Asociación Española de Enfermería en Cardiología

PROFESSIONAL PROFILE OF THE HEART FAILURE SPECIALIST NURSE

ACREDITATION SYSTEM OF THE SPANISH ASSOCIATION OF CARDIOLOGY NURSING

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Reviewed and endorsed by the Spanish Association of Cardiology Nursing (AEEC) and the Heart Failure Association of the Spanish Society of Cardiology Nursing (SEC)

SOCIEDAD ESPAÑOLA DE CARDIOLOGÍA

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ABBREVIATIONS

ACC: American College of Cardiology.

ACEi: Angiotensin-converting enzyme inhibitor.

AHA: American Heart Association.

AHTN: Arterial hypertension.

AMI: Acute myocardial infarction.

APN: Advanced Practice Nurse.

ARB II: Angiotensin II receptor antagonists.

ARNI: Angiotensin Receptor–Neprilysin Inhibitor.

BB: Beta-blockers.

BHF: British Heart Foundation.

BP: Blood pressure.

COPD: Chronic obstructive pulmonary disease.

CPAP: Continuous positive airway pressure.

CPG: Clinical Practice Guidelines.

CRT: Cardiac Resynchronisation Therapy.

CV: Cardiovascular.

CVD: Cardiovascular disease.

CVRF: Cardiovascular risk factors.

DM: Diabetes Mellitus.

DNI: National Identity Document.

ECG: Electrocardiogram.

ECTS: European Credit Transfer System.

ESC: European Society of Cardiology.

ETIFIC: ETIFIC study: Nurse drug titration in heart failure.

EU: European Union.

FHD: Familial heart disease.

FT: Family tree.

GS: Genetic study.

HF: Heart failure.

HFA: Heart Failure Association.

HFpEF: heart failure with preserved ejection fraction.

HFPN: Heart Failure Policy Network.

HFrEF: heart failure with reduced ejection fraction.

HFSN: Heart Failure Specialist Nurse.

HFU: Heart Failure Unit.

HR: Heart rate.

HT: Heart transplant.

ICD: Implantable Cardioverter-defibrillator.

ICN: International Council of Nurses.

ICT: Information and Communication Technologies.

INE: National Institute of Statistics.

ITERA: Program to promote the creation and consolidation of multidisciplinary programs for the management of pathologies in Heart Failure.

IV: intravenous.

LV: Left ventricle.

MAREC: MAREC study: diagnosis of the nursing situation in cardiological care in Spain.

MCS: Mechanical circulatory support.

MRA: Mineral-cholinergic receptor antagonists.

NECPAL: Tool to identify Advanced-Terminal patients in need of palliative care within health and social services.

NSAIDs: Nonsteroidal anti-inflammatory drugs.

NYHA: New York Heart Association.

O^2sat: Oxygen saturation.

OSAS: Obstructive sleep apnoea syndrome.

PC: Primary Care.

PE: Physical exercise.

PRICE: PRICE Study: Prevalence of Heart Failure in Spain.

PRISMA: Training program for referents in the Process of Comprehensive and Multidisciplinary Care of Heart Failure.

RAE: Royal Spanish Academy.

RD: Royal Decree.

RI: Renal insufficiency.

AEEC: Spanish Association of Nursing in Cardiology.

SEC: Spanish Society of Cardiology.

SEC-Excellent: program registered in the SEC-CALIDAD project with the purpose of integrating, affording coherence, and completing the numerous activities and quality improvement programs promoted by the SEC and its Scientific Sections.

SEMI: Spanish Society of Internal Medicine.

SEMI-Excellent: SEMI project to contribute to the continuous improvement of the quality of care in the internal medicine services of the SNS and seeks to integrate, afford coherence and complete the numerous activities and quality improvement programs promoted by the SEMI and its working groups.

SGLT2i: Sodium and glucose type 2 cotransporter inhibitors.

SNS: Spanish National Health System.

TIA: Transient ischemic attack.

UDN: University Diploma in Nursing.

UMIPIC: Comprehensive Management Units for HF patients.

USA: United States.

WHO: World Health Organisation.

