpose medical work room.</td>
<td>• Chair.</td>
</tr>
<tr>
<td><em>Working area for the unit consultants. With access to voice and data net.</em></td>
<td>• Coat stand.</td>
</tr>
<tr>
<td></td>
<td>• Cupboard with shelves.</td>
</tr>
<tr>
<td></td>
<td>• Ergonomic office chair.</td>
</tr>
<tr>
<td></td>
<td>• Filing cabinet.</td>
</tr>
<tr>
<td></td>
<td>• Laser printer.</td>
</tr>
<tr>
<td></td>
<td>• L-shaped working table with drawers.</td>
</tr>
<tr>
<td></td>
<td>• Picture.</td>
</tr>
<tr>
<td></td>
<td>• Wall-mounted blackboard.</td>
</tr>
<tr>
<td></td>
<td>• Waste bin.</td>
</tr>
<tr>
<td></td>
<td>• Working stations / computers.</td>
</tr>
<tr>
<td>31. Meeting room</td>
<td>• Chair.</td>
</tr>
<tr>
<td><em>For staff meetings, with computers and telephones.</em></td>
<td>• Coat stand.</td>
</tr>
<tr>
<td></td>
<td>• Filing cabinet.</td>
</tr>
<tr>
<td></td>
<td>• Laser printer.</td>
</tr>
<tr>
<td></td>
<td>• Negatoscope&lt;sup&gt;59&lt;/sup&gt;.</td>
</tr>
<tr>
<td></td>
<td>• Overhead projector.</td>
</tr>
<tr>
<td></td>
<td>• Pictures.</td>
</tr>
<tr>
<td></td>
<td>• Round circular table.</td>
</tr>
<tr>
<td></td>
<td>• Telephone.</td>
</tr>
<tr>
<td></td>
<td>• Wall-mounted blackboard.</td>
</tr>
<tr>
<td></td>
<td>• Waste bin.</td>
</tr>
<tr>
<td></td>
<td>• Wooden shelves.</td>
</tr>
<tr>
<td></td>
<td>• Working stations / computers.</td>
</tr>
<tr>
<td>Premises</td>
<td>Equipment</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>ADMINISTRATIVE AREA AND STAFF UTILITY ROOMS</td>
<td></td>
</tr>
<tr>
<td>32. Staff resting room</td>
<td>25 L swing lid waste bin.</td>
</tr>
<tr>
<td>For staff to rest. With water inlet and telephones.</td>
<td>Central table.</td>
</tr>
<tr>
<td>For staff to rest. With water inlet and telephones.</td>
<td>Chairs.</td>
</tr>
<tr>
<td>25 L swing lid waste bin.</td>
<td>Coat stand.</td>
</tr>
<tr>
<td>Central table.</td>
<td>Floor and wall cupboards.</td>
</tr>
<tr>
<td>Chairs.</td>
<td>Paper towel dispenser.</td>
</tr>
<tr>
<td>Coat stand.</td>
<td>Pictures.</td>
</tr>
<tr>
<td>Floor and wall cupboards.</td>
<td>Resting armchairs.</td>
</tr>
<tr>
<td>Paper towel dispenser.</td>
<td>Telephone.</td>
</tr>
<tr>
<td>Pictures.</td>
<td>Worktop with sink, microwave and fridge.</td>
</tr>
<tr>
<td>Resting armchairs.</td>
<td></td>
</tr>
<tr>
<td>Telephone.</td>
<td></td>
</tr>
<tr>
<td>Worktop with sink, microwave and fridge.</td>
<td></td>
</tr>
<tr>
<td>25 L swing lid waste bin.</td>
<td></td>
</tr>
<tr>
<td>Central table.</td>
<td></td>
</tr>
<tr>
<td>Chairs.</td>
<td></td>
</tr>
<tr>
<td>Coat stand.</td>
<td></td>
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<tr>
<td>Floor and wall cupboards.</td>
<td></td>
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<tr>
<td>Paper towel dispenser.</td>
<td></td>
</tr>
<tr>
<td>Pictures.</td>
<td></td>
</tr>
<tr>
<td>Resting armchairs.</td>
<td></td>
</tr>
<tr>
<td>Telephone.</td>
<td></td>
</tr>
<tr>
<td>Worktop with sink, microwave and fridge.</td>
<td></td>
</tr>
</tbody>
</table>

33. On duty consultant resting room                                      | 25 L swing lid waste bin.                                                 |
|  For on duty consultant to rest. With water inlet and telephones.      |  Bed.                                                                     |
|  For on duty consultant to rest. With water inlet and telephones.      |  Coat stand.                                                              |
|  25 L swing lid waste bin.                                              |  Mirror.                                                                  |
|  Bed.                                                                  |  Office chair.                                                            |
|  Coat stand.                                                            |  Paper dispenser.                                                         |
|  Mirror.                                                                |  Paper towel dispenser.                                                   |
|  Office chair.                                                          |  Side table.                                                              |
|  Paper dispenser.                                                       |  Soap dispenser.                                                          |
|  Paper towel dispenser.                                                 |  Telephone.                                                               |
|  Side table.                                                            |  Toilet brushes.                                                          |
|  Soap dispenser.                                                        |  Wardrobe.                                                                |
|  Telephone.                                                             |  Waste bin                                                                |
|  Toilet brushes.                                                        |  WC, basin and shower.                                                   |
|  Wardrobe.                                                              |  Work table.                                                              |
|  Waste bin                                                              |                                                                           |
|  WC, basin and shower.                                                  |                                                                           |
|  Work table.                                                            |                                                                           |

34. Staff toilets and changing rooms.                                    | 25 L swing lid waste bin.                                                 |
|  For the unit staff. With similar characteristics to the toilets for   |  Coat stand.                                                              |
|  the visitors.                                                         |  Mirrors.                                                                 |
|  Coat stand.                                                            |  Paper towel dispenser.                                                   |
|  Mirrors.                                                               |  Soap dispenser.                                                          |
|  Paper dispenser.                                                       |  Toilet brushes.                                                          |
|  Paper towel dispenser.                                                 |                                                                           |
|  Soap dispenser.                                                        |                                                                           |
|  Toilet brushes.                                                        |                                                                           |
### II. UNIT FOR CONVENTIONAL OBSTETRIC HOSPITALIZATION

<table>
<thead>
<tr>
<th>Premises</th>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PATIENTS AND RELATIVES ROOMS AREA</strong></td>
<td></td>
</tr>
<tr>
<td>35. Room for obstetric hospitalization.</td>
<td>• Acrylic material crib with chromium plated stand</td>
</tr>
<tr>
<td>- Even though single bedded, rooms will have double capacity.</td>
<td>for the healthy NB.</td>
</tr>
<tr>
<td>They will have enough room for the crib of the NB, either conventional or joint or bed-side crib, to encourage accommodation, together and interuptedly, and even with a bed for his/her own, of the father or escort. In each room there should be a changing table and a bath were the mother may bath her child.</td>
<td>• Call communication system.</td>
</tr>
<tr>
<td>- The room must be designed (lighting, colour, views) taking into account that the normal position of the user is lying in bed, and thus the height of the window must allow viewing the outside from bed. There must be a device for adjusting the intensity of light in the room. Electric switchers must be easily accessible to inpatients (if they are 90cm from the floor, they can be used by patients on wheelchairs).</td>
<td>• Chair.</td>
</tr>
<tr>
<td>- The room will have a wardrobe and a 2.80 m head-board.</td>
<td>• Changing table and bath.</td>
</tr>
<tr>
<td>The air-conditioning system will be adjustable and adapted to any kind of disability. Walls will have protections against bed impacts.</td>
<td>• Decoration.</td>
</tr>
<tr>
<td>- Windows with adjustable opening and with the possibility of being controlled by the staff. Acoustic insulation by means of the appropriate furniture and isolation boards on the walls.</td>
<td>• Electric bed with accessories.</td>
</tr>
<tr>
<td>- Colours will depend on the type of patient and the location of the room will depend on the position of the patient.</td>
<td>• Flowmeter.</td>
</tr>
<tr>
<td>- There will be enough space to accede the users by both sides of the bed, including the necessary area for circulations and for the use of medical equipment, gurneys or transfer chair.</td>
<td>• Portable digital sphygmomanometer.</td>
</tr>
<tr>
<td>- With an area reserved for the users and escorts and/or carers to rest, where there will be resting chairs for both.</td>
<td>• Reclining chair for escort.</td>
</tr>
<tr>
<td>- With the necessary means for providing care to inpatients.</td>
<td>• Reclining chair for patient.</td>
</tr>
<tr>
<td></td>
<td>• Table with overbed frame.</td>
</tr>
<tr>
<td></td>
<td>• TV.</td>
</tr>
<tr>
<td></td>
<td>• Vacuometer.</td>
</tr>
<tr>
<td></td>
<td>• Wardrobe.</td>
</tr>
<tr>
<td><strong>Premises</strong></td>
<td><strong>Equipment</strong></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td><strong>PATIENTS AND RELATIVES ROOMS AREA</strong></td>
<td></td>
</tr>
<tr>
<td>-- With a service board in the headboard which will include the appropriate electric intakes for the electromedical equipment, the light control system, the nurse call communication system, with light, the audiovisual aids control (radio, TV, video, earphones), voice and data network access (telephone, internet), appropriate both for staff at the clinical unit and for patients and/or her escort.</td>
<td></td>
</tr>
<tr>
<td>36. Toilet at the patient’s room.</td>
<td>• 25 l swinging lid waste bin.</td>
</tr>
<tr>
<td>- With basin, bedpan cleaner, WC and shower, with shelf, towel rail, coat stands, toilet roll holder and bedpan hanger.</td>
<td>• Coat stand.</td>
</tr>
<tr>
<td>- Showers will have low entry shower trays to allow access to all patients. It must work as assisted shower. Grab rails with the appropriate height for patients in wheelchairs. Mirrors with the appropriate height and inclination for patients in wheelchairs. With mixer taps and low noise level toilet flushes. Steam shower lights.</td>
<td>• Mirror.</td>
</tr>
<tr>
<td>- Fluorescent lighting is unadvisable.</td>
<td>• Paper dispenser.</td>
</tr>
<tr>
<td>37. Information desk.</td>
<td>• Paper towel dispenser.</td>
</tr>
<tr>
<td>For users and carers information. Computers and telephones.</td>
<td>• Soap dispenser.</td>
</tr>
<tr>
<td></td>
<td>• Toilet brushes</td>
</tr>
<tr>
<td>38. Resting room for admitted mothers.</td>
<td>• Chair / armchair.</td>
</tr>
<tr>
<td>Common area for the meeting of the mothers with the NB.</td>
<td>• Low table.</td>
</tr>
<tr>
<td></td>
<td>• Low TV table.</td>
</tr>
<tr>
<td></td>
<td>• Picture.</td>
</tr>
<tr>
<td></td>
<td>• TV.</td>
</tr>
<tr>
<td></td>
<td>• Work table.</td>
</tr>
<tr>
<td>39. Resting room for relatives.</td>
<td>• 3-seat benches.</td>
</tr>
<tr>
<td>For relatives and escorts to rest.</td>
<td>• Chairs/ armchairs.</td>
</tr>
<tr>
<td></td>
<td>• Coat stands.</td>
</tr>
<tr>
<td></td>
<td>• Low table.</td>
</tr>
<tr>
<td></td>
<td>• Pictures.</td>
</tr>
<tr>
<td></td>
<td>• Waste bins.</td>
</tr>
</tbody>
</table>
### PATIENTS AND RELATIVES ROOMS AREA

<table>
<thead>
<tr>
<th>Premises</th>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>40. Toilets for visits.</td>
<td>• 25 L swing lid waste bin.</td>
</tr>
<tr>
<td>Toilet for visits and users.</td>
<td>• Coat stand.</td>
</tr>
<tr>
<td></td>
<td>• Mirrors.</td>
</tr>
<tr>
<td></td>
<td>• Paper dispenser.</td>
</tr>
<tr>
<td></td>
<td>• Paper towel dispenser.</td>
</tr>
<tr>
<td></td>
<td>• Soap dispenser.</td>
</tr>
<tr>
<td></td>
<td>• Toilet brushes.</td>
</tr>
</tbody>
</table>