1. BACKGROUND AND JUSTIFICATION

1.1 BACKGROUND

Heart failure (HF) is a complex and multicausal clinical syndrome, with symptoms and signs that can result from any structural or functional alteration of the heart that causes a decrease in ventricular filling or pumping (ejection) of blood[1]. It is characterised by high rates of prevalence, mortality, and hospital admissions, together with a decrease in the patient's quality of life, all generating an important economic, health, and social impact.

The prevalence of HF is variable according to the country of origin, in the USA it represents 2.5%, it is 4% in Germany compared with 1.4% in Italy and 2.1% in Spain, the average being between 1-2% in adults and it is estimated that it could reach 4.2%, given the low detection of HF patients. There are no significant differences regarding gender and an increase with age of greater than 10% is observed in people over 70 years of age[2].

In Spain, several prevalence studies have been carried out, although with methodological and subject selection differences that may influence the variability of their results. Recently, the PATHWAYS-HF[3] study was published, which included 1,189,003 individuals recruited from both health centres and hospitals, reporting a prevalence of 1.87% and an incidence rate of 2.78 new cases per 1,000 inhabitants/year. Previously, Sayago-Silva *et al*.,[4] reviewed data from the PRICE and EPISERVE studies. The PRICE study registered 2,703 subjects over 45 years of age and reported a prevalence of 6.8%, similar in both sexes that, in individuals over 75 years, reached 16%. The EPISERVE study was developed in 16 autonomous communities and included 2,534 individuals over 18 years of age, evidencing a prevalence of 4.7%.

According to data from the National Institute of Statistics (INE), the group of cardiovascular (CV) diseases remained the leading cause of death (23% of the total), with HF remaining in third place, behind ischemic heart disease and cerebrovascular disease[5]. It should be noted that mortality from CV and non-CV causes at one year is between 10-14%[6], and 56% and 75%, respectively, five years after diagnosis[2].

After the initial diagnosis, patients will be hospitalised, on average, once a year, with HF decompensation being the commonest cause in people over 65 years of age[7,8]. The most common causal factors of decompensation were infections, mostly respiratory, 29%, arrhythmias 22%, anaemia 16%, and non-compliance with the therapeutic regimen 12%[9], factors that can be anticipated and prevented. Thirty days after discharge, HF patients have a high rate of readmissions, compared with other diagnoses, half of them are readmitted at least once a year and up to 80% will be readmitted in the following five years[2]. The average hospital stay in Spain in 2018 was 8.5 days[10]. It is estimated that the number of HF hospitalisations will increase by up to 50% over the next 25 years, as well as admissions due to CV causes, due to an increasing number of comorbidities. In addition, it is estimated

that HF represents a health cost of approximately 2.5% of the total expenditure, generated mainly by hospital admissions, together with the cost attributable to informal care[11].

The HF patient profile, according to clinical practice guidelines (CPG)[1,8], is that of a complex, elderly patient, with important associated comorbidities, multiple readmissions, and a very diverse aetiology due to greater recognition and diagnosis of specific cardiomyopathies. The PATHWAYS-HF[3] study identified a mean age of 78.3 years, 53% were males, of whom 51% had a reduced ejection fraction (ICrEF). According to the CPG[1], trends of decreasing ICrEF incidence have been observed compared with an increase in preserved ejection fraction (ICpEF) incidence. According to Comín *et al*.,[12] HF patients present a significant deterioration in their quality of life, data that are associated with worse prognosis and severity, presenting a higher incidence of mobility limitations, pain, and anxiety/depression, in relation to other chronic diseases. Being a woman, age, worse functional quality, more comorbidity, and recent admission are predictors of a worse quality of life. We must not forget that HF has a great impact on the physical and emotional health of informal caregivers, associated with being a woman and of low socioeconomic status and a worse quality of life[6,12].

Therefore, these HF patients require continuous care in a specific program with a multidisciplinary team, to reduce the risk of hospitalisation and mortality[13]. The CPG 2021[8] recommends, with a 1A level of evidence, HF programs with specialised multidisciplinary teams of cardiologists and nurses, both at home and in HF consultations, throughout the process, from the beginning, through critical events, periods of apparent stability, and their terminal stages. Both care in HF consultations and home visits by nurses (these being more effective) reduce all-cause mortality compared with usual care. Also, the CPG suggests the multidisciplinary management of patients by professionally trained and capable personnel, centred on the patient/person, contemplating the prevention of disease progression, symptom control, care for terminally ill patients taking into account their preferences and encouraging the participation of the patient/caregiver in the understanding and management of their disease. As components, they recommend optimised management of lifestyle choices, pharmacological measures and devices, patient education, with special emphasis on self-care and self-management of symptoms, provision of psychosocial support to patients and family caregivers, follow-up after discharge (clinic, home visits, telephone attention, or telemonitoring), easy access to medical care, especially to prevent and manage decompensations, with appropriate intervention when faced with an unexplained change in weight, nutritional and functional status, quality of life, sleep problems, psychosocial problems, or other findings (e.g., laboratory values), access to advanced treatment options; supportive and palliative care[8]. Most of these components, conducted by specialist nurses, are effective in significantly reducing admissions and mortality in the meta-analysis by Oyanguren *et al*., which analysed 66 randomised controlled trials of HF care and studied the effectiveness of the programs, of which 83%

consisted of multidisciplinary programs, in which nurses were the most frequent professionals, together with cardiologists and family doctors[14].

With all the above, HF nurses develop essential roles in the care of patients with HF, such as patient education and optimisation of medical therapy, among others. In some European countries, nurses can prescribe HF medications and in others, they can increase the dosage of prescribed medical therapies. Nurses are a key element in the continuity process between hospital care and primary care (PC)[13].

1.2 JUSTIFICATION

One of the diseases with the greatest impact on chronicity is HF. The World Health Organisation (WHO), to face the epidemic of chronicity, proposes to guarantee the sustainability of the public health system via citizen co-responsibility and suitable management of available resources. This sustainability must go hand in hand with the increase in expectations that the population has regarding health systems. Therefore, this body proposes to improve the study programs carried out by doctors and nurses, in order to treat patients with chronic health problems more efficiently[15]. In Spain, the Interterritorial Council of the National Health System (SNS) agreed on the "Strategy for addressing chronicity in the National Health System", in which one of the recommendations is to enhance the actions of nursing professionals in the care of chronic processes[16].

In this context, the figure of the Advanced Practice Nurse (APN) emerges: this professional performs a wide range of practical and theoretical activities based on scientific evidence, and performs a type of practice characterised by great autonomy and a high degree of responsibility[17]. According to Cooper *et al.*,[18] the specialist nurse usually has functions linked to a specialised area, such as HF, with a deeper knowledge of the clinical approach and care provision than that provided by other nurses. Despite this, the nurses of the Heart Failure Units (HFUs) are not recognised as APNs or as specialists (or experts).

One of the problems that exists is the denomination of the HF nurse. In Oyanguren's study, the different nursing roles analysed in the meta-analysis are exposed. In the case of HF nurses, key factors were considered: experience in cardiology, coronary units, and HF in all its stages, training, with specific courses in HF and/or university master's degree, and finally the educational and care roles, with clinical monitoring and drug titration in patients with HF[14]. Likewise, in other countries, the HF specialist nurse, in addition to often having a master's degree, acquires this condition of HF expert nurse with the professional experience of their clinical practice, in cardiology and HF[14,19-22]. Likewise, HF nurses have demonstrated their fundamental role within the multidisciplinary HF teams[14,23], their figure being recognised and recommended in the CPGs of the European Society of Cardiology (ESC)[8].

In our country, the Spanish Society of Cardiology (SEC) has developed the SEC-Excellent project, a program of evaluation and certification of care processes in cardiology services, which guarantees compliance with minimum, measurable, and objective standards, in the units that are accredited. Although the HFUs are classified into different groups according to their complexity (community, specialised, advanced), personnel requirements are established for all, which includes a unit head who has, at least, one year of advanced training in HF and at least one nurse with HF experience[24]. However, this document does not specify the characteristics that a "nurse with HF experience" must meet, nor does it detail the specific training, nor the minimum time of experience or competencies acquired according to the complexity of the HFU.

At the community level, nurse case managers, some of them specialists in Family and Community Nursing, include some functions for HF patients. They collaborate in education, but they are not exclusively dedicated to HF patients, nor can they be considered HF nurses, not for their training (without a special university master's degree or speciality accreditation), nor for their experience, or their roles. Therefore, the nurse case manager, who is sometimes part of the multidisciplinary team that cares for the HF patient, should not be confused with the HF specialist nurse.