### NURSE STATION AND UTILITY ROOMS

<table>
<thead>
<tr>
<th>Premises</th>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>41. Desk and staff working area (control).</td>
<td>• Care management PDA’s.</td>
</tr>
<tr>
<td>It must allow the direct observation of all the cubicles at the common room.</td>
<td>• Chairs.</td>
</tr>
<tr>
<td>Appropriate for management and control, with an area accessible for people in wheelchair; communication system patient-nurse by means of a light and acoustic system. Pneumatic tube installation. Control of the fire safety system, gas board control. Computer and telephone.</td>
<td>• Coat stand.</td>
</tr>
<tr>
<td></td>
<td>• Counter.</td>
</tr>
<tr>
<td></td>
<td>• Cupboard with shelves.</td>
</tr>
<tr>
<td></td>
<td>• Ergonomic chairs with wheels.</td>
</tr>
<tr>
<td></td>
<td>• Filing cabinet.</td>
</tr>
<tr>
<td></td>
<td>• Laser printer.</td>
</tr>
<tr>
<td></td>
<td>• Metal shelves.</td>
</tr>
<tr>
<td></td>
<td>• Modular desk with drawers.</td>
</tr>
<tr>
<td></td>
<td>• Picture.</td>
</tr>
<tr>
<td></td>
<td>• Tel DECT type, communication system.</td>
</tr>
<tr>
<td></td>
<td>• Telephone.</td>
</tr>
<tr>
<td></td>
<td>• Waste bin.</td>
</tr>
<tr>
<td></td>
<td>• Working stations / computers.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Premises</th>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>42. Minor surgery room.</td>
<td>• 25 L swing lid waste bin.</td>
</tr>
<tr>
<td>For minor surgery procedures outside the women’s room. Consultation room unit, stainless steel worktop, washbasin with elbow mixer taps with thermostat control. Individual lighting in exploration bed. Oxygen and vacuum connections.</td>
<td>• Aspirator.</td>
</tr>
<tr>
<td></td>
<td>• Auxiliary table.</td>
</tr>
<tr>
<td></td>
<td>• Cart for minor surgery.</td>
</tr>
<tr>
<td></td>
<td>• Drip stand.</td>
</tr>
<tr>
<td></td>
<td>• Examination gurney.</td>
</tr>
<tr>
<td></td>
<td>• Exploration light.</td>
</tr>
<tr>
<td></td>
<td>• Flowmeter.</td>
</tr>
<tr>
<td></td>
<td>• Instruments for minor surgery.</td>
</tr>
<tr>
<td></td>
<td>• Multi-box for disposable material.</td>
</tr>
<tr>
<td></td>
<td>• Paper towel dispenser.</td>
</tr>
<tr>
<td></td>
<td>• Soap dispenser.</td>
</tr>
<tr>
<td></td>
<td>• Stainless worktop with basin and accessories.</td>
</tr>
<tr>
<td></td>
<td>• Sterile material cabinet.</td>
</tr>
<tr>
<td></td>
<td>• Vacuometer.</td>
</tr>
<tr>
<td>Premises</td>
<td>Equipment</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>NURSE CONTROL AND UTILITY ROOMS</td>
<td></td>
</tr>
<tr>
<td>43. Milk bank.</td>
<td>• Bottle cleaner.</td>
</tr>
<tr>
<td>Small area for mothers who are undergoing</td>
<td>• Bottle heater.</td>
</tr>
<tr>
<td>some problems with breastfeeding and have to</td>
<td>• Cupboard and glass cabinet.</td>
</tr>
<tr>
<td>pump their milk. The room will be equipped</td>
<td>• Double sink clinical unit.</td>
</tr>
<tr>
<td>with fridge, microwave and the necessary</td>
<td>• Fridge.</td>
</tr>
<tr>
<td>supplies to store maternal milk.</td>
<td>• Glass cabinet</td>
</tr>
<tr>
<td>Water outlet.</td>
<td>• Other (bottles, jars, etc.).</td>
</tr>
<tr>
<td></td>
<td>• Worktop.</td>
</tr>
<tr>
<td>44. Nurse resting room.</td>
<td>• 25 L swing lid waste bin.</td>
</tr>
<tr>
<td>For staff to rest. By the nurse station.</td>
<td>• Central table.</td>
</tr>
<tr>
<td>Water outlet.</td>
<td>• Chairs.</td>
</tr>
<tr>
<td></td>
<td>• Coat stand.</td>
</tr>
<tr>
<td></td>
<td>• Floor and wall cupboards.</td>
</tr>
<tr>
<td></td>
<td>• Paper towel dispenser.</td>
</tr>
<tr>
<td></td>
<td>• Pictures.</td>
</tr>
<tr>
<td></td>
<td>• Resting armchairs.</td>
</tr>
<tr>
<td></td>
<td>• Telephone.</td>
</tr>
<tr>
<td></td>
<td>• Worktop with sink, microwave and fridge.</td>
</tr>
<tr>
<td>45. Clean utility room.</td>
<td>• 25 L swing lid waste bin.</td>
</tr>
<tr>
<td>For storing clean supplies and preparing</td>
<td>• Clinical unit with double sink and above storage space.</td>
</tr>
<tr>
<td>medication. Double sink unit with water</td>
<td>• Fixed 60 cm stool.</td>
</tr>
<tr>
<td>outlet.</td>
<td>• Paper towel dispenser.</td>
</tr>
<tr>
<td></td>
<td>• Refrigerator.</td>
</tr>
<tr>
<td></td>
<td>• Soap dispenser.</td>
</tr>
<tr>
<td></td>
<td>• Wall-mounted glass case 80 x 90 x 35 cm.</td>
</tr>
<tr>
<td>46. Kitchen.</td>
<td>• 25 L swing lid waste bin.</td>
</tr>
<tr>
<td>Arrival of food carts and preparation of</td>
<td>• Double sink and draining board, and waste disposal unit.</td>
</tr>
<tr>
<td>food. Adapted to the hospital food cooking</td>
<td>• Kitchen cupboard.</td>
</tr>
<tr>
<td>and distribution technologies. With double</td>
<td>• Microwave.</td>
</tr>
<tr>
<td>sink and draining board and an area for</td>
<td>• Paper towel dispenser.</td>
</tr>
<tr>
<td>storing carts.</td>
<td>• Refrigerator.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>47. Disposable material room.</td>
<td>• Double-box unit store system.</td>
</tr>
<tr>
<td>For daily use small material. Area for</td>
<td>• Metal shelves.</td>
</tr>
<tr>
<td>supplies carts by means of periodic</td>
<td></td>
</tr>
<tr>
<td>reposition. Surfaces must be washable.</td>
<td></td>
</tr>
<tr>
<td>Modular desks higher than the carts. With an</td>
<td></td>
</tr>
<tr>
<td>area appropriate for the storage of saline</td>
<td></td>
</tr>
<tr>
<td>solutions.</td>
<td></td>
</tr>
<tr>
<td>Premises</td>
<td>Equipment</td>
</tr>
<tr>
<td>----------</td>
<td>-----------</td>
</tr>
<tr>
<td><strong>NURSE CONTROL AND UTILITY ROOMS</strong></td>
<td></td>
</tr>
</tbody>
</table>
| 48. Linen store room. For clean linen. | • Clean laundry trolleys.![](https://via.placeholder.com/15)
• Metal shelves. |
| 49. Supplies and equipment store room. For monitors and equipment. | • Metal shelves. |
| 50. Area for wheelchairs. Out of the unit circulation flow. | • Wheel chairs. |
• Double sink unit and waste disposal unit. ![](https://via.placeholder.com/15)
• Paper towel dispenser. |
| 52. Cleaning equipment store room. For cleaning equipment and products. | • Metal shelves. |
| **ADMINISTRATIVE AREA AND STAFF UTILITY ROOMS** | |
| 53. Manager’s office. With computers and telephones. | • Chair. ![](https://via.placeholder.com/15)
• Coat stand. ![](https://via.placeholder.com/15)
• Cupboard with shelves. ![](https://via.placeholder.com/15)
• Ergonomic office chair with wheels. ![](https://via.placeholder.com/15)
• Filing cabinet. ![](https://via.placeholder.com/15)
• Ink jet printer. ![](https://via.placeholder.com/15)
• L-shape executive desk with drawer. ![](https://via.placeholder.com/15)
• Picture. ![](https://via.placeholder.com/15)
• Round circular table. ![](https://via.placeholder.com/15)
• Telephone. ![](https://via.placeholder.com/15)
• Wall-mounted blackboard. ![](https://via.placeholder.com/15)
• Waste bin. ![](https://via.placeholder.com/15)
• Working stations / computers. |
| 54. Multi-purpose medical work room. Working area for the unit consultants. With access to voice and data net. | • Chair. ![](https://via.placeholder.com/15)
• Coat stand. ![](https://via.placeholder.com/15)
• Cupboard with shelves. ![](https://via.placeholder.com/15)
• Ergonomic office chair. ![](https://via.placeholder.com/15)
• Filing cabinet. ![](https://via.placeholder.com/15)
• Laser printer. ![](https://via.placeholder.com/15)
• L-shaped working table with drawers. ![](https://via.placeholder.com/15)
• Picture. ![](https://via.placeholder.com/15)
• Wall-mounted blackboard. ![](https://via.placeholder.com/15)
• Waste bin. ![](https://via.placeholder.com/15)
• Working stations / computers. |
<table>
<thead>
<tr>
<th>Premises</th>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADMINISTRATIVE AREA AND STAFF UTILITY ROOMS</td>
<td></td>
</tr>
<tr>
<td>55. Meeting room. For staff meetings, with computers and telephones.</td>
<td>• Chair.</td>
</tr>
<tr>
<td></td>
<td>• Coat stand.</td>
</tr>
<tr>
<td></td>
<td>• Filing cabinet.</td>
</tr>
<tr>
<td></td>
<td>• Laser printer.</td>
</tr>
<tr>
<td></td>
<td>• Negatoscope&lt;sup&gt;59&lt;/sup&gt;.</td>
</tr>
<tr>
<td></td>
<td>• Overhead projector.</td>
</tr>
<tr>
<td></td>
<td>• Pictures.</td>
</tr>
<tr>
<td></td>
<td>• Round circular table.</td>
</tr>
<tr>
<td></td>
<td>• Telephone</td>
</tr>
<tr>
<td></td>
<td>• Wall-mounted blackboard.</td>
</tr>
<tr>
<td></td>
<td>• Waste bin.</td>
</tr>
<tr>
<td></td>
<td>• Wooden shelves.</td>
</tr>
<tr>
<td></td>
<td>• Working stations / computers.</td>
</tr>
<tr>
<td>56. Staff resting room. For staff to rest. With water inlet and telephones.</td>
<td>• 25 L swing lid waste bin.</td>
</tr>
<tr>
<td></td>
<td>• Central table.</td>
</tr>
<tr>
<td></td>
<td>• Chairs.</td>
</tr>
<tr>
<td></td>
<td>• Coat stand.</td>
</tr>
<tr>
<td></td>
<td>• Floor and wall cupboards.</td>
</tr>
<tr>
<td></td>
<td>• Paper towel dispenser.</td>
</tr>
<tr>
<td></td>
<td>• Pictures.</td>
</tr>
<tr>
<td></td>
<td>• Resting armchairs.</td>
</tr>
<tr>
<td></td>
<td>• Telephone.</td>
</tr>
<tr>
<td></td>
<td>• Worktop with sink, microwave and fridge.</td>
</tr>
<tr>
<td>57. Staff toilet and changing room. For the unit staff. With similar characteristics to the toilets for the visitors</td>
<td>• 25 L swing lid waste bin.</td>
</tr>
<tr>
<td></td>
<td>• Coat stand.</td>
</tr>
<tr>
<td></td>
<td>• Mirrors.</td>
</tr>
<tr>
<td></td>
<td>• Paper dispenser.</td>
</tr>
<tr>
<td></td>
<td>• Paper towel dispenser.</td>
</tr>
<tr>
<td></td>
<td>• Soap dispenser.</td>
</tr>
<tr>
<td></td>
<td>• Toilet brushes.</td>
</tr>
</tbody>
</table>
6.3. Medical supplies. Sterilization

All healthcare centres with HMs should exercise strict control over the storage and distribution of medical supplies and equipment, with special attention to expiry dates.

Moreover, they must have safe areas for the correct storage and control of medical supplies and instruments, with the appropriate capacity to respond to their needs and with the adequate methods of classification and control. Moreover, they should guarantee, by means of adequate distribution systems, the availability of all the necessary material for all the activities performed at the unit. When possible, the use of periodic replacement systems (i.e. double-box) is highly recommended.

Healthcare centres must ensure that sterile equipment is used correctly. Single-use supplies should be disposed of after each use and must not, under any circumstances, be re-used. Sterile equipment packaging must always indicate that the date on which the equipment was sterilized and the use-by date.

All non-disposable material or instruments that may penetrate the skin or the mucous membranes or that may be in contact with the mucous membranes, mucus or other organic body fluids have to be cleaned and sterilized before each use, by means of an efficient and adequate system.

Whenever necessary, staff and patients will be equipped with the appropriate personal protection.

6.4. Prevention and control of nosocomial diseases

Healthcare centres with HMs should establish the adequate procedures to prevent and control hospital acquired diseases. Those procedures should analyse the healthcare processes specifically conducted on the unit and define the appropriate guidelines.

In general, HMs do have specific requirements against nosocomial infections similar to those taken at surgical environments, hospitalization wards, consultation rooms or cabinets at which diagnostic or treatment procedures are performed.

As in those places, both patients and staff may run the risk of acquiring an infection or of transmitting it both sides. Therefore, the so called “universal precautions” and hospital policies on infection control should be carefully observed.
6.5. Hygiene protocols

HMs should keep optimum hygiene and cleanliness in all areas, premises, equipment, apparatus and medical supplies.

There should be a hygiene, disinfection and pest control protocol, in accordance with their specific needs. This protocol will be accompanied by an outsource contract that guarantees its fulfilment, unless it is performed by the unit staff.

There should also be a cleaning, disinfection and, where appropriate, sterilization protocol for equipment and non disposable apparatus and instruments.

6.6. Hospital waste management

Healthcare centres with HMs are obliged to identify and classify hospital waste assuring that is properly removed and disposed of.

To comply with this obligation they must have a protocol for the identification, classification and handling of hospital waste that obeys current legislation and which should be acknowledged and followed by the staff of the unit.
7. Human Resources

7.1. Registry of medical staff

Healthcare centres with HMs should have an updated register of healthcare personnel, whichever their contractual relationship with the centre, the way or the place in which they render their services.

This registry will include the following information: registration number, full name, qualifications, professional category, speciality, function, nature of relationship with the centre and, where appropriate, date of leaving, dismissal or retirement and, all the additional information required to comply with the general principles established by the Spanish National Health System Inter-regional Board pursuant to all legislation on the medical profession.

The healthcare personnel register will be updated whenever there is any change on the staff and it will be reviewed at least once every three years, checking that all staff meet the necessary criteria for the exercise of their profession.

The register will include the unit to which each professional is related to, especially if they work at the HM.

7.2. Personal file

All healthcare centres will keep a personal file on each worker, retired employees too, including all documents relating to the qualification, specialized training, professional experience and work life.

Right to access these files for the people concerned will be guaranteed, as well as the safety and confidentiality of all personal data.

7.3. Qualification and competences

All staff will work under the principles, the conditions and the requisites established in the Act 44/2003, November 21st, on the medical profession and in other legal and deontological ethic code applicable.

The consensus document among the Royal College of Obstetricians and Gynaecologists, the Royal College of Midwives, the Royal College of Anaesthetists and the Royal College of Paediatrics and Child Health35

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“acknowledges the main role of the midwife in the care for the woman during normal labour, as well as the need for a higher involvement of the doctor specialized in obstetrics in caring for women during difficult or complicated pregnancies and labours, and the supervision and training of the medical staff. All personnel: midwives, obstetricians, anaesthetists and paediatricians should work together in order to agree on protocols that improve the results for mother and newborn, especially in complicated pregnancies.” Some of the standards and recommendations contained in this section are based on the mentioned consensus document.

The staff for the HM should have the following qualifications and competences:

- **HM Manager.** There should be a specialist in obstetrics and gynaecology in charge of the HM. Likewise, there will be a specialist in obstetrics and gynaecology available 24 hours a day. The name of the HM manager and the doctor or doctors working 24 hours a day should be available in the operational rules of the HM. Annex 8 includes an adapted version of the duties proposed by the consensus document of professional colleges of the United Kingdom for the HM manager.

- **Head of the Midwifery.** This function will be performed by a certified nurse with a specialization in midwifery. Annex 9 includes an adapted version of the duties proposed by the consensus document of professional colleges of the United Kingdom for the midwife in charge of the HM.

- **Midwife.** She/he will be a certified nurse with a specialization in obstetrics gynaecologic nursing (midwifery), whose activities in the unit will be related to providing special care for women during pregnancy, labour and puerperium. Midwives experience lies in assisting normal labours and in their diagnosis skills to identify and refer out of these cases. Even if an obstetrician or another member of the multidisciplinary team is needed, the midwife is still responsible for providing global support, maximizing the continuity of care and promoting, in as much as possible, a view of pregnancy and labour as a normal physiological process. There will be a tendency to guarantee the availability of a full time midwife for each woman with on-progress labour.

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(62) For example: Higuero JC, Garrido B, Mora JM, Maañón JC, Mora AM. Procedimiento de Matronas para Ingresos y Egresos de Alto Riesgo. Hospital Costa del Sol (Marbella, Málaga, Spain).
• **Obstetricians.** Within the HM, the role of doctors specialized in obstetrics and gynaecology is to ensure a high assistance standard to women and their newborns with complicated obstetrics or medical needs and to be available for acute, serious, often unpredictable, and life threatening emergencies. There is some evidence of relationship between the absence of a specialist in obstetrics in the HM, as for example during nights, and less favourable(63) results.

In the case of emergencies, prevision for labours with complications, including Caesarean sections, or when the clinical situation is worrisome, the specialist in obstetrics must be consulted and be available in the HM when required.

**An obstetrician on duty will be guaranteed in the labour room, either physically present or on call.**

• **Anaesthetist.** She/he will be a doctor specialized in anaesthesia and resuscitation, in charge of the pharmacological analgesia procedures during labour and the anaesthetic management of women undergoing obstetrical surgical procedures. Anaesthetists are involved, in one way or another, in the healthcare of 50% or more (depending on the centre practices) of the women hospitalized in the HM.

The role of the anaesthetists continues during the early post-labour period in order to ease the pain and detect complications. All women requiring anaesthesia must go through a pre-anaesthetic consultation.

**In order to improve practice, more than 95% of women with scheduled Caesarean sections and more than 85% with emergency Caesarean sections should receive regional anaesthesia, since regional is safer anaesthesia than the general.**

There will be a tendency to guarantee the availability of anaesthetists that not only provides epidural analgesia or other analgesia-anaesthesia techniques to women in labour who require it, but also assists urgent/emergency labours that require analgesia/anaesthesia (Caesarean sections, instrumental deliveries, other surgical procedures).

• **Paediatrician/neonatologist.** She/he will be a doctor specialized in pediatrics, responsible for the care and recovery of the newborn.

(63) This is a quotation from the bibliographic reference 33, in annex 5. The consensus document among the RCOG, the RCM, the RCA and the RCPCH pleads for a “168 hours coverage” (24 hours a day, seven days a week) of a specialist (“consultant”) in obstetrics.
The stabilization of the newborn requires the coordinated help of midwives, doctors and nurses. The specific role of each member of the team varies according to the local circumstances of the centre; however, whenever possible, mother and child must remain together. The staff members responsible for the stabilization of the newborn must check the resuscitation equipment when assisting in the HM.

**Doctors** (midwives, obstetricians or paediatricians) trained in advanced life support techniques (including endotracheal intubation) must be available for newborns that are premature, sick, or have congenital anomalies.

Protocols and guidelines for the following situations must be developed:

- Identification of the newborn with a potentially difficult situation or medical problems as well as those who may have to be readmitted in the neonatal unit.
- Mechanisms for referral to the neonatal intensive care unit.
- Resuscitation and management of newborns excessively undeveloped or with congenital anomalies.

Clinical examination and screening of the newborn must follow the protocols and guidelines of the Health Services. There will be a tendency to guarantee the availability of a paediatrician-neonatologist trained in neonatal resuscitation, either physically present or on call, in charge of assisting, stabilizing and/or transferring the newborn when needed.

- **Nurse** (care related to treatment administration and patient recovery: in the operating theatre, hospitalization, etc.). Certified nurse with training and experience in maternal perinatal care.
- **Nurse assistant.** Associate degree as a nursing assistant, with training and experience in maternal perinatal assistance.
- **Secretary** (administrative assistant). Associate degree in a field other than health services.
- **Auxiliary staff**. Orderly.