The literature addressing HF highlights the good results of interventions carried out by HF specialist nurses, such as the effectiveness in reducing mortality and readmissions[14]. The ETIFIC study, the first multicentre randomised trial to evaluate the effectiveness and safety of HF drug titration by nurses compared to cardiologists, confirmed the non-inferiority hypothesis in terms of dose, adverse effects, and clinical outcomes[25,26]. Some studies demonstrate better therapeutic compliance, evaluating the degree of self-care in HF patients after having received education and assessment[29]. The meta-analysis by Jonkman *et al*., (20 randomised trials), demonstrated the effectiveness of programs with self-management interventions, mostly performed by specialist nurses. A longer duration of the intervention reduced the risk of mortality, HF-related hospitalisation, and related hospitalisation after 6 months, improving the quality of life of patients[30]. Other studies have addressed clinical factors associated with quality of life, in one of them the nurse performed a geriatric assessment of the patient with standardised scales, demonstrated how frailty and depression[31] affect the quality of life of patients with HF[12]. For their part, Comín-Colet *et al*., describe the transition of care, highlighting the different roles played by nurses between hospital discharge, discharge planning, early visits, and structured follow-up after discharge[32].

Some studies describe the figure of the HF nurse[14,25-32,1], specifically, the MAREC[33] study, with 84 participating centres, most of them public centres (n=70, 83%), concluded that 61 centres (71.4%) have an HF unit and the number of nurses ranges between 1.7 ± 1. There is also a special group of nurses, also not recognised, who develop their professional competence in heart transplant and ventricular assist devices units. Of the centres that

responded, 15 (17.9%) had heart transplants and the number of nurses ranged between 3 ± 3.5. All of them, with training, experience, and a role corresponding to a specialised nurse. However, in Spain there is no recognition of expert or specialist HF nurses, nor is it a generalised requirement to access a work position in an HF program or HF.

In this document, we will use the denomination of specialist nurse, according to the International Council of Nurses (ICN): a nurse who has extensive experience and knowledge in a speciality. In addition, they are prepared beyond the level of a generalist nurse, authorizing them to practice as a specialist in a branch within the nursing field[34].

As shown above, there is sufficient evidence to demand the recognition of a professional profile for the HF Specialist Nurse common to all Autonomous Communities, according to the different work positions, before the Committee for Continuing Education of Health Professions and, of course, the institutions where these nurses exercise their professional work. For this reason, from the HF working group of the Spanish Association of Nursing in Cardiology (AEEC the need arises to define the profile of the HF specialist nurse with training and experience to access the different HFUs, standardising accredited training and accreditation/recognition, to address the high prevalence and optimised implementation of the guidelines and thus resolve the complex situations that affect HF patients: clinical diagnosis, education for self-care, drug optimisation and titration, flexible diuretic regimen, adherence to pharmacological treatment, patient follow-up with advanced therapies, heart transplantation, and action for the palliative patient.

1.3 INTERNATIONAL MODELS

The evolution of the SNS is linked to factors that influence the functions of nurses, such as the emergence of new health problems, ageing of the population, development of new technologies, and crisis in public finances, which has led to a reduction in hospital stays[35]. As a result, in countries such as the United States, the United Kingdom, Australia, or Canada, different specific roles have been promoted and developed within the nursing discipline[17]. In these countries, advanced practice training is necessary to develop the roles of HF nurses[19].

In Europe, the number of HF nurses has increased, and their roles are well-established in many countries[20]. However, according to Blue *et al*.,[19] there is variation in the training of this nurse between countries. First, due to the diversity between countries and between centres within the same countries in the definition of the roles that this nurse must play. Second, training is acquired after having achieved experience in HF patient management. And third, the difficulty in comparing training programs, where the terms of qualification do not have the same significance between countries[19].

In the same way, the Heart Failure Association (HFA) of the European Society of Cardiology (ESC), recognises that the figure of the HF nurse does not exist in all countries. However, where they do exist, they develop their roles in different care settings. Therefore, the

responsibility of nurses is increasing, although their roles and responsibilities are influenced by geographical location and the legal framework regulating the professions of each country[20].