The staff ascribed to the HM will perform the duties attached to their professional status, according to the work protocols and procedures included in the regulations of the centre and under the directions of the person in charge.
7.4. Identification and discrimination of staff members

Healthcare centres with HMs will take the necessary measures to guarantee that users and escorts can identify staff and can distinguish the qualifications and the professional category of the person/s that are caring them.

Healthcare staff professional categories will be distinguished by the uniform and identified by means of a personal ID tag which will clearly show his/her full name and category.

Healthcare staff is obliged to identify themselves when required by the user, indicating their full name, professional qualifications and speciality, as well as category and role, whenever it is not clearly comprehended by the patient.

7.5. Documentation methods

For the correct exercise of their profession, healthcare centres will provide to the staff of the HM, according to their category, the following resources:

a) Access to patient’s clinical records.
b) Healthcare and clinical practice guides, pathways and protocols.
c) Internal regulations, as well as the unit objectives and functions, both general and specific.
d) Healthcare, informative and statistical documents set by the centre.
e) The procedures, reports, joint protocols or indicators that may help to guarantee continued patient care.

7.6. Undergraduate and postgraduate training

7.6.1. Objectives to develop in the upcoming years

In the upcoming years, teaching of medicine and nursing, and training of specialist in both fields, should include not only new healthcare modalities, as day surgery, day hospitalization or home hospitalization, but also current trends in medicine, cost-effective use of technological advances, quality control, competence of service providers, elaboration of clinical pathways and guides; namely, it should adapt to clinical management techniques.
As for the HM, the following aims should be met:

1. To include in a systematic way this healthcare modality on the practical experience of medical and nursing students.
2. To train future specialists on Obstetrics and Gynaecology, Anaesthesiology and Resuscitation, and on Obstetric-Gynaecologic Nursing on the different functional elements of the HM, taking into special consideration the development of criteria and recommendations by the “Estrategia de atención al parto normal en el Sistema Nacional de Salud”.
3. To contribute in the promotion of the basic principles of managed healthcare, through the two previous aims.

7.6.2. Undergraduate and postgraduate training plan

Medicine and nursing student in general and the residents of the specialities present in the HMs must have a deep knowledge of the distinctive elements of these units. Postgraduate training will adjust to the programmes approved by the respective Specialty National Commissions.

7.7. Continued training

The HMs will take the necessary measures to allow staff to receive continued training and to undergo research and training activities. The HMs will have available training programmes, which will be adapted to the unit characteristics, to keep staff up to date on patients’ safety and quality.

Health Services and other healthcare organizations should collaborate with the HMs professionals in the promotion of their training. For this purpose, when requested, there should be provided:

- Specific training for specialist staff and for other healthcare professionals, not only on the techniques related to the treatments included in the service portfolio of the HM, but also on the organizational and functional criteria necessary for its development and implementation, as well as on the advantages that these techniques imply for the users.
- Opportunities to attend to and practice in a HM of reference.
• Local incentives.

**Multi professional development and training for all members in the HM staff must be promoted. It is recommended the of use simulators whenever is possible.** Skills and training covering the following aspects must be developed:

• Third- and fourth-degree lacerations.
• Shoulder dystocia.
• Severe pre or postpartum haemorrhage.
• Identification of the ill mother.
• Identification of the ill newborn.
• Foetal monitoring.
• Breech birth.
• Umbilical cord prolapse.
• Basic resuscitation of the adult.
• Basic neonatal resuscitation.
• Perineal suturing.

7.8. Criteria for the calculation of the necessary resources

For its operation, the HM should be provided with the necessary medical and nurse staff who, apart from having the appropriate qualifications to fulfil the needs of the users, they should have vocation and specific personal skills suitable to their caring. The staff should work as a team, ideally of a multidisciplinary nature, in order to assist to the different needs of the patients.

Allocation of human resources in the HMs will depend on the complexity of the cases cared for in the unit, on the expected volume of activity and the organizational model adopted. To calculate the necessary staff it should be taken into account that the caring special characteristics of the obstetric service determine the need for the HMs -both the obstetrics suite and the conventional obstetrics hospitalization unit- to operate 24 hours a day 365 days a year, shaping the arrangement of the resources in a way that ensures emergency care, which represents the main feature of the care required, and which, by definition, cannot be programmed.

The criteria exposed below have, consequently, a suggestive nature; therefore their use as planning reference for HMs requires that they are
adapted in every case to the specific conditions of each specific case.

- Doctors specialized in Obstetrics and Gynaecology:
The number of full time doctors appointed to the HM\(^{(64)}\) may be drawn from the following formula:

\[
SD = \frac{(W \times CAT) + (L \times LT) + (SP \times SPT \times NS) + (S \times AST) + (TAOA \times AWH)}{DWH \times AWH \times 60 \times CA}
\]

Where:

\begin{itemize}
  \item **SD** is the number of full time specialized doctors ascribed to the HM.
  \item **W** is the number of annual expected women who require clinical diagnosis consultation by a specialist in obstetrics previous to hospitalization.
  \item **CAT** is the average time, in minutes, that a specialized doctor devotes to each woman who requires a consultation previous to hospitalization.
  \item **L** is the number of expected labours in which an obstetrician will be needed.
  \item **LT** is the average time that the doctor specialized in obstetrics devotes to labours that need his/her participation.
  \item **SP** is the number of annual expected obstetrical procedures.
  \item **SPT** is the average duration of obstetrical procedures.
  \item **NS** is the average number of specialist in obstetrics who participate in an obstetrical procedure.
  \item **S** is the number of annual expected stays at the obstetrics conventional hospitalization unit.
  \item **AST** is the average time per stay, in minutes, that a specialist devotes to each woman admitted at the obstetrics conventional hospitalization unit.
  \item **TAOA** is the average time, in minutes, that specialists in obstetrics devote daily to other activities in the HM apart from consultations previous to hospitalization, assistance to labour, and surgery.
\end{itemize}

\(^{(64)}\) It must be taken into account that this formula corresponds only to the specialists ascribed to the two units that form the HM: the obstetrics suite and the obstetrics conventional hospitalization unit. Accordingly, it does not include other routine activities carried out by these professionals in an Obstetrics and Gynaecology Service (for example: planned outpatient care).
DWH is the number of daily work hours of a specialist in obstetrics.

AWH is the number of annual work hours of a specialist in obstetrics.

CA is the care achievement of specialists in the HM, in percentage.

The Spanish Society of Gynaecology and Obstetrics recommends that the staff on call should include, at least, a specialist in obstetrics for every 2000 labours or fraction16. The recommendations of the United Kingdom35. (65) professional colleges are as follows:

- < 2,500 labours / year: 1 specialist in obstetrician + 40 hours/week as “consultant”
- 2,500-4,000 labours/year: 2 specialists in obstetrician + 60 hours/week as “consultant”
- 4,000-5,000 labours/year: 3 specialists in obstetrician + 98 hours/week as “consultant”
- 5,000-6,000 labours/year: 3 specialists in obstetrician + 168 hours/week as “consultant”

- Doctor specialized in Anaesthesia and Resuscitation and Paediatrics-Neonatology:
Allocation of these specialists will be determined by the HM request for assistance. It is desirable, as long as the volume of activity allows it, that the HMs have ascribed doctors specialized in these fields; otherwise, they will remain under the staff of the corresponding services, which should guarantee coverage of the HM needs in terms of labour analgesia and anaesthesia to women undergoing obstetrical procedures (anaesthetists), and assistance and recovery of newborns (paediatricians).
Below there is a formula to approximate the calculation of the staff needed, when there is adequate quantity of activity:
Anaesthetists:

\[
SD = \frac{(LxLT)+(SPxSPT+(TAOAxAWH))}{DWHxAWHx60xCA}
\]

(65) There are noticeable differences in qualifications, categories and functions carried out by the different members of the team, as well as in the organization and management of the HMs in the British National Health Service and the Spanish National Health Service; therefore, the reference is shown as a suggestion.
Where:

\[
SD = \frac{(L \times LT) + (W \times CT) + (TAOA \times AWH)}{WH \times AWH \times 60 \times CA}
\]

Neonatologists:

\[
SD = \frac{(L \times LT) + (W \times CT) + (TAOA \times AWH)}{WH \times AWH \times 60 \times CA}
\]

Where:

**SD** is the number of full time specialized doctors ascribed to the HM.

**L** is the number of expected labours.

**LT** is the average time that the paediatrician devotes to the labour.

**C** is the number of annual expected Caesarean sections.

**CAT** is the average time that the paediatrician devotes to a Caesarean section.

**TAOA** is the average time, in minutes, that neonatologists devote daily to other activities in the HM apart from assistance to labours and Caesarean sections.

**DWH** is the number of daily work hours of a specialist.

**AWH** is the number of annual work hours of a specialist.

**CA** is the care achievement of doctors in the HM, in percentage.
There must be an anaesthetist on call immediately available for the HM.
It is advisable that all HM with at least 2,000 labours a year guarantees a paediatrician attending in the labour room.

- Midwives, nurses and nurses assistants:
The number of staff ascribed to the HM\(^{(66)}\) may be drawn from the following formulas:

\[
M = \frac{(WM \times CATM) + (P \times TPM) + (TAO \times AWH)}{DWH \times AW \times 60 \times CA}
\]

\[
N = \frac{(W \times CATN) + (SP \times SPT \times NS) + (S \times ASTN) + (TAOAN \times AWH)}{DWHN \times AWH \times 60 \times CA}
\]

\[
AS = \frac{(WAS \times CATAS) + (L \times LTAS) + (S \times ASTAS) + (TAOAS \times AWH)}{DWHAS \times AWH \times 60 \times CA}
\]

Where:
- \( M \) is the number of midwives.
- \( N \) is the number of nurses.
- \( AS \) is the number of nurse assistants.
- \( WM \) is the number of annual expected women who require clinical diagnosis consultation by a midwife before hospitalization.
- \( WN \) is the number of annual expected women who require a nurse during the clinical diagnosis consultation previous to hospitalization.

\(^{(66)}\) As in the cases of specialist in Obstetrics and Gynaecology, it must be taken into account that this formula corresponds only to the midwives ascribed to the two units that form the HM: the obstetrics suite and the obstetrics conventional hospitalization unit. Accordingly, it does not include, other routine activities carried out by these professionals (for example: planned outpatient care).
WAS is the number of annual expected women who require a nurse assistant during the clinical diagnosis consultation previous to hospitalization.

CATM is the average time, in minutes, that midwives devote to clinical diagnosis consultation previous to hospitalization.

CATN is the average time, in minutes, that nurses devote to clinical diagnosis consultation previous to hospitalization.

CATAS is the average time, in minutes, that nurse assistants devote to clinical diagnosis consultation previous to hospitalization.

L is the number of expected labours.

LTM is the average time that a midwife devotes to a labour.

LTAS is the average time that the nurse assistant devotes to a labour.

SP is the number of annual expected obstetrical procedures.

SPT is the average duration of obstetrical procedures.

NN is the average number of nurses who participate in an obstetrical procedure.

NAS is the average number of nurses assistants who participate in an obstetrical procedure.

S is the number of annual expected stays at the obstetrics conventional hospitalization unit.

ASTN is the average time per stay, in minutes, that a nurse devotes to each woman admitted at the obstetrics conventional hospitalization unit.

ASTAS is the average time per stay, in minutes, that a nurse assistant devotes to each woman admitted at the obstetrics conventional hospitalization unit.

TAOAM is the average time, in minutes, that midwives devote daily to other activities in the HM.

TAOAN is the average time, in minutes, that nurses devote daily to other activities in the HM.

TAOAAAS is the average time, in minutes, that nurses assistants devote daily to other activities in the HM.

DWHM is the number of daily work hours of a midwife.

DWHN is the number of daily work hours of a nurse.
**DWHAS** is the number of daily work hours of a nurse assistant.

**AWH** is the number of annual work hours.

**CA** is the care achievement in percentage.

As long as the resources allow it, it should be provided that each woman with a documented labour has a midwife assigned who can devote 100% of her/his time\(^{31, 32, 35}\). This proportion can be higher in cases of higher risk labours than in those considered lower risk. The consensus document of the United Kingdom\(^{35}\) professional colleges considers the allocation of a Midwife Manager for every 6 midwives.

**Non medical support staff:** Depending on the volume of activity and the computerization level of the HM, there will be necessary one administrative assistant. An orderly will be also needed for the obstetrics suite and another for the obstetrics conventional hospitalization unit.
8. Care Quality

8.1. Authorization and registry

As discussed in the Current Situation section, among the authorization and registry rules of healthcare centres promulgated by certain regional governments for healthcare centres and institutions there are concrete references related to the obstetric suite which are considered minimums. Some of these rules establish as minimum structural requirements those corresponding to a “sequential” organization of labour (pre-labour, labour, etc.) as well as other aspects related to human resources, etc. that probably should be reviewed in terms of the scientific evidence available and the standards and recommendations gathered in this document.

8.2. Accreditation and audit

Among the regional governments which have elaborated accreditation systems, only Catalonia establishes specific criteria for the obstetric suite: “The structure and disposition of spaces assigned to labour are adequate to the care needs, facilitate the job of the professionals involved and allow rational use of human resources”\(^\text{14}\).

The Ministry of Health and Social Policy and the National Commission of the Gynaecology and Obstetrics Specialization have established the accreditation criteria for this specialty services for postgraduate training, since the Spanish National Health Services has not a universal system of care accreditation for HMs.

The EU Project on Promotion of Breastfeeding in Europe 2004-2008 includes in the Promotion, protection and help section: to incorporate the compliance of all Baby Friendly Initiative\(^\text{67}\) criteria within the accreditation system national rules for a high maternity service of high quality.

It would be advisable that all maternal deaths were object of a detailed confidential auditory by a technical-scientific body independent from the corresponding Health Service and healthcare centre.

\(^{67}\) The Spanish URL of the initiative is www.ihan.es. UNICEF. Iniciativa Hospital Amigo de los Niños (Baby Friendly Hospitals Initiative). According to its web page there are 13 hospitals accredited in Spain. (last viewed on 15/12/08).
8.3. Quality Indicators

The Spanish Society of Gynaecology and Obstetrics, in coordination with the Avedis Donabedian Foundation, has developed a wide group of care quality indicators in gynaecology and obstetrics\textsuperscript{74} that might prove excessively extent.

Within the key indicators of the Spanish National Health Service\textsuperscript{75} the rate of Caesarean sections has been included, as a relevant indicator to measure the quality and results of the health care. Following the “Estrategia de atención al parto normal en el Sistema Nacional de Salud” implementation framework, the work group on quality indicators is elaborating a document that can be useful to evaluate the internal quality of the HMs.

The United Kingdom professional colleges’ consensus document on safe labour\textsuperscript{35} includes a group of indicators focused on the results:

- Normal labours without intervention.
- Inductions – indications, results and success.
- Prolonged labours
- Rate of labours longer than 18 hours.
- Instrumental deliveries, vacuum extraction and rotational and non-rotational forceps
- Third- and fourth-degree lacerations.
- Rate of epidural anaesthesia/analgesia.
- Failed maternal intubation.
- Total number of births.
- Planned Caesarean section – incidences and indications.
- Emergency Caesarean section – incidences and indications.
- Perinatal mortality during delivery.
- Apgar Test <7 after 5 minutes in newborns under 37 weeks gestation.
- Need for neonatal resuscitation in newborns under 37 weeks gestation.
- Admissions of newborns under 2.5 kg in a neonatal unit.
- Occurrences of primary postpartum haemorrhage.
- Referral of the mother to an intensive care unit.
- Referral of the mother to other units.
- Referral of the newborn to other units.
- Hysterectomy and other haemostatic methods.
- Percentage of labours with complications assisted by a consultant.
- Rate of breastfeeding at birth and discharge.
• Antenatal steroids previous to preterm labour.
• Maternal mortality.
• Neonatal mortality.
• Neonatal injuries due to delivery, such as:
  • Brachial and facial paralysis.
  • Extra-cranial haematomas.
  • Bone fractures.
• Injuries, erosions.
• Neonatal encephalopathy

The American AHRQ\(^\text{76}\) establishes as quality criteria the rate of Caesarean sections, as well as the rate of vaginal birth after Caesarean deliveries. Likewise, the National Quality Forum has passed a group of performance indicators for perinatal care\(^\text{(68)}\).