The recent report of the Heart Failure Policy Network (HFPN)[6] describes HF policy and practice in Europe and analyses 11 countries, among which is Spain[36]. It aims to raise awareness of unmet needs concerning HF and presents an exhaustive analysis of policy issues in HF, key care issues, and provides examples of best practices in the 11 European countries. The accreditation and financing of HF specialist nurses is one of the five actions proposed in this report.

The HF specialist nurse, with different denominations but sharing content, is formally recognised and accredited in England, Germany, Ireland, the USA, Sweden, and Australia[6,19]. In other countries, including Spain, there are obstacles such as recognition of the HF specialist nurse, the long and complex process of national accreditation to develop their profile, lack of postgraduate programs, absence or limited awareness among decision-makers about the benefits afforded by HF specialist nurses and their consequent remuneration[6,36.]

Finally, the nurse requires a set of skills and abilities that goes beyond their initial education and training[20]. Likewise, nurses need solid theoretical knowledge, intensive practical training, good medical support, working in a system that culturally and legally supports the autonomy of nurses and, finally, nurses must be subject to audits and quality controls of their interventions[19].

2. OBJECTIVES OF THE DOCUMENT

After all the above, the HF specialist nurse must regularly forms part of the HFU, whether community, specialised, or advanced in a homogeneous manner throughout the country.

For the performance of their competencies, nurses receive non-regulated continued training on the management of HF patients. Despite not having institutional recognition, the trained and specialised HF nurse is included in the quality indicators of the SEC[24]. Therefore, it is necessary to develop a professional profile of the HF specialist nurse that allows an official training qualification and the recognition of the accreditation.

The preparation of this document is intended to answer the concerns of nurses that develop their activity in the functional area of HF, guaranteeing their right to prove their competence for the exercise of their functions.

General objectives:

- Describe the professional profile of the HF specialist nurse, the training and competencies that allow the development of the accreditation for this nurse, unifying the requirements for the whole of the Spanish State.

Secondary objectives:

- Obtain the recognition of all the Health Systems of the different Autonomous Communities, for the exercise of functions related to this profile and obtain a remuneration according to said profile.
- Increase the quality of care and safety in clinical practice in HF care.
- Serve as a guide for health centres and cardiology services when selecting staff, favouring them to acquire the necessary skills and protocolising the activities to be carried out within the different care areas.
- Contribute to ensuring the sustainability of the system and develop care models oriented to chronicity, where one of the key components is the specialisation of nursing staff.
- Carry out a professional registry of accredited HF specialist nurses, valid in all territories of the State.

3. COMPETENCIES OF THE HF NURSE

From different quarters, the term "competency" has been the subject of numerous definitions. According to the Royal Spanish Academy (RAE), it is a "skill, aptitude, or suitability to do something or intervene in a specific matter"[37]. It is often related to other terms such as ability, aptitude, skill, dexterity, etc., but in the RAE, they are not clearly differentiated and we observe that capacity is defined as aptitude; aptitude as a competent capacity; skill as ability; dexterity as skill; competence as aptitude. This may explain why the concepts of ability, aptitude, skill, dexterity, and competence are used as equivalent synonyms[38]. Therefore, we understand professional competence as the set of knowledge, skills, and attitudes combined for professional practice[39]. To all this, we add the definition of the roles that are the different functions that the HF nurse must perform as the main player in HF programs and units[37].

The HF nurse needs to specify their professional profile and objectively establish mechanisms for evaluating their competencies to carry out their interventions linked to their different roles. According to Blue, the definition of roles has the potential to influence the responsibility that the HF nurse can assume[19]. For this, the nurse competent in HF requires a solid training for their profession, but must also develop skills and attitudes, that is, they must possess the know-how, know-how-to-be, and know-how-to-act[38]. In order to describe the competencies and roles of this nurse, we developed the competency

framework, using the HF nurse curriculum defined by the HFA of the ESC[9] as a guide. This competency framework will afford an indication of personal and professional development as an HF specialist nurse and serve as a guide to develop the knowledge, skills, and professional behaviour necessary to work safely and competently (Annex 1).