It is also possible to use care quality indicators related to the area of obstetrics hospitalization:

• Conventional hospitalization. At the expense of the standards and recommendations applied to conventional hospitalization units, the quality indicators most frequently used are the following:
  • Average stay case-mix index adjusted <1
    Average stay case-mix adjusted = Sum (DRG to DRG) (Standard patient discharges* Average stay in a unit) / Total of standard patient discharges
    It is the average stay of a specific considered unit if it will care, with the average stay for each of the DRG (annex 3), to the standard patients (Standard patient discharges), i.e., the range of population for comparison. Extreme cases are excluded for calculation purposes. It is recommended to compare with the lowest standard from within the whole Spanish National Health Service or the corresponding range of hospitals where the HM\(^\text{(69)}\) is located.

  • Average stay performance adjusted <1
    Average stay performance adjusted = Sum (DRG to DRG) (Unit patient discharges*Standard of average stay) / Total of unit patient discharges
    It is the average stay of a specific considered unit if it would have taken care of its own cases (Unit patient discharges)

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\(^\text{68}\) http://www.qualityforum.org/projects/ongoing/perinatal/
\(^\text{69}\) http://www.msc.es/estadEstudios/estadisticas/docs/NORMA_GRD_2006_Cluster.xls
with the average stay that the standard *(standard of average stay) has used for each DRG (annex 3). Extreme cases are excluded for calculation purposes. It is recommended to compare with the lowest standard from within the whole Spanish National Health Service or the corresponding range of hospitals where the HM is located.

- **Percentage of readmissions:**
  \[
  \left(\frac{\text{a}}{\text{b}}\right) \times 1000
  \]
  a) Number of hospital discharges with readmission.
  b) Total number of discharges due to that reason during the studied period of time.

  Readmission is defined as all unexpected hospital admission (urgent hospitalization) after a discharge from the same hospital. For establishing the rate of one-year sequence, the study is made considering the hospitalization indexes of the first 11 months of the year, excluding discharges due to death.

- **Notification rate of adverse reaction to medication:**
  \[
  \left(\frac{\text{a}}{\text{b}}\right) \times 1000
  \]
  a) Number of suspected adverse reaction notifications completed in a specific period of time.
  b) Discharges from hospital during that period of time.

  It includes all notifications carried out by healthcare staff to the Spanish Society of Pharmacovigilance (SEFV, in its Spanish acronym) and included in the FEDRA database (Adverse reactions database of the Spanish Society of Pharmacovigilance).

- **Rate of Nosocomial infection:**
  \[
  \left(\frac{\text{a}}{\text{b}}\right) \times 100
  \]
  a) Number of hospital discharges with nosocomial infection diagnosis in a year.
  b) Discharges from hospital in that year.

  The numerator includes all those hospital discharges in which appear, in any secondary diagnosis position, the codes 999.3, 996.6x, 998.5x or 519.01. Exclusions and / or exceptions: in the original definition (Agency for Healthcare Research and Quality) cases with a hospital stay of less than two days are excluded, as well as any code
indicating that the patient is in an immunosuppressed or cancer situation.

- Rate of transfusion reaction:
  \[ \frac{a}{b} \times 1000 \]
  a) Total number of hospital discharges with transfusion reactions in a year.
  b) Total number of discharges from hospital in that year.
  The numerator includes, in any secondary diagnosis position, the codes 999.5 to 999.8 or E876.0 from the CIE-9 classification in its MC version. Cases in which the transfusion reaction appears with a main diagnoses code are excluded. The OECD Health Care Quality Indicators Project includes the following codes: 9996 ABO Incompatibility Reaction, 9997 RH Incompatibility Reaction, E8760 Mismatched Blood In Transfusion and the exception of discharges of patients over 18 or from the major diagnostic category 14 (pregnancy, delivery and puerperium)

Finally, satisfaction surveys should be performed, in order to value the apparent quality or the quality felt by the user. In order to be able to compare the surveys of the HMs, the following question-answer method, which responds to the “Health Barometer” methodology, could be used:

- Overall, the care you have received in the HM has been...
  - Very good.
  - Good.
  - Average
  - Poor
  - Very poor.
  - Don’t know / No answer.

With: \( \frac{a}{b} \times 100 \), being:
  a) Patients interviewed who have attended the HM in the last year and declare to have received a good or very good assistance.
  b) Patients interviewed who have used the service in the last year.
A group of indicators is proposed, summarized in the following table:

<table>
<thead>
<tr>
<th>Quality dimension</th>
<th>Indicator</th>
<th>Calculation</th>
</tr>
</thead>
</table>
| 1. Percentage of labours without intervention | \(\frac{a}{b}\) \times 100 | a) Number of labours without intervention (normal labours)  
b) Total number of deliveries (vaginal deliveries + Caesareans sections). |
| 2. Percentage of instrumental deliveries | \(\frac{a}{b}\) \times 100 | a) Number of instrumental vaginal deliveries.  
b) Total number of vaginal deliveries. |
| 3. Percentage of labours longer than 18 hours | \(\frac{a}{b}\) \times 100 | a) Number of vaginal deliveries ≥ 18 hours long.  
b) Total number of deliveries. |
| 4. Percentage of Caesarean sections | \(\frac{a}{b}\) \times 100 | a) Number of Caesarean sections.  
b) Total number of deliveries (vaginal + Caesareans). |
| 5. Percentage of scheduled Caesarean sections | \(\frac{a}{b}\) \times 100 | a) Number of planned Caesarean sections.  
b) Total number of deliveries (vaginal + Caesareans). |
| 6. Percentage of emergency Caesarean sections | \(\frac{a}{b}\) \times 100 | a) Number of emergency Caesarean sections.  
b) Total number of deliveries (vaginal + Caesareans). |
| 7. Percentage of vaginal births after Caesarean deliveries | \(\frac{a}{b}\) \times 100 | a) Number of vaginal birth after a previous Caesarean delivery.  
b) Total number of deliveries (vaginal + Caesareans) after a previous Caesarean delivery. |
| 8. Percentage of episiotomies | \(\frac{a}{b}\) \times 100 | a) Number of episiotomies.  
b) Total number of vaginal deliveries. |
| 9. Percentage of third- and fourth-degree lacerations | \(\frac{a}{b}\) \times 100 | a) Number of third- and fourth-degree lacerations.  
b) Total number of vaginal deliveries. |
<table>
<thead>
<tr>
<th>Quality dimension</th>
<th>Indicator</th>
<th>Calculation</th>
</tr>
</thead>
</table>
| Scientific-technical quality and efficiency of the HM. Global | 10. Percentage of epidural anaesthesia/analgesia | \[(a) / (b)] \times 100  
a) Number of users of epidural anaesthesia/analgesia.  
b) Total number of vaginal deliveries. |
| | 11. Percentage of primary postpartum haemorrhage | \[(a) / (b)] \times 100  
a) Number of users with haemorrhage after vaginal delivery.  
b) Total number of vaginal deliveries. |
| | 12. Percentage of hospitalizations in the intensive care unit | \[(a) / (b)] \times 100  
a) Number of users hospitalized in an intensive care unit (within the HM or referred to other healthcare centres).  
b) Total number of newborns. |
| | 13. Percentage of hospitalizations in the neonatology unit | \[(a) / (b)] \times 100  
a) Number of newborns hospitalized in a neonatology unit (within the HM or referred to other healthcare centres).  
b) Total number of newborns. |
| | 14. Percentage of obstetrics neonatal injuries | \[(a) / (b)] \times 100  
a) Number of newborns with obstetrics neonatal injuries (for example: Erb’s palsy).  
b) Total number of newborns. |
| | 15. Percentage of neonatal encephalopathy | \[(a) / (b)] \times 100  
a) Number of NB with neonatal encephalopathy.  
b) Total number of newborns. |
| | 16. Rate of maternal mortality due to obstetrics causes | \[(a) / (b)] \times 100.000  
Number of maternal deaths due to direct obstetrics causes (see annex 10 for a definition).  
b) Total number of deliveries (vaginal + Caesareans).  
Note: This indicator must be obtained through an auditory of all maternal deaths. |
| | 17. Rate of perinatal mortality | \[(a) / (b)] \times 1.000  
a) Number of perinatal deaths (see annex 10 for a definition).  
b) Total number of newborns. |
| | 18. Rate of perinatal mortality during labour | \[(a) / (b)] \times 1.000  
a) Number of perinatal deaths during delivery.  
b) Total number of newborns. |
| | 19. Rate of breastfeeding at discharge | \[(a) / (b)] \times 1.000  
a) Number of breastfed newborns at discharge.  
b) Total number of newborns. |
<table>
<thead>
<tr>
<th>Quality dimension</th>
<th>Indicator</th>
<th>Calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>20. Scientific-technical quality and efficiency of the HM. Conventional Hospitalization</td>
<td>20.1. Average stay case-mix index adjusted</td>
<td>Average stay case-mix adjusted = Sum (DRG to DRG) (Standard patient discharges * Average stay in a unit) / Total of standard patient discharges</td>
</tr>
<tr>
<td></td>
<td>20.2. Average stay performance adjusted</td>
<td>Average stay performance adjusted = Sum (DRG to DRG) (Unit patient discharges * Standard of average stay) / Total of unit patient discharges</td>
</tr>
</tbody>
</table>
| | 20.3. Percentage of readmissions | \( \frac{(a)}{(b)} * 1,000 \)  
(a) Number of hospital discharges with readmission.  
(b) Total number of discharges due to that reason during the studied period of time. |
| | 20.4. Notification rate of adverse reaction to medication | \( \frac{(a)}{(b)} * 1,000 \)  
a) Number of suspected adverse reaction notifications completed in a specific period of time.  
b) Discharges from hospital during that period of time. |
| | 20.5. Rate of nosocomial infection | \( \frac{(a)}{(b)} * 100 \)  
a) Number of hospital discharges with nosocomial infection diagnosis in a year.  
b) Discharges from hospital in that year. |
| | 20.6. Rate of transfusion reaction | \( \frac{(a)}{(b)} * 100 \)  
a) Total number of hospital discharges with transfusion reaction in a year.  
b) Total number of discharges from hospital in that year. |
| | 20.7. Rate of global in-hospital mortality | \( \frac{(a)}{(b)} * 100 \)  
a) Number of hospital discharges due to death, total and for each one of the selected processes.  
b) Total discharges. |
| 21. Quality perceived by the HM users. | 21.1. Satisfaction index | \( \frac{(a)}{(b)} * 100 \)  
a) Patients interviewed who have attended to the HM and declare to have received a good or very good assistance.  
b) Patients interviewed who have used the service in the last year. |
9. Criteria for the Review and Follow up of the Standards and Recommendations

When the “Estrategia de Atención al Parto Normal” (Care Strategy to Normal Labour) would be implemented it will probably bring important changes in the way the attention to labour is organized and managed. This fact, together with the foreseeable changes in the organization and management of the healthcare system, make it advisable that this document should be reviewed and updated within five years at the most.

Throughout the process for the writing up of this document, some lacunae have been identified. In order to improve this knowledge as the basis over which the recommendations could be set up, based on evidence or, at least, on experience, it is highly recommended that the next review of the present document will include, apart from the topics it includes, the following:

- An analysis of the legislation on authorization and registry of the obstetric suite that the regional governments have developed and a proposal of coordination of these rules and of their adequacy to the standards and recommendations included hereby.
- A model of informed consent which would have the acceptance and agreement of the different scientific societies that have a role in labour.
- A systematic analysis of the quality indicators of the HMs which may imply the set of indicators recommended in chapter 8 of this document.
- An analysis of the reasons for the variability of the rates of Caesarean sections.
- An analysis which would deal with the relation between the rate of activity of the HMs and the rate of Caesarean sections as well as with the perinatal morbidity and mortality.
- A comparative analysis of the advantages and inconveniences that the integrated care to childbirth (LDRP) and the sequential, more traditional, model may have in the Spanish Society.
Annex 1. Prevention of Neonatal Infection Caused by Group B Streptococcus (GBS)\(^{15}\)

**Independently from the gestational age**

- To all pregnant women identified as carriers of a vaginal or rectal GBS in a culture carried out during the five weeks prior to labour.
- To all pregnant women who might have GBS detected in the urine during pregnancy, independently from the result of the vaginal or rectal culture, if it has been carried out.
- To all pregnant women who may have previously had a child with neonatal infection caused by GBS, regardless the result of the vaginal or rectal culture.
- At any labour with PROM longer than 18 hours when there are no available results of cultures.
- At all labours in which the mother may have intrapartum temperature\(^{(70)}\).

**Labour < 37 weeks of pregnancy**

- At any labour in which colonization might be positive or unknown.

**Labour > 37 weeks of pregnancy without any risk factor and not-knowing if the mother is carrier**

- No antibiotic prophylaxis will be used and the NB will be under close clinical monitoring, without being separated from the mother.

\(^{(70)}\) When symptoms of Systemic Inflammatory Response Syndrome are confirmed (leukocytosis, tachycardia, tachypnea, >38\(^{\circ}\), leukopenia; two of these signs or symptoms); on the other hand, it should be considered which antibiotics should be used when there is no GBS.
Premature rupture of membranes at pre-term pregnancy

- If the culture to detect GBS colonization has been carried out and the result is negative, it is not necessary to apply antibiotic prophylaxis for GBS.
- If the culture has not been carried out or the result is unknown, antibiotic prophylaxis for GBS should be initiated until the result of the culture is provided, stopping prophylaxis if negative.
- If the woman is known to be a carrier of the GBS, antibiotic prophylaxis should be applied. The length of the treatment will depend on the criteria of the gynaecologist and the personal circumstances of the pregnant woman.

Not recommended prophylaxis regardless the gestational age

- Negative or rectal GBS culture in the current pregnancy (carried out on the 5 weeks prior to childbirth), even though there might be any risk factors and even the culture has been positive on a previous pregnancy.
- Scheduled Caesarean section with a GBS positive result culture without any signs of beginning of labour and not showing any signs membrane rupture.

The source used for these recommendations also has antibiotic recommendations that should adapt to the antibiotic policy of the centre.

Treatment to the NB of an infected mother

The following situations may occur:

1. The prophylaxis has been appropriately carried out (at least 4 hours before the end of labour in two successive doses) and the NB shows signs of infection: the NB should undergo a haemoculture, a blood count, a CRP and a biochemical analysis (glucose, calcium, creatinine, and a total protein test). Peripheral smear cultures (umbilical, otic, nasal, meconium and gastric aspiration). Start antibiotic treatment (ampicillin + gentamicin). Lumbar puncture might be arguable and it should be considered depending on each specific case. The baby should be admitted into the neonatal unit.
2. Prophylaxis adequately carried out and NB asymptomatic. There are two possible situation:
a) If ≥ 35 weeks of pregnancy: clinical monitoring for at least 48 hours at the maternity ward.

b) If < 35 weeks of pregnancy: haemoculture and blood count: close monitoring and consider admission.

3. Incomplete prophylaxis (started at least 4 hours before the end of labour or if there has been lack of additional doses of antibiotic if labour had been longer than 4 hours) and NB is asymptomatic; all NB should have blood taken for haemoculture and blood count:
   a) If NB ≥ 35 weeks of pregnancy, monitoring; the baby may stay in the maternity unit with the mother.
   b) If NB < 35 weeks of pregnancy, the baby should be admitted into a neonatal unit.

4. No prophylaxis and asymptomatic NB. Two situations:
   a) If full term NB: penicillin G: 50,000 intramuscular during the first hour of life and monitoring at the maternity ward for at least 48 ours.
   b) If pre-term NB: penicillin G: 20,000 intramuscular. Monitoring. Consider admission at the neonatal unit.

5. Suspicion of chorioamnionitis: perform haemoculture, blood count, CRP, biochemical tests, peripherals smear tests. Start treatment with ampicilin and gentamicin and admit into the unit.