First, it lists the specific functions that encompass seven roles common to their capabilities, which must be performed by HF nurses in any workplace: clinical care/evaluator, educator/advisor, rehabilitator, psychosocial, coordinator, researcher, and care leadership. Next, different tables are presented where their different capacities are developed for each role, where the knowledge to be acquired or possessed, skills to be performed, and professional behaviours that refer to the clinical skills and attitudes with the patient and their social environment, as well as the health team, are detailed.

Secondly, the advanced functions characteristic of advanced HFUs that provide services in the device implantation and monitoring unit are specified: Tricameral-ICD, medium and long-term ventricular assist, heart transplant programs, and specific consultations of familial cardiomyopathies and cardio-oncology. Nurses working in advanced HF units have the same roles described in the specific functions, except for the clinical/evaluator role, which describes the different capacities to develop the role in each workplace.

Finally, to assume the responsibility detailed by the different roles, it is important that the follow-up of the professional is planned and structured with appropriate, qualified, and identified personnel to provide mentorship, in general, and for those who assume new roles[19]. In addition, the new roles must have a trajectory within the professional clinical career with competencies that allow the development[19] of the HF specialist nurse and with remuneration according to their roles. Regarding the competency framework, this is a guide that helps develop the competencies to be acquired by the professional who wants to access a position within the three modalities of HFUs described by the SEC[24], in addition, the competence framework of the HF nurse can be a quality indicator of the units accredited by the SEC[24]. It can also be useful as training and professional development for other health professionals working with people living with HF. Finally, for the human resources departments of hospitals with HFUs and PC it can be a tool for assessing competencies, for registering achievements, a portfolio of services, and developing and training the HF specialist nurse.

4. CURRICULUM OF THE HF NURSE

4.1 KNOWLEDGE AND EXPERIENCE TO DEVELOP THEIR ROLE

Place within the multidisciplinary team.

HF is a problem with a great impact on people's well-being and their family and social environment. Time is required for adaptation, acquisition of skills, and learning, so that these people, with their condition of chronicity, can accept and assume responsibility for self-control and self-care. The new care models focus more on the needs of people than on the provision of treatment, coordinating different professionals who collaborate in their care, and integrating different levels of care. The key components of these models, according to the review carried out by Comín *et al*.,[32] are early intervention during hospitalisation, discharge planning, early visit, and structured follow-up after hospital discharge, planning for advanced transitions, and the participation of doctors and nurses specialised in HF.

The HF specialist nurse forms part of the multidisciplinary team, collaborates in the organisation of the care process, has an active role in the monitoring of the physical, mental, and social state of these people, and in the planning of assistance and care throughout the transitional process between care levels. In addition, in the structured follow-up, they detect decompensation early, optimise HF drugs, and implement the education program for patients and caregivers, to improve adherence and self-care, helping them with the difficulties that arise throughout the evolutionary course of the disease.

Body of knowledge required

Several articles and authors, including Blue *et al*.,[19] and Riley *et al*.,[20] define the educational and training requirements of the HF nurse. Uchmanowicz *et al*.,[39] developed a curriculum to improve nurses' knowledge and skills, based on ESC guidelines. The curriculum should include the following knowledge:

- Definition, epidemiology, and evolutionary course.
- Aetiology, risk factors, and pathophysiology of HF.
- Factors that may affect decompensation.
- Functional tests and physical examination, blood analysis, electrocardiography, echocardiography, radiography, and stress test with oxygen consumption.
- Associated comorbidities (cardiovascular and non-cardiovascular): prevalence, impact, diagnosis, treatment, care, and associated risk increase.