**Treatment of the NB of a mother without any risk factor and with unknown colonization situation.**

6. 48 hours clinical monitoring.
Annex 2. Risk Identification

Type I or Medium

1. Mild to moderate anaemia.
2. Pelvic anomaly
3. Cardiopathy I and II\(^{(71)}\).
4. Previous genital surgery (included Caesarean section).
5. Unfavourable social and economic conditions.
6. Inadequate pregnancy monitoring: first visit > 20 weeks of pregnancy or < than 4 visits or without additional test.
7. Gestational diabetes with good metabolic control.
8. Intrauterine device and pregnancy.
9. Extreme age: < 16 or > than 35 years.
10. Unknown gestational age: unknown date for last period, irregular periods or obstetric examination with discordant results.
11. Bigeminal pregnancy
13. Previous sterile condition: couple that has not been able to conceive during the two previous years.
15. Haemorrhage during the first quarter (non active).
16. (Rh) D Incompatibility\(^{(70)}\).
17. Excessive weight gain \(\text{BMI}^{(72)}>20\%\) or > than 15 kg.
18. Low weight gain < than 5 kg.
19. Mother infections: infections without clear foetal aftermaths.
20. Urinary infection: Asymptomatic bacteriuria and cystitis.
22. Multiparity: 4 or more labours with foetus > 28 weeks of pregnancy.
23. Obesity: BMI > over 29 kg/m2.
24. Abnormal foetal presentation: non-cephalic > 32 weeks of pregnancy
25. Risk of intrauterine growth retardation: risk factors associated to this retardation.
26. Risk of sexually transmitted infections\(^{(70)}\).
27. Risk at job: works in direct contact with toxic substances.

\(^{(71)}\) The mother should see a tocologist with the report of the specialist (cardiologist, nephrologist, endocrinologist, haematologist...).
\(^{(72)}\) BMI: Body Mass Index.
28. Suspicion of foetal malformation: previous records, ultrasound or biochemical alterations.
29. Suspicion of foetal macrosomy: estimated foetal weight at full-term > 4 kg.
30. Low height: < 1.50 m.

**Type II or high**

1. Drug abuser\(^{(70)}\): usual drug taker, medicines...
2. Alterations on the amniotic fluid: hydroamnios and oligoamnios.
3. Risk of pre-term labour (between 32-35 weeks).
4. Severe anaemia\(^{(70)}\): Hb level < 7.5.
5. Cardiopathies, levels III and IV\(^{(70)}\).
6. Previous diabetes\(^{(70)}\).
7. Gestational diabetes with a poor metabolic control.
8. Multiple pregnancy: three or more foetuses on the uterus.
9. Endocrine diseases (other)\(^{(70)}\): thyroid, suprarenal, hypohysis, hypothalamus...
10. Second and third quarter haemorrhage.
12. Maternal infection\(^{(70)}\): any infection with aftermath on the mother, the foetus or the NB.
13. Isoinmune condition\(^{(70)}\).
15. Inappropriate obstetric records: two or more abortions, one or more pre-term labours, distocic deliveries, NB with mental or sense conditions, one or more foetal or neonatal deaths, record of intergrowth retardation,....
16. Pyelonephritis
17. Associated maternal medical condition\(^{(70)}\): any condition that brings up severe or mild maternal and/or foetal suffering (renal dysfunction, breathing insufficiency, blood dyscrasia, hepatocellular insufficiency,....).
19. Genital tumours: uterine, adnexal...
20. Multiple pregnancy.
Very High Risk

1. Confirmed retarded intrauterine growth.
2. Confirmed foetal malformation.
3. Confirmed cervical incompetence.
4. Placenta previa.
5. Placenta abruptio.
6. Hypertension condition of pregnancy: serious preeclampsia and preeclampsia added to chronic hypertension.
7. Risk of preterm labour (under 32 weeks).
8. Previous membrane rupture on pre-term pregnancy.
10. Serious associated maternal condition(70).
11. Prenatal foetal loss.
12. Other.
### Annex 3. List of DRG Cared at HMs (AP, V. 18)

<table>
<thead>
<tr>
<th>Cod.</th>
<th>MDC</th>
<th>Type</th>
<th>Name</th>
<th>Weight</th>
<th>Includes</th>
<th>Clinical description</th>
</tr>
</thead>
<tbody>
<tr>
<td>370</td>
<td>14</td>
<td>SURG</td>
<td>Caesarean section with complications.</td>
<td>1,1062</td>
<td></td>
<td>Surgical DRG which includes those patients admitted due to labour and/or related situations who have had a Caesarean section performed. Moreover, these patients have other diagnostic labelled as complication or comorbidity, such as anaemia, puerperal infection, urinary infection or preeclampsia. There are not included in this group high risk Caesarean sections considered as DRG 650 or 651.</td>
</tr>
<tr>
<td>371</td>
<td>14</td>
<td>SURG</td>
<td>Caesarean section without complications.</td>
<td>0,8965</td>
<td></td>
<td>Surgical DRG which includes those patients admitted due to labour and/or related situations who have had a Caesarean section performed. There are not included in this group high risk Caesarean sections considered as DRG 650 or 651.</td>
</tr>
<tr>
<td>372</td>
<td>14</td>
<td>MED</td>
<td>Vaginal delivery with complicating diagnosis.</td>
<td>0,588</td>
<td></td>
<td>Medical DRG which includes those patients admitted due to labour and/or other related conditions in which delivery is vaginal, and including instrumental labours. The reason for admission was a diagnosis considered as “complicated” as, for example, premature rupture of membranes, eclampsia or placenta previa or pre-labour diagnosis, previous Caesarean section or prolonged pregnancy which also had other diagnosis considered as complicated.</td>
</tr>
</tbody>
</table>

*Hospital Care for Childbirth*
<table>
<thead>
<tr>
<th>Cod.</th>
<th>MDC</th>
<th>Type</th>
<th>Name</th>
<th>Weight</th>
<th>Includes</th>
<th>Clinical description</th>
</tr>
</thead>
<tbody>
<tr>
<td>373</td>
<td>14</td>
<td>MED</td>
<td>Vaginal delivery without complicating diagnosis.</td>
<td>0.4842</td>
<td>Normal childbirth, foetal suffering, forceps, other.</td>
<td>Medical DRG which includes those patients admitted due to labour and/or other related conditions in which delivery is vaginal, and including instrumental labours. The most frequent reasons for admissions are normal childbirth, instrumental delivery which does not show any cause or pH alterations and which do not have any other diagnosis considered as complicated.</td>
</tr>
<tr>
<td>374</td>
<td>14</td>
<td>SURG</td>
<td>Vaginal delivery with sterilization and dilatation and curettage.</td>
<td>0.7948</td>
<td>Assisted labour, dilatation and curettage after labour or abortion.</td>
<td>Surgical DRG which includes those patients admitted for labour and/or related conditions and who, on the same stay, have undergone any procedure but for sterilization and curettage, as tubal ligation and/or puerperal curettage.</td>
</tr>
<tr>
<td>375</td>
<td>14</td>
<td>SURG</td>
<td>Vaginal delivery with operating room procedure except dilatation and curettage and/or sterilization.</td>
<td>0.5876</td>
<td>Assisted labour, low-forceps delivery with episiotomy.</td>
<td>Surgical DRG which includes those patients admitted for labour and/or related conditions and who, on the same stay, have undergone any procedure but for sterilization and curettage, such as cervix, bladder or anus wound suture.</td>
</tr>
<tr>
<td>376</td>
<td>14</td>
<td>MED</td>
<td>Postpartum and post abortion diagnosis without operating room procedure.</td>
<td>0.5594</td>
<td>Care and immediate examination after labour, puerperal infection, postpartum haemorrhage, infection of the urinary ways: later admission.</td>
<td>Medical DRG which includes admitted patients during puerperium either because delivery took place at home or because after having been discharged due to delivery or and abortion, they have to be admitted again due to complications such as haemorrhage, mastitis, or complications of the surgical wound.</td>
</tr>
<tr>
<td>Cod.</td>
<td>MDC</td>
<td>Type</td>
<td>Name</td>
<td>Weight</td>
<td>Includes</td>
<td>Clinical description</td>
</tr>
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</tr>
<tr>
<td>377</td>
<td>14</td>
<td>SURG</td>
<td>Postpartum and post abortion diagnosis with operating room procedure.</td>
<td>1,0688</td>
<td>Dilatation and curettage.</td>
<td>Surgical DRG which includes patients admitted after delivery or an abortion and who undergo any surgical process, being the most frequent curettage.</td>
</tr>
<tr>
<td>378</td>
<td>14</td>
<td>MED</td>
<td>Ectopic pregnancy</td>
<td>1,0676</td>
<td></td>
<td>Medical DRG which includes patients admitted due to ectopic pregnancy, regardless if they undergo or not surgery for that reason.</td>
</tr>
<tr>
<td>379</td>
<td>14</td>
<td>MED</td>
<td>Threatened abortion</td>
<td>0,4245</td>
<td></td>
<td>Medical DRG which includes patients admitted for risk of abortion or pre-term delivery.</td>
</tr>
<tr>
<td>382</td>
<td>14</td>
<td>MED</td>
<td>False labour</td>
<td>0,1416</td>
<td></td>
<td>Medical DRG which includes patients admitted for false labour.</td>
</tr>
<tr>
<td>383</td>
<td>14</td>
<td>MED</td>
<td>Other antepartum diagnosis with medical complications.</td>
<td>0,5872</td>
<td>Hyperemesis urinary infection, hypertension, diabetes.</td>
<td>Medical DRG which includes pregnant patients that are admitted or discharged before labour. The reason for admission may be unique diagnosis considered as complicated (for example hypertension, hyperemesis or urinary infection) or diagnosis not considered as complicated (multiple pregnancy, previous Caesarean sections or cervical incompetence) whenever accompanied by other of the mentioned diagnosis considered as complicated.</td>
</tr>
<tr>
<td>384</td>
<td>14</td>
<td>MED</td>
<td>Other antepartum diagnosis without medical complications.</td>
<td>0,4144</td>
<td>Uterine inertia, antepartum haemorrhage, mole, retarded growth.</td>
<td>Medical DRG which includes pregnant patients that are admitted or discharged before labour. The reason for admission may be a unique diagnosis not considered as complicated as: antepartum haemorrhage, multiple pregnancy or mole.</td>
</tr>
<tr>
<td>Cod.</td>
<td>MDC</td>
<td>Type</td>
<td>Name</td>
<td>Weight</td>
<td>Includes</td>
<td>Clinical description</td>
</tr>
<tr>
<td>------</td>
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</tr>
<tr>
<td>650</td>
<td>14</td>
<td>SURG</td>
<td>High risk Caesarean section with complications.</td>
<td>1,5278</td>
<td>Low cervical Caesarean section.</td>
<td>Surgical DRG which includes patients admitted for delivery and/or related conditions that undergo a Caesarean section and who were admitted under a diagnosis considered as complicated, as haemorrhage due to placenta previa, placenta abruptio, hypertension or pre-term labour. Moreover, these patients have another diagnosis considered as complication or comorbidity such as post-labour anaemia or urinary infection.</td>
</tr>
<tr>
<td>651</td>
<td>14</td>
<td>SURG</td>
<td>High risk Caesarean section without complications.</td>
<td>1,0785</td>
<td></td>
<td>Surgical DRG which includes patients admitted for delivery and/or related conditions that undergo a Caesarean section and who were admitted under a diagnosis considered as complicated, as haemorrhage due to placenta previa, placenta abruptio, hypertension or pre-term labour.</td>
</tr>
<tr>
<td>652</td>
<td>14</td>
<td>SURG</td>
<td>High risk vaginal delivery with sterilization and/or dilatation and curettage.</td>
<td>0,9268</td>
<td></td>
<td>Surgical DRG which includes patients admitted for delivery and/or related conditions who had a vaginal delivery and who were admitted under a diagnosis considered as complicated, as haemorrhage due to placenta previa, placenta abruptio, hypertension or pre-term labour. Moreover, these patients underwent tubal ligation or puerperal curettage.</td>
</tr>
<tr>
<td>629</td>
<td>15</td>
<td>MED</td>
<td>Born weight &gt; 2.499 gr., without significant surgical procedures, with normal newborn diagnosis.</td>
<td>0,2387</td>
<td>Jaundice, TTN (transient tachypnea of the NB), foetal suffering, haemolytic condition, hypoglycaemia, feeding problem.</td>
<td>Medical DRG which includes NB with less than 29 days when admitted and who weighted more than 2.499 gr. when born who have not undergone major surgery procedure and do not have major or minor problems. These patients may have some secondary diagnosis of complication or comorbidity such as transient tachypnea of the newborn or suspicion or perinatal infection.</td>
</tr>
</tbody>
</table>
Annex 4. Service Portfolio of a Obstetric Unit

### Outpatient consultation
1. Prenatal control of low risk pregnancies.
2. Prenatal control of medium risk pregnancies.
3. Prenatal control of high risk pregnancies.
4. Puerperium control.
5. Level I, II and III ultrasound, foetal Doppler, basic and enhanced echocardiography, and morphological ultrasound study.
6. Chromosome conditions triage within the first quarter, ultrasound markers and risk calculation.
7. Chromosome conditions triage within the second quarter and risk calculation.

### Emergency services
1. Triage.
2. Care to patients on labour.
3. Care to patients with symptoms of pregnancy.
4. Diagnostic emergency ultrasound.

### Foetal Health Unit
1. II and III level ultrasound.
2. Advanced foetal doppler.
3. Echocardiography.
4. Antepartum foetal monitoring - progressive biophysical profile.
5. Amniocentesis for the analysis of the amniotic fluid (chromosomal, microbiological).

### Day Hospital
1. Control and follow up of high risk obstetric condition.
2. Chronic maternal condition.
3. Hypertension and pregnancy.
4. Diabetes.
5. Intrauterine growth retardation.
6. Alterations on the amniotic fluid.
7. Premature rupture of membranes.

---

(73) Example adapted from a hospital. There are some HMs that may offer more or less of the services included on the list. Those listed hereby are the most frequent.
<table>
<thead>
<tr>
<th><strong>Conventional Hospitalization</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Care to high and medium risk obstetric condition.</td>
</tr>
<tr>
<td>2. Care to low risk vaginal delivery puerperium.</td>
</tr>
<tr>
<td>3. Care to high risk vaginal delivery puerperium.</td>
</tr>
<tr>
<td>4. Care to low risk abdominal delivery puerperium.</td>
</tr>
<tr>
<td>5. Care to high risk abdominal delivery puerperium.</td>
</tr>
<tr>
<td>6. Care at the foetal health and the prenatal diagnostic unit.</td>
</tr>
<tr>
<td>7. Training and health promotion procedures.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Obstetrics (Obstetric suite)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LDRP</strong>&lt;sup&gt;(76)&lt;/sup&gt;</td>
</tr>
<tr>
<td>1. Control of efforts of low risk labour.</td>
</tr>
<tr>
<td>2. Control of efforts of high risk labour.</td>
</tr>
<tr>
<td>3. Care to the patient and her relatives.</td>
</tr>
<tr>
<td>4. Reception and resuscitation of low risk NB.</td>
</tr>
<tr>
<td>5. Reception and resuscitation of high risk NB.</td>
</tr>
<tr>
<td>7. Low risk labour care.</td>
</tr>
<tr>
<td>8. High risk labour care.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Operating theatres</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Scheduled Caesarean sections.</td>
</tr>
<tr>
<td>2. Emergency Caesarean sections.</td>
</tr>
<tr>
<td>3. Emergency hysterectomies.</td>
</tr>
</tbody>
</table>

<sup>(76) Labour, delivery, recovery and postpartum rooms</sup>
Annex 5. “Estrategia de atención al parto normal en el Sistema Nacional de Salud”: Levels of evidence and strength of the recommendation

The recommendations included in the “Estrategia de atención al parto normal en el Sistema Nacional de Salud” in close relation to these practices are provided below; it is currently being written up the Spanish National Health Service Guide on Care to Labour:

- Shaving of the perineum.
  - Avoid the routine practice of perineal shaving of women on labour(75), 79.
- Enema.
  - Do not recommend the administration of enemas on a routine basis to the parturient.
  - Use optionally, informing the woman on its practice, asking for her opinion and agreeing on its administration only as a hygienic means.
- Being escorted during the whole process.
  - Allow and encourage all women, if they want to, to have an escort during the whole process uninterruptedly, making possible to be accompanied by since the early stages of labour.
  - To promote an institutional policy that would allow pregnant woman to choose freely the person of their setting to accompany them continuously during the whole process of labour.
- Dilatation.
  - Train the pregnant woman how to recognize the real signs

(75) Several studies have proved that the rate of infection is lower in those patients who have not been shaved. When an organization settles a policy on hair removal, it should only put it into practice when necessary. Razors should not be used and they should be removed from healthcare centres. The organizations must train their staff on the importance of cutting hair instead of shaving it and teach them how to use appropriately electric clippers.
of labour to reduce the number of on duty consultations due to false efforts of childbirth.

- Provide the pregnant woman physical, emotional and psychological support during the whole process, allowing an escort, chosen by the parturient, to be constantly present.
- Allow the pregnant woman wander around freely depending on her needs and preferences, and adapt the most comfortable position.
- Let the woman take sugary liquids and light food moderately. Do not apply intravenous hydration on women on normal efforts of childbirth, as it limits her movements and comfort.
- Keep parenteral hydration for dehydrated mothers, vomiting, under regional anaesthesia, or under other specific symptoms that require an endovenous perfusion.
- Make a registry of the evolution of the efforts of childbirth by means of a partogram as an objective element for the management of the second stage.
- Do not perform early amniotomy as a routine procedure. This procedure will be used for parturients whose partogram shows abnormal labour progress.
- Carry out a control of foetal heart frequency during the efforts of labour by means of intermittent auscultation. Do only perform continuous electronic heart monitoring in those patients with high risk or with abnormal progress in the efforts of childbirth.
- Limit the number of vaginal palpation to a minimum number, being advisable not performing more than one every 3 hours, if it is not considered necessary.

- Pain management during labour.
  - Inform women on the different pain relievers, their benefits and potential risks. Do not perform routine analgesia: offer women the possibility to choose a method if they want it and if it is available at the centre.
  - Allow woman to be accompanied during the efforts of childbirth and delivery.
  - Those women who do not want to use drugs during labour, will be informed about the available evidence on non-pharmacologic methods.
• Maternal position during the expulsive stage.
  • A Cochrane review admitted that the findings of the review suggest several potential benefits for vertical delivery, though there is a possibility of blood loss higher than 500 ml, and it recommends that it should be promoted that women should have their babies on the most comfortable position. Up to that point, the benefits and risks of the different positions cannot be specifically estimated and, whenever there will be available the information of the concise data from a methodological point of view, women should be allowed to take informed decisions about the labour positions which they may want to assume when on labour.

• Episiotomy.
  • Promote a policy of selective episiotomy.
  • Do not suture minor sprains or cuts.
  • If necessary, do a continuous suture with synthetic absorbable material.

• Delivery.
  • To provide active management of labour at vaginal deliveries to prevent postpartum haemorrhage.
  • If active management of labour is carried out, oxytocin will be used, if possible ergometrine/syntometrine, misoprostol (oral, sublingual or rectal) or injectable prostaglandin.
  • If no active handling is carried out, use uterotonic drugs to prevent postpartum haemorrhage.
  • Taken into account the benefits for the NB, the cord should not be clamped while there is still a beating, and not earlier than necessary to apply traction of the placenta, which is 3-5 minutes after delivery.
  • According to the available evidences and recommendations, the components of the active management are defined, which include:
    • Administration of uterotonic drugs, mainly oxytocin, immediately after delivery.
    • Late clamping of the umbilical cord.
    • Controlled traction of the cord to extract the placenta.

It should be carried out by qualified staff on the procedures and on hospital environment. More investigation is necessary to apply it to home deliveries.
- **Instrumental deliveries.**
  - Instrumental deliveries should be avoided unless specifically prescribed due to possible immediate wounds, or late aftermaths derived from the use of forceps, vacuum systems or spatula. Its use increases the size and the frequency of the episiotomies, it reduces the length of breastfeeding as the mother and the NB are more often separated, and it causes stress on the NB after a complicated labour as well as maternal discomfort caused by the scars or pain.
  - This method is recommended as the first option when an assisted labour is considered taking into account that there is a reduction in the possibilities of maternal morbidity with extracting vacuum system if compared with the use of forceps, and it should always be performed in presence of experienced staff in the use of vacuum systems. There should be developed training programmes in the use of extracting vacuum systems in those places where there is not experienced staff.
  - Vacuum systems, as the first option in an assisted labour should be promoted only after having reached a minimum training standard of the staff that is present at labours.
- **Caesarean sections.**
  - It is recommended the implementation of programmes for the reduction of the rate of Caesarean sections which would include multi-purpose strategies based in scientific evidences, which will also make a cost assessment of the implementation and which would involve the staff in the analysis of the problems for the change and the assessments of the results.
- **Early contact mother-NB**
  - The healthy NB and his/her mother must stay together after delivery and must not separate at any time if the health condition of the mother allows it.
  - Immediately after delivery, the NB will be placed over the mother’s abdomen; he/she is dried and covered with a dry towel. Thus the baby will take the woman’s breast spontaneously in most of the cases and will remain at least 70 minutes in direct contact skin-to-skin with his/her mother.
  - The only procedures that will be performed on the baby during skin-to-skin contact time will be the identification
and the settlement of the score of the Apgar test.

- Mothers should be informed about the advantages of the skin to skin contact.
- All other practices should be postponed on eye prophylaxis, weight, K vitamin, etc. until the early contact has finished, trying to carry out all the procedures in front of the parents and after they have given their consent.
- It should not be performed on a routine basis the secretion aspiration, the gastric lavage, the passage of the orogastric probe, the use of a probe to check the permeability of the nasal cavity and the passage of the rectal probe. They are not necessary and they imply certain risks.
- It is also advisable in those cases of Caesarean sections. Whenever possible, prepare the site to make the early contact mother-NB.
- If the mother’s condition does not allow it, the father will be offered the possibility of performing the contact skin-to-skin with the baby.
- Settle a system of care centred in the development, encouragement of the “Kangaroo mother care” system, the contact skin-to-skin of mothers and fathers and the collaboration of the former in the care of the babies, mainly of those more vulnerable newborns.
- Work with support groups that encourage good practices.

- Postnatal immediate care
- Abandon unjustified procedures and delay those compulsory which imply separating the mother and the baby. Request the consent of the mothers for any procedure.

- Breastfeeding
- Encourage efficient practices for the support of maternal breastfeeding, making breastfeeding easier, as well as the extraction, preservation and maintenance for administering the NB milk of his/her own mother.
- Encourage milk donation and the start up of milk banks. Work with support groups which encourage good practices at breastfeeding.
Annex 6. Resource sizing criteria

1. Setting the basic dimensions of the healthcare resources of a HM depends on demography (structure of the population), epidemiology (morbidity), on clinical factors (criteria for the set up of the different services that make up its service portfolio) and on management (use of available productive capacity).
   In any case, it implies setting the healthcare needs by making an estimate of the expected request and adequate them to the resource sizing of the unit (beds for conventional hospitalization, consultation, day hospital beds/chairs) adjusted to a previously established profile of productivity.

2. To calculate the number of LDRP necessary rooms to cover the caring needs at a HM (nº LDRP) it will be considered, in principle, the theoretical number of labours (L), the theoretical number of elective Caesarean sections (ECs), the average stay at a LDRP room (AS) and the occupancy rate (O):

   \[ \text{nº LDRP} = \frac{\text{L-ECS}}{365 \times O} \times AS \]

   Where:
   - L is calculated as:

   \[ L = \text{BR} \times \frac{\text{Population}}{1000} \]

   being BR the birth-rate.

---

(76) It is considered as labour the delivery or extraction of womb a viable result of conception. A viable foetus is the foetus that weights, when being born, 500 grs. or over and a vaginal delivery is any labour delivered via the vagina, regardless the technique. Source: Statistics of inpatient institution, Ministry of Health and Social Policy.

(77) The result of this formula is, in fact, the number of births in a specific time frame, which does not match exactly with the number of labours due to multiple labours. Though the miscalculation is barely imperceptible, to calculate exactly the number of labours it should be divided the number of births obtained by this means between the average number of NB on each labour.
O  Is expressed in parts per 1 (0,85 for an occupation of 85%).
TP  Is expressed in days (0,5 for an average stay of 12 hours).

It should also be taken into account the possibility of time concurrence of labours which, on a general rule, will not be homogeneously distributed in time. A simple approach consists of setting an upper threshold to cover extreme situations, calculating the need of LDRP rooms for a concurrence of labours n-times over the daily average (DA).

In this occasion, the upper threshold (Max. LDRP) will be calculated as:

\[
\text{Max. LDRP} = \frac{n(\text{P-CE})}{365\times O} \times \text{AS}
\]

Where:

- \( n \) is the maximum expected concurrence of labours (highest rate) expressed in reference to the daily average number of labours.

Table Annex 6.1. Example 1. Resource sizing for the LDRP rooms

As it has been stated in chapter 2 of this document on standards and recommendations, the birth rate in Spain is approximately 11 NB every one thousand people per year.

Thus, with this birth rate, for a population of 250,000 people, there could be expected 2,750 annual labours\(^{(78)}\).

If it is considered that 10% of labours are elective Caesarean sections, with an average stay at the LDRP room of 12 hours and with an occupancy rate of the LDRP rooms of 70%, it will be obtained:

\[
\frac{(2750-275)}{365\times 0.7} \times 0.5 = 4.84 \cong 5
\]

To foresee a high peak with a concurrence which would double the medium rate of labour and an occupancy rate of 100%:

\[
\frac{2 \times (2750-275)}{365} \times 0.5 = 6.78 \cong 7
\]

With this upper threshold it could be considered, for example, that the optimal sizing is 6 LDRP rooms, figure which will cover a concurrence 1.75 times the daily average rate of labours, with an occupancy level of 100%.

\(^{(78)}\) Please note that in this example all deliveries of the population reference area will be performed at the HM which resource sizing in being calculated.
3. The operating theatre at the obstetric suite is a resource which must perform an important number of urgent procedures and which, therefore, must be available 24 hours a day 365 days a year, so that the calculation of the operation theatres necessary in accordance with a theoretical output\(^{(79)}\) cannot be applied.

The Spanish Society of Obstetrics and Gynaecology recommends fitting out an obstetric operating theatre every 3000 childbirths\(^{15}\).

4. To calculate the number of necessary beds at conventional obstetric hospitalization to cover the caring needs at a HM (B), it will be taken into account the theoretical number of admissions (A) in a year, the average stay (AS) and the foreseen occupancy rate (O):

\[
B = \frac{A \times AS}{365 \times O}
\]

Where:

- \(A\) is calculated as
  \[
  A = \text{Population} \times \frac{\text{Att}}{1000}
  \]

being \(\text{Att}\) the attendance rate at conventional obstetric hospitalization, expressed in the number of admission every one thousand woman on fertile age.

<table>
<thead>
<tr>
<th>Table Annex 6.2. Example 2. Resource sizing of the beds at obstetric hospitalization.</th>
</tr>
</thead>
</table>
| For a population of 250000 people, as the one used in sample 1, there would be, according to the structure of the Spanish population\(^{(80)}\), 54,100 fertile women (between 15 to 45 years). Calculating that the obstetric admissions not related with labour mean a 25% of admissions, the approximate attendance rate will be 63 obstetric admissions every 1000 fertile women: 3437 admissions. Of all admissions, 2200 will be vaginal deliveries, with an average stay of 1 day at the unit for conventional obstetric hospitalization (there are not included, for this purpose, the 12 hours that on a general basis parturients stay at the LDRP room); 550 Caesarean sections (considering that the rates of Caesarean sections on 20%) with an average stay of three days and the other, 687, other conditions, with an average stay of 2.5 days. The resulting average stay at the unit is 1.62 days. For an occupancy rate of 80%, the number of necessary beds will be:

\[
B = \frac{3487 \times 1.62}{365 \times 0.8} = 19.34 \approx 20
\]

\(^{(79)}\) In this case, the need to cover the urgent cases prevails over the optimization criteria so that it will guarantee the operating theatre availability, with occupancy rates that, on a general rule, will be rather low.

Annex 7. Functional design programme

In accordance with the development of the ergonomic schemes of the premises which provide the recommended sizing for the main premises of the unit, it has been decided to include, as an example, a functional design programme of the premises of a HM with 6 LDRP rooms, 1 operating theatre for Caesarean sections and 20 beds in single bedded rooms for conventional obstetric hospitalization. The sizing corresponds approximately to the sizing samples included in annex 5 of this document.

### Table Annex 7.1. Functional desing programme of a HM

<table>
<thead>
<tr>
<th>Area</th>
<th>Premises</th>
<th>Floor surf.</th>
<th>Num.</th>
<th>Total surf.</th>
<th>Remarks: functional and technical characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>RECEPTION</td>
<td>1. Access.</td>
<td></td>
<td></td>
<td></td>
<td>Signposting on the outside will facilitate access. It is advisable that the unit should be placed at the closest level to the street as possible. Design will respond to current legislation for disabled people and to the Spanish Technical Building Code - Basic Document - Specific Safety Regulations. Staff and supplies (supplies, food, pharmacy, linen, waste, etc.) will be clearly separated. The obstetric suite will be a semi-restricted access area to care staff, users and their escort. Within the suite, access to the surgical area will be restricted to the care staff appointed to it. The other premises of the suite will be designed in such a way that circulation between the non-related services and the public will be hindered, but for the visiting hours.</td>
</tr>
</tbody>
</table>

(81) Expressed in m².
## I. OBSTETRIC SUITE

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<thead>
<tr>
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<tbody>
<tr>
<td></td>
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<td></td>
<td></td>
<td>Access to the obstetric suite from the entrance hall or from the main circulation hall should be made through automatic doors that shall allow visibility in both directions. The entrance hall will be wide enough to allow circulation to the reception-admission desk, avoiding masses that may make access difficult.</td>
</tr>
<tr>
<td>2. Admission - reception</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>For the admission of users and relatives. Administrative tasks of registry and discharge. With a desk with the appropriate height to pay attention to users on wheelchairs. With computers and telephone.</td>
</tr>
<tr>
<td>3. Waiting - resting room</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Equipped for stays of several hours and with a capacity appropriate to the sizing of the unit. With phone connections and background music. Cold drinks and food vending machines.</td>
</tr>
<tr>
<td>4. Examination cabinet</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>For the classification of women who are admitted into the obstetric suite on an urgent basis. With computer and telephone connections.</td>
</tr>
<tr>
<td>5. Information office</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>To inform users and relatives. With computer and phone connections.</td>
</tr>
<tr>
<td>6. Toilets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Toilets for visits and users. With basin and WC. At least one toilet will be disabled friendly.</td>
</tr>
</tbody>
</table>

**TOTAL AREA RECEPTION**

**62**

### EXPLORATION AREA

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>7. Consultation room / process control</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>For exploration and examination of users so as to assess any possible risks and to make a decision on the monitoring of labour that are less complex (obstetric exploration, foetal auscultation, etc.).</td>
</tr>
</tbody>
</table>
### I. OBSTETRIC SUITE

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<tbody>
<tr>
<td>8. Observation</td>
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<td>24</td>
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<td>24</td>
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<tr>
<td></td>
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<td></td>
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<td></td>
<td>Monitor during waiting times of the evolution of those women whose clinical assessment before the prescription for admission requires more than one consultation.</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>Comfortable chairs, at a common ward, placed in such a way that they can be directly seen from the nurse station, with the possibility of being closed for privacy.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>With basin for staff. Oxygen and vacuum connections.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Computer and telephones.</td>
</tr>
<tr>
<td>9. Examination and tech-</td>
<td></td>
<td></td>
<td>4</td>
<td>12</td>
<td>48 [Clinical assessment of the parturient and of the other patients cared in the surgical suite; before the prescription for admission and for more complex maternal-foetal treatments (cardiotocographic monitoring, ultra-sound, amniotic liquid puncture, etc.), when needed.]</td>
</tr>
<tr>
<td>niques cabinet /Foetal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Cubicles at an open ward, distributed in such a way that they can be directly seen from the nurse station.</td>
</tr>
<tr>
<td>Health Unit</td>
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### I. OBSTETRIC SUITE

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<td></td>
<td>With the possibility of being closed for privacy (though not risking patient’s safety). With comfortable bed or armchair. Windows with the possibility of being blocked and positions that allow its cleaning. Headboards with electric, oxygen and vacuum intakes. With integrated communication system with the nurse. TV and music preinstalled facilities. Computer connections. With basin for staff. Oxygen and vacuum intakes. Computers and telephones.</td>
</tr>
</tbody>
</table>

#### TOTAL AREA EXPLORATION

<table>
<thead>
<tr>
<th>LDRP</th>
<th>10, LDRP</th>
<th>35-40</th>
<th>6</th>
<th>215</th>
</tr>
</thead>
</table>

Care to the parturient throughout the whole process of vaginal delivery (dilatation, expulsive, delivery and recovery) and to the healthy NB who does not need to be admitted at the unit of neonatology. Placed at the obstetric suite with an easy access to the surgical area so that the parturient may be quickly transferred in case of complications. Designed as bedrooms with charming furniture decoration appropriate with the atmosphere. With service panel on the headboard of the bed hidden behind screens or pictures; windows allowing views to the outside and natural light. Artificial illumination with a double lighting circuit: indirect and adjustable, this might be adjusted depending on the woman’s wishes, and working artificial light, according to the lighting standards of hospital rooms, should complications arise.
### I. OBSTETRIC SUITE

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<td></td>
<td>Room temperature will also be adjustable, depending on the woman's needs. The bed must allow the parturient placing herself in the most comfortable position. It must have wheels to permit transfers to the operating theatre in case of abdominal delivery. Appropriate for normal or instrumental delivery under local or epidural anaesthesia; there should be enough place to carry out resuscitation procedures, if necessary, as well as to use of ultrasound monitors, foetal and maternal telemetric monitors and intravenous therapy, which should be stored near the room and moved into the room when necessary. Rooms will have a basin for hand washing, acoustic insulation, ventilation system for gas pollution control, protection against electric risks and fire safety systems ruled by current legislation. It is recommended to foresee a bigger room (40 m²) to provide care for physically disabled users.</td>
</tr>
<tr>
<td>11. Toilet at LDRP</td>
<td>4</td>
<td>6</td>
<td>24</td>
<td>With basin, WC, bidet and shower so that the woman on labour may benefit from the soothing effects of hot water during dilatation. The toilet door must always open into the room. Optionally, there would be a free-standing bath in the room, so that the woman may choose to use it during the dilatation and expulsive stages.</td>
<td></td>
</tr>
<tr>
<td>Area</td>
<td>Premises</td>
<td>Floor surf</td>
<td>Num.</td>
<td>Total surf</td>
<td>Remarks: functional and technical characteristics</td>
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<tr>
<td>I. OBSTETRIC SUITE</td>
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<td></td>
<td></td>
<td>In these cases the bath at the bathroom may be uncomfortable for the staff who provides care during labour, and thus it could be placed in the room.</td>
</tr>
<tr>
<td>TOTAL AREA LDRP</td>
<td></td>
<td></td>
<td></td>
<td>239</td>
<td></td>
</tr>
<tr>
<td>SURGICAL AREA</td>
<td>12. Surgeon preparation</td>
<td>8</td>
<td>1</td>
<td>8</td>
<td>Disinfection and donning gloves and masks. With direct access to the operating theatre. Continuous basin with three water inlets, with automatic water system and sterile equipment. With a clock.</td>
</tr>
<tr>
<td></td>
<td>13. Operating theatre</td>
<td>40</td>
<td>1</td>
<td>40</td>
<td>Facilities and equipment requirements similar to those of a general surgical suite. Service surface of 40m², with a minimum free of 3 metres and with measures that would allow making a 6 metre diameter circle around the operating table. Walls and ceiling will be made of hard, nonporous, waterproof, washable and fire-resistant materials; they would not have cracks, and they would be continuous and without gloss. There will be neither rails nor elements which could gather dirt and wall elements will be built-in. The floor will be washable, semiconductive, earth wired, without items and angles between vertical and horizontal walls. There will be no windows. Doors will have a minimum of 1.5m wide, preferably automatic and sliding on an external rail. If there is more than one operating theatre, each will have two identical switchboards for the gas intakes, each will have nitrogen protoxide intakes, medicinal compressed air, oxygen (O₂), vacuum, and an anaesthetic gas extraction system (AGES). In each operating theatre, there would be a board for the gas pressure control with an alarm system. There would be insulated light sources for room lighting of the theatre. If fluorescent lamps are used, the necessary measures will be taken to avoid interferences between the ignition and the electro-medical equipments.</td>
</tr>
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### I. OBSTETRIC SUITE

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<tbody>
<tr>
<td>Each operating theatre will have, at least, twelve earth wired single-phase intakes with 16 amps. There would also be, at least, in each operating theatre, an electrical single-phase earth wired 20 amps intake for radiodiagnosis equipment and laser, if necessary. There would be preferably used swivel articulated arms for anaesthesia and surgery. There would be anchorages for lamps. Protection devices against electrical risks. 1000 lux minimum room lighting and 25000 lux at the surgical table. Air conditioning requirements will obey the Spanish standard UNE 100173 (instalaciones de acondicionamiento de aire en hospitales - air conditioning systems at hospitals), the ASHRAE Standards and Guidelines, and the requirements of the AIA. It will also have the technical conditions of a general operating theatre regarding the “RITE” (Regulations on Building Heating Installations). There would be special protection for X rays and it would be advisable to have tables which would allow making radiographies. The area allotted for the facilities equipment should be placed on a different level from the suite, if possible on the roof. There would be data and voice access points, and there would be a clinical station to have access to the information net.</td>
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### I. OBSTETRIC SUITE

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</thead>
<tbody>
<tr>
<td>15. Dirty utility room and waste disposal.</td>
<td>6</td>
<td>1</td>
<td>6</td>
<td></td>
<td>Dirty linen and waste store room. Water inlet.</td>
</tr>
<tr>
<td>16. Supplies store room (sterile material, anaesthesia, equipment, etc.)</td>
<td>6</td>
<td>1</td>
<td>6</td>
<td></td>
<td>For several supplies</td>
</tr>
<tr>
<td>17. Staff toilet and changing room.</td>
<td>16</td>
<td>1</td>
<td>16</td>
<td></td>
<td>Air locked. For the unit’s staff. With similar characteristics to the visitor’s toilet.</td>
</tr>
</tbody>
</table>

**TOTAL AREA OF THE SURGICAL AREA** 94

### NURSE STATION AND GENERAL UTILITY ROOMS

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>18. Desk and working area (control).</td>
<td>25</td>
<td>1</td>
<td>25</td>
<td></td>
<td>It must allow the direct observation of all the cubicles at the common room. Appropriate for management and control, with an area accessible for people in wheel chair; communication system patient-nurse by means of a light and acoustic system. Pneumatic tube installation. Control of the fire safety system, gas board control. Computer and telephone.</td>
</tr>
<tr>
<td>19. Nurse resting room</td>
<td>10</td>
<td>1</td>
<td>10</td>
<td></td>
<td>For staff to rest. By the control. With water outlet.</td>
</tr>
<tr>
<td>20. Clean utility room</td>
<td>10</td>
<td>1</td>
<td>10</td>
<td></td>
<td>Area for the clean supplies and drug preparation. Water outlet for double sink unit.</td>
</tr>
<tr>
<td>22. Disposable material store room</td>
<td>6</td>
<td>1</td>
<td>6</td>
<td></td>
<td>For daily use small material. Area for supplies carts by means of periodic reposition. Surfaces must be washable. Modular desks higher than the carts. With an area appropriate for the storage of saline solutions.</td>
</tr>
</tbody>
</table>
# I. OBSTETRIC SUITE

<table>
<thead>
<tr>
<th>Area</th>
<th>Premises</th>
<th>Floor surf.</th>
<th>Num.</th>
<th>Total surf.</th>
<th>Remarks: functional and technical characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>23. Linen store room</td>
<td>6</td>
<td>1</td>
<td>6</td>
<td></td>
<td>For clean linen.</td>
</tr>
<tr>
<td>24. Equipment store room</td>
<td>6</td>
<td>1</td>
<td>6</td>
<td></td>
<td>For monitors and equipment.</td>
</tr>
<tr>
<td>25. Area for wheelchairs</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
<td>Out of the unit circulation flow.</td>
</tr>
<tr>
<td>27. Cleaning equipment store room</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td></td>
<td>For cleaning equipment and products.</td>
</tr>
</tbody>
</table>

**TOTAL AREA NURSE STATION AND UTILITY ROOMS** 79

<table>
<thead>
<tr>
<th>STAFF SUPPLY ROOMS</th>
<th>Floor surf.</th>
<th>Num.</th>
<th>Total surf.</th>
<th>Remarks: functional and technical characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>28. Manager office</td>
<td>12</td>
<td>1</td>
<td>12</td>
<td>With computers and telephones.</td>
</tr>
<tr>
<td>29. Multi-purpose medical work room</td>
<td>20</td>
<td>1</td>
<td>20</td>
<td>Working area for the unit consultants. With access to voice and data net.</td>
</tr>
<tr>
<td>30. Meeting room</td>
<td>20</td>
<td>1</td>
<td>20</td>
<td>For staff meetings, with computers and telephones.</td>
</tr>
<tr>
<td>31. Staff resting room</td>
<td>12</td>
<td>1</td>
<td>12</td>
<td>For staff to rest. With water inlet and telephones.</td>
</tr>
<tr>
<td>32. On-duty doctor resting room</td>
<td>10</td>
<td>1</td>
<td>10</td>
<td>For on duty consultant to rest. With water inlet and telephones.</td>
</tr>
<tr>
<td>33. Staff toilets and resting rooms</td>
<td>3</td>
<td>2</td>
<td>6</td>
<td>For the unit staff. With similar characteristics to the toilets for the visitors.</td>
</tr>
</tbody>
</table>

**TOTAL AREA OF THE STAFF SUPPLY ROOMS** 80

**TOTAL AREA OF THE OBSTETRIC SUITE** 666
General characteristics of the unit

It is considered as the physical area whose main aim is providing care to the parturient mother, including the reception and the clinical assessment of the mothers that arrive to the hospital under the suspicion of being in labour or with labour procdrome, the examination and the control of the parturient, the dilatation, the delivery as well as the care and the resuscitation of the NB and the immediate postpartum period. At the obstetric suite there would be cared all the obstetric urgent procedures and there would be a surgical area with the necessary resources to provide care to the obstetric urgent procedures and it will have a surgical area equipped with the necessary resources to provide care to the surgical procedures related to labour included in the service portfolio of the HM.

On the design of the obstetric suite, there would be considered the following specific objectives:

- Get a nice environment, non medical and comfortable, so that the woman might feel at ease instead of exposed and observed.
- Facilitate flows and circulations during the pre-labour, labour and post-labour stages, and minimize the distances with the conventional obstetric hospitalization area and neonatology.
- Introduce uses that belong to the actual demand, included in the document on “Estrategia de atención al parto normal en el Sistema Nacional de Salud”, as for example, water pools.
- Encourage the meeting between mothers as the support to immediate postpartum.

II. UNIT FOR CONVENTIONAL OBSTETRIC HOSPITALIZATION

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ROOMS FOR PATIENTS AND RELATIVES</td>
<td>34. User’s room</td>
<td>22</td>
<td>20</td>
<td>440</td>
<td>Even though single bedded, room will have double capacity. They will have enough room for the crib of the NB, either conventional or joint or bed-side crib, to encourage accommodation, together and interruptedly, and even with a bed for his/her own, of the father or escort. In each room there should be a changing table and a bath were the mother may bath her child. The room must be designed (lighting, colour, views) taking into account that the normal position of the user is lying in bed, and thus the height of the window must allow viewing the outside from bed. There must be a device for adjusting the intensity of light in the room. Electric switchers must be easily accessible to inpatients (if they are 90cm from the floor, they can be used by patients on wheelchair).</td>
</tr>
</tbody>
</table>
II. UNIT FOR CONVENTIONAL OBSTETRIC HOSPITALIZATION

|------|----------|-------------|------|-------------|---------------------------------------------------|

The room will have a wardrobe and a 2.80 headboard. The air-conditioning system will be adjustable and adapted to any kind of disability. Walls will have protections against bed impacts. Windows will have adjustable opening and the possibility of being controlled by the staff. Acoustic insulation by means of the appropriate furniture and isolation boards on the walls. Colours will depend on the type of patient and the location of the room will depend on the position of the patient. There will be enough space to accede the users by both sides of the bed, including the necessary area for circulations and for the use of medical equipment, gurneys or transfer chair. With an area reserved for the users and escorts and/or carers to rest, where there will be resting chairs for both. With the necessary means for providing care to inpatients. With a service board in the headboard which will include the appropriate electric intakes for the electromedical equipment, the light control system, the nurse call communication system, with light, the audiovisual aids control (radio, TV, video, earphones), voice and data network access (telephone, internet), appropriate both for staff at the clinical unit and for patients and/or her escort.
### II. UNIT FOR CONVENTIONAL OBSTETRIC HOSPITALIZATION

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>35. Toilets at the patients' room.</td>
<td>4</td>
<td>20</td>
<td>80</td>
<td></td>
<td>With basin, bedpan cleaner, WC and shower, with shelf, towel rail, coat stands, toilet roll holder and bedpan hanger. Showers will have low entry shower trays to allow access to all patients. It must work as assisted shower. Grab rails with the appropriate height for patients in wheelchairs. Mirrors with the appropriate height and inclination for patients in wheelchairs. With mixer taps and low noise level toilet flushes. Steam shower lights. Fluorescent lighting is unadvisable.</td>
</tr>
<tr>
<td>37. Resting room for admitted mothers.</td>
<td>24</td>
<td>1</td>
<td>24</td>
<td></td>
<td>Common area for the meeting of the mothers with the NB.</td>
</tr>
<tr>
<td>38. Resting room for relatives.</td>
<td>20</td>
<td>1</td>
<td>20</td>
<td></td>
<td>For relatives and escorts to rest.</td>
</tr>
<tr>
<td>39. Toilet for visits.</td>
<td>3</td>
<td>2</td>
<td>6</td>
<td></td>
<td>Toilets for visits and users.</td>
</tr>
<tr>
<td>TOTAL AREA ROOMS FOR USERS AND RELATIVES</td>
<td></td>
<td></td>
<td></td>
<td>582</td>
<td></td>
</tr>
</tbody>
</table>

| NURSE STATION AND UTILITY ROOMS                                      | 25       | 1           | 25   |             | It must allow the direct observation of all the cubicles at the common room. Appropriate for management and control, with an area accessible for people in wheelchair; communication system patient-nurse by means of a light and acoustic system. Pneumatic tube installation. Control of the fire safety system, gas board control. Computer and telephone. |

| 40. Desk and staff working area (control).                          | 25       | 1           | 25   |             |                                                     |

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### II. UNIT FOR CONVENTIONAL OBSTETRIC HOSPITALIZATION

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>41. Minor surgery room.</td>
<td>18</td>
<td>1</td>
<td>18</td>
<td></td>
<td>For minor surgery procedures outside the women’s room. Consultation room unit, stainless steel worktop, washbasin with elbow mixer taps with thermostat control. Individual lighting in exploration bed. Oxygen and vacuum connections.</td>
</tr>
<tr>
<td>42. Milk bank.</td>
<td>12</td>
<td>1</td>
<td>12</td>
<td></td>
<td>Small area for mothers who are undergoing some problems with breastfeeding and have to pump their milk. The room will be equipped with fridge, microwave and the necessary supplies to store maternal milk. Water outlet.</td>
</tr>
<tr>
<td>43. Nurse resting room.</td>
<td>10</td>
<td>1</td>
<td>10</td>
<td></td>
<td>For staff to rest. By the nurse station. Water outlet.</td>
</tr>
<tr>
<td>44. Clean utility room.</td>
<td>10</td>
<td>1</td>
<td>10</td>
<td></td>
<td>For storing clean supplies and preparing medication. Double sink unit with water outlet.</td>
</tr>
<tr>
<td>45. Kitchen.</td>
<td>8</td>
<td>1</td>
<td>8</td>
<td></td>
<td>Arrival of food carts and preparation of food. Adapted to the hospital food cooking and distribution technologies. With double sink and draining board and an area for storing carts.</td>
</tr>
<tr>
<td>46. Disposable material store room.</td>
<td>8</td>
<td>1</td>
<td>8</td>
<td></td>
<td>For daily use small material. Area for supplies carts by means of periodic reposition. Surfaces must be washable. Modular desks higher than the carts. With an area appropriate for the storage of saline solutions.</td>
</tr>
<tr>
<td>47. Linen store room.</td>
<td>6</td>
<td>1</td>
<td>6</td>
<td></td>
<td>For clean linen.</td>
</tr>
</tbody>
</table>
II. UNIT FOR CONVENTIONAL OBSTETRIC HOSPITALIZATION

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>48. Supplies and equipment store room.</td>
<td>6</td>
<td>1</td>
<td>6</td>
<td>For monitors and equipment.</td>
<td></td>
</tr>
<tr>
<td>49. Area for wheel chairs.</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>Out of the unit circulation flow.</td>
<td></td>
</tr>
<tr>
<td>50. Dirty utility room and waste disposal.</td>
<td>6</td>
<td>1</td>
<td>6</td>
<td>To store dirty linen and waste. Water inlet.</td>
<td></td>
</tr>
<tr>
<td>51. Cleaning equipment store room.</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>For cleaning equipment and products.</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL AREA NURSE STATION AND UTILITY ROOMS** 110

| ADMINISTRATIVE AREA AND STAFF UTILITY ROOM | | | | |
|--------------------------------------------|---|---|---| |
| 52. Manager’s office. | 12 | 1 | 12 | With computers and telephones. |
| 53. Multi-purpose medical work room. | 18 | 1 | 18 | Working area for the unit consultants. With access to voice and data net. |
| 54. Meeting room. | 18 | 1 | 18 | For staff meetings, with computers and telephones. |
| 55. Staff resting room. | 12 | 1 | 12 | For staff to rest. With water inlet and telephones. |
| 56. Staff toilet and changing room. | 3 | 2 | 6 | For the unit staff. With similar characteristics to the toilets for the visitors. |

**TOTAL AREA ADMINISTRATIVE AND STAFF UTILITY ROOMS** 66

**TOTAL AREA UNIT FOR CONVENTIONAL OBSTETRIC HOSPITALIZATION** 758
General characteristics of the unit

In accordance with the scheme of the proposed LDRP room at the obstetric suite, the puerperium stage will be cared at the conventional hospitalization unit. Thus, once the mother and the NB have recovered from labour or, once the woman who has undergone Caesarean section has left the post-anaesthesia care unit, they will be transferred to the unit for conventional obstetric hospitalization which will be located, preferably, on the hospitalization area, and will have similar conditions to the polyvalent hospitalization units.

It will be considered as a priority minimizing the flows from the obstetric suite and the neonatology unit. The design of the unit will facilitate the fulfilment of the recommendations of early contact of the mother and the NB and the postnatal practices of the “Estrategia de atención al parto normal en el Sistema Nacional de Salud”, mainly in the suppression of baby wards. The distribution of the areas of the unit must allow carrying out group activities on health education.

A key characteristic of this unit is to accommodate the healthy NB by their mothers, though it could also be admitted on the unit a pregnant woman with a condition that justifies hospital monitoring. The proportion of beds allotted to each of these groups must be flexible to adapt to the needs which might be changing throughout time.

It is also advisable to put together the women depending on the reason for admission and on the risk levels (e.g. there should be together, in principle, a puerperal woman with a healthy NB baby together with a pregnant woman with a dead foetus). Taking into account the type of care provided, special attention will be paid at separating clean areas from septic ones.

Considering that the management challenges of the clinical processes which imply hospitalization is over the range of extent of this document. It has been opted to include in this section a set of the individual areas appropriate to the most common caring and support activities at obstetric hospitalization, so that the suggested design is compatible with any of the management solutions which might be put into practice.

The basic resource for conventional hospitalization is the bed, so the definition of the caring activities performed around it will define the physical characteristics of the necessary premises for the care procedures of the admitted users and of their children and will settle the support procedures.

The unit for obstetric hospitalization will have the following characteristics:

- **Orientation**: Whenever possible, it is advisable that all rooms would have the best orientation, with natural light. Staff working areas should also have natural light.

- **Views**: Rooms overlooking the outside should be taken into account so that it may serve as a way of relaxing from anxiety and making possible, whenever possible, having views from the headboard of the bed (height of the open areas of the façade).

- **Noises**: The location of the unit will depend on the level of existent noises that might be foreseen in the different areas of the allotted space.

- **Internal circulations**: There are two types of circulations: for those visits of relatives and escorts and for internal circulation (users in bed, staff, supplies and support services). Both circulations should be independent and the unit should not work as a means to ascending to other units. The location of the control must be close to the users’ access from the outside (escorts and relatives), while the internal circulation may be located a bit further from the control.
Annex 8. Tasks of the manager of the HM.
Adapted from: Safer Childbirth. Minimum Standards for the Organisation and Delivery of Care in Labour. Royal College of Obstetricians and Gynaecologists, Royal College of Midwives, Royal College of Anaesthetists, Royal College of Paediatrics and Child Health. October 2007.35

1. To provide strong professional leadership for all disciplines and to ensure, together with the head of the midwifery, that guidance is available to all staff within the labour ward and that there is a focal point for doctors, both informally and formally.
2. To work with the head of the midwifery to develop pattern, guidelines, education and joint standards for the HM.
3. To communicate openly and consult extensively with clinicians, midwives and staff on events and developments within the HM.
4. To manage the performance of the HM, both in terms of the efficient and effective use of all resources and the development and maintenance of the highest standards of delivery of patient care.
5. To involve all staff in the development of patient service and harness their commitment to the achievement of the agreed performance targets.
6. To promote within the HM an ethos of continuous learning and development, ensuring leadership and involvement in research, audit, education and training as appropriate.
7. To manage poor performances by obstetric consultants in line with the centre procedures.
8. In liaison with the head of the midwifery, the risk manager and the clinical governance, to take a lead role to ensure the delivery of the governance agenda, including leading on serious untoward incident reviews. This should include:
   • ensuring that structures are in place in the HM to address the requirements of the governance and risk management strategies
and to support and develop best clinical practice.

- ensuring that there are clinical policies in place for all major obstetric emergencies and ratifying these policies.
- participating in this role as a member of the HM forum and ensuring that decisions taken within this forum are translated into clinical practice on the ward. This may involve organisational changes, teaching, training and changes in policy and communication.
- ensuring that infection control policies and guidelines are implemented and monitored on the HM.
- facilitating the collection of information to set up perinatal statistics.
- ensuring that the recommendations of the health services and administrations and of the Healthcare Commissions and the Royal Colleges are incorporated, where appropriate.
- facilitating skills drills and ensuring that remedial action is taken if shortcomings are identified during these drills.

**General remarks**

This role description is an outline of the principal duties and responsibilities of the clinical lead for the HM and is not intended to be an exhaustive list. The job may change over time to reflect the changing needs of the HM. Any variation will be agreed in advance between the post-holder and the clinical director as part of the continuing process of review and development.

The post-holder will liaise with the appropriate personnel, including the Head of the Midwifery for the HM, senior midwifery staff and the clinical director for obstetrics.

1. To work in close relation with the manager of the HM, midwives and other medical staff, having a specific role in leading on initiatives to promote normal childbirth.

2. To support and encourage midwives to look at birth as a normal life event within the context of a social model of health and wellness. This perspective includes wider determinants of health, social, psychological issues and emotional support for women and their families, working across boundaries with different agencies at each birth setting.

3. The Head of the Midwifery will
   - provide clinical leadership, facilitating practitioners to improve their evidence based practice and maintain competence.
   - lead on the development and monitoring of practices that enhance the physiological process of labour and birth.
   - facilitate professional confidence in the normal birth process.
   - facilitate positive birth experience for women with complex needs or additional risk factors to ensure that they have equal opportunities to experience processes supporting normality.
   - provide expert advice to midwives and doctors.
   - support and guide the team.
   - actively contribute to strategic planning of services.
   - plan and implement innovative models of care.
   - be a mentor and role model for midwives to link concepts of normality to practice.
   - lead the implementation of midwifery research to enhance the body of midwifery knowledge.
actively participate in clinical audit and the development of evidence-based clinical standards of care and ensure that the recommendations of the health services and administrations and of the Healthcare Commissions and the Royal Colleges are incorporated, where appropriate.

- evaluate care and service provision and develop an appropriate service to meet the need of diverse groups.
- share her/his expertise and act as a resource, both internally and externally, with health and social care.

Clinical practice

Clinical practice accounts for at least 50% of the role and it would be expected that the Head of the Midwifery would work closely with the consultant obstetrician at the HM to develop a culture of promoting normal labour and childbirth by the effective use of evidence and research.

**Abortion**
Expulsion or extraction from the mother of a foetus or an embryo under 500 gr. of weight (which equals approximately to 22 full weeks) independently from the gestational age, if there are or not any signs of life, or if labour was spontaneous or induced. 

**Birth rate**
Number of babies born alive per one thousand people. 
Source: Spanish National Institute of Statistics.

**Born alive**
It is the full expulsion or extraction of the mother of a product of conception, regardless the length of the pregnancy and that, after being separated, breathes and shows any other sign of life as heart beats, umbilical cord pulse and clear signs of movement of the voluntary muscles, in spite of the fact the umbilical cord has been clamped or not and the placenta is still attached. Each product of this birth is considered as a born alive. 

**Foetal death**
Foetal death is the death of a product of conception before the complete expulsion or extraction from the mother, regardless the length of the pregnancy. Death is proved by the fact that, after being separated, the foetus does not breathe nor show any other sign of life such as hear beat, umbilical cord pulse or any visible sign of movement of the voluntary muscles. 

**Foetal mortality rate**
Number of foetal deaths in foetuses ≥ 1.000 grs. or ≥ 28 weeks of pregnancy each 1000 babies born in a population of reference.

**Full-term labour**
37 to 41 full weeks (from 259 to 293 days).

**Gestational age**
The length of the gestation period or pregnancy is considered to begin on the first day of the woman’s last normal menstrual period. The gestation period is expressed in complete days or weeks (for example: events that occur 280 to 286 days after the beginning of the last normal menstrual period are considered as taking place after 40 weeks of pregnancy).
Foetal growth, as its size varies continuously, is measured in relation to the specific week of the gestational age (for example: the average weight when born after 40 weeks is the weight measured after 280-286 days of pregnancy).

**Global fecundity rate**
Babies born per 1000 women between 15 to 49 years.
Source: Spanish National Institute of Statistics.

**Hospital Maternity Unit (HM)**
Organization of healthcare staff that offers multidisciplinary care to women, the new born and the relatives during delivery and labour and which complies with the specific structural and functional means and resources to ensure efficiency, high quality and a safe environment for the development of this activity.

**Infant death**
All the deaths occurred on the first year of age.
Source: Spanish National Institute of Statistics.

**Infant mortality rate**
It is the number of NB deaths ≥ 1.000 grs. of weight when being born until their first year of life, that take place on a reference population of each 1000 babies born alive or dead.
**Labour room**
Wards allotted and specifically equipped to provide care to vaginal delivery during the expulsive stage of labour on a sequential arrangement of vaginal delivery\(^{(82)}\).

**Labour, delivery, recovery and postpartum unit (LDRP)**
Premises within the labour area which allow providing care to the parturient throughout vaginal delivery (dilatation, expulsive, delivery and recovery) as well as to the NB who does not require to be transferred to the neonatology unit.

**Low weight at birth**
When weight at birth is < 2.500 g.

**Maternal death**
Maternal death is the death of a woman during pregnancy or 42 days after the end of it, regardless the duration or the location (intrauterine or ectopic) and due to any reason related to or worsened during pregnancy or its care but never due to accidental or incidental reasons. Maternal deaths should be divided in two groups:

- **a)** *Caused by a direct obstetric reason*: those resulting from obstetric complications of the pregnant-puerperal condition, due to the care procedures, the lack of them, inappropriate treatments or complications resulting from any of these factors.
- **b)** *Caused by an indirect obstetric reason*: those resulting from a previous medical-surgical condition concomitant with pregnancy or puerperium that does not depend on pregnancy and was not due to direct obstetric reasons but which complicated due to the physiological changes of pregnancy or labour.

The WHO includes some variations on the definitions used by the Spanish Society of Gynaecology and Obstetrics on the 10th revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10):

- **a)** *Maternal death related to pregnancy*: it includes the previous definition though adding any cause of death, i.e., it also includes accidental or

\(^{(82)}\) The definition might be misunderstanding as far as LDRP rooms are concerned and therefore it has been added to the definition of the Statistics of Inpatient Healthcare Organizations those rooms used at the expulsive stage of labour, within the sequential organization of labour.
incidental reasons. The etiopathogenetic classification is not considered, and thus the recall of cases seems simpler and easier.

b) Late maternal death: it broadens the inclusion dates between the 42nd day after delivery and less than a year after the end of pregnancy. It thus includes those deaths which occur after puerperium but which depend directly with the pregnant-puerperal condition.

It is highly recommended that the Spanish healthcare system should use the definitions settled by the WHO and thus it should follow its registry and its pattern of investigation of maternal deaths.

**Maternal mortality rate**
Number of direct or indirect maternal death every 100,000 babies born alive. In some countries the reference number is over 10000 babies born alive.

**Neonatal death**
When death occurs within the first four weeks (28 days) after birth.
Source: Spanish National Institute of Statistics.
It might be divided in:
   a) Early neonatal death: death occurs within the first 7 days before birth (less than 168 hours).
   b) Late neonatal death: it includes the NB death after the 7th day of birth and before the 28th. Source: Spanish Society of Gynaecology and Obstetrics (2008).

**Neonatal mortality rate**
It corresponds to the number of deaths that occur in those NB ≥ 1.000 gr. of weight when born and < 28 days of age per 1000 babies born alive or dead.

**Non-medicalized labour**
Labour which, as it obeys the characteristics described in the definition of normal childbirth, is carried out without the need of any therapeutic procedures which alter its physiology. At non medicalized labours is also fundamental the role of the maternal-foetal monitoring as well as the psychological care to the parturient and her family from the caring staff.
Normal labour
Spontaneous, low risk, labour which remains considered as such until delivery. The baby is born spontaneously in cephalic position on the 37 to the 42 full weeks. After labour both the mother and the child are in good condition. Source: WHO (1999).
Efforts of childbirth of a pregnant woman without any risk factors during pregnancy which begins spontaneously on the 37th to the 42nd week and that, after a physiological evolution of dilatation and labour, it ends with the delivery of a normal NB who adapts adequately to extra-uterine life. Expulsion and immediate puerperium must, also, evolve physiologically. Source: Spanish Society of Gynaecology and Obstetrics (2008).
Unique physiological process with which a woman ends her full-term pregnancy, in which there are involved psychological, social and cultural factors. It begins spontaneously and it develops and ends without complications; it ends with delivery and it does not imply more participation than its integral and respectful support. Source: Organization of Associations of Spanish Midwives (2006).

Perinatal death
Sum of late foetal mortality and early foetal mortality (it includes from the 28th full week until the end of the 7th day afterbirth). Foetal weight must be 1000 grs. or over. Source: Spanish National Institute of Statistics and Spanish Society of Gynaecology and Obstetrics (2008).

Perinatal mortality rate
Rate between the number of dead foetuses over more than 28 weeks (weighting 1000 grs. or more or with a height from vertex to heel of 35 cm) until their seventh full day of postnatal life, divided by the total number of babies born alive per one thousand, in a civil year in a population of reference. Source: Spanish National Institute of Statistics, Spanish Society of Gynaecology and Obstetrics (2008).

Perinatal mortality
Still births (from the 28 week of gestation) and infant deaths (up to 7 days after being born) per 1000 live births. Source: Spanish National Institute of Statistics.

Postnatal death
NB death between the end of the 28th day until the first year of life.
**Post-natal mortality rate**
Rate between the number of NB ≥ 1.000 grs. death on the first 28 days of life and the first year of life per 1000 babies born, dead or alive.

**Post-term labour**
≥ 42 full weeks (≥ 294 days).

**Pre-term labour**
< 37 full weeks (< 259 days).

**Weight at birth**
It is the first weight of the foetus or NB obtained after birth. This weight should be taken preferably within the first hour of life and before the sensible postnatal weight loss occurs.
Annex 11. Abbreviations

ABO  “ABO incompatibility reaction”  
AGES  Anaesthetic Gas Extraction System  
AHQR  Agency for Healthcare Research and Quality (United States of America)  
AIA  American Institute of Architects  
AP  All-Patient (at DRG)  
ASHRAE  American Society of Heating, Refrigerating and Air-Conditioning Engineers  
CIMS  Coalition for Improving Maternity Services  
CRP  C-reactive protein  
DECT  Digital Enhanced Cordless Telecommunication  
DRG  Diagnostic Related Groups  
GBS  Group B Streptococcus  
ICD  International Classification of Diseases  
HM  Hospital Maternity  
LDRP  Labour, Delivery, Recovery and Postpartum  
MDB  Minimum Database Set  
NB  New born  
NHS  National Health Service (United Kingdom)  
NICE  National Institute for Clinical Excellence (United Kingdom)  
PDA  personal digital assistant  
PROM  Premature Rupture of Membranes  
RCA  Royal College of Anaesthetists (United Kingdom)  
RCM  Royal College of Midwives (United Kingdom)  
RCOG  Royal College of Obstetricians and Gynaecologists (United Kingdom)  
RCPCH  Royal College of Paediatrics and Child Health (United Kingdom)  
TTN  Transient Tachypnea of the Newborn  
XR  X ray
Annex 12. Bibliography


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