- Chronic HF and decompensated HF: clinical profiles, recognition and management of signs and symptoms of decompensation, recognition of especially vulnerable patients, and stratification of CV and psychosocial risks.
- Pharmacology: HF-specific drugs, optimisation dose (initiation and target dose), pharmacological titration protocols, adverse events, interactions, problem-solving, flexible diuretic regimen.
- Information and education for patients: Theories of education and learning. Intervention strategies. Motivational interview. Communication and conflict resolution skills. Adherence, barriers and facilitators, causes of non-adherence, associated factors, and approach.
- Care recommendations according to the CPG[8]: Prevention, fluids and water balance, nutrition and food (low-sodium diet, recommendations, special situations: obesity, cachexia, renal failure), weight control and self-control guidelines, toxic habits.
- Cardiac rehabilitation programs, recommendation of physical exercise, sexuality.
- Coordination of care, organisation of assistance, and effectiveness of programs. Teamwork and multidisciplinary perspective. Care models. Transitions in care.
- Cardiac devices: indications, function, implantation, wound care, and alert monitoring (arrhythmia recognition, HF decompensation data, anti-tachycardia therapies).
- Advanced therapies: peritoneal dialysis (indications, care, and follow-up), ventricular assist devices (indications, complications, wound care).
- Donation and heart transplant process.
- Palliative care and geriatric patient.
- Remote monitoring, telemedicine.
- Research, evidence-based nursing, and critical reading.

Continuing education

HFPN[6,41] defines investment in nursing personnel specialised in HF, promoting professional training and accreditations, as a necessity to generate sustainable models.

The continued training of nursing professionals specialised in HF in Spain should be mandatory, to ensure the quality standards defined by the SEC. At least 30 hours of accredited continued education on HF are proposed every two years.

There is accredited training currently available in our country with different programs:

- The ITERA programme facilitated the development of HFUs in Spain, to later become the PRISMA programme (Training Programme for Referents in the Process of Comprehensive and Multidisciplinary Care of HF), which focuses on the development of integrated HF-management programmes. The most recently developed training is the PRISMA-AP program, led by the Transversal Program in HF of the Hospital 12 de Octubre, aimed at PC health personnel.

- Online HF Course for Nursing of 400 hours, which was accredited by the University of La Coruña and the ESC; which has become the Expert Title in HF for Nursing: 14 ECTS credits (350 h) granted by the Francisco de Vitoria University. It was created to develop an intense program of advanced training for nurses on HF and its treatment, in order to enhance their incorporation into multidisciplinary teams, thus participating in the comprehensive care of HF patients.

- Master in HF Nursing from the University of Barcelona. Course designed according to the guidelines of the European Higher Education Area and equivalent to 60 ECTS credits (1500 hours). Its purpose is to broaden and deepen the knowledge of nursing care in the field of HF patients, with the aim of facilitating and allowing research, planning, training, organisation, and prevention in this framework.

- Attendance at courses and congresses accredited by the SEC and the AEEC, as well as ESC Heart Failure congresses and annual meetings of the HF Section.

- Training activities of the different accredited health services, which promote the acquisition of knowledge and skills for the performance of professional activities related to the area of HF.

- Training activities provided by other accredited private bodies or entities, which promote the acquisition of knowledge and skills for the performance of professional activities related to the area of HF.

Experience and hours of training required

The experience of the nurse is key to the development and performance of certain competencies. Davidson[42] defines the nurse as the professional with the greatest potential to recognise decompensation early, prevent complications, optimise therapy, and facilitate communication and coordination in care. This evidence reinforces the need to generate a specific and determined profile as an HF specialist nurse.

In RD 639/2015[43], there is no mention of the accredited training hours that the professional must possess. On the other hand, it documents a minimum of two years of professional practice in the set of tasks included in the competencies subject to accreditation, within

the activity of their work position. The ETIFHC study by Oyanguren *et al*.,[25,26], coincides with RD 639/2015[43] on the minimum time of professional practice as a requirement that the HF nurse must meet for graduation and, also, refers to the training that the participant in the study must possess, which is 400 accredited hours of specific training in HF.

Based on this clinical trial, the training program of the HF specialist nurse must demand some training requirements since they have demonstrated effectiveness in the performance of the roles they describe. Based on the provisions of Royal Decree 639/2015[43], in order to obtain **an accreditation diploma**, in our case, in the functional area of HF, one must:

- Accredit, in the last 10 years, a minimum of two years of professional practice with evidence of carrying out activities and developing roles related to HF.
- A positive performance evaluation will be necessary, certified in the SNS by the health institution or Scientific Society, in accordance with the rules of this document.

In order to obtain an **advanced accreditation diploma** according to Decree 639/2015[43], in the functional area of HF, one must:

- Document, in the last five years, a minimum of three years of clinical experience with evidence of performing functions and providing services related to HF.
- A positive performance evaluation, certified in the SNS by the health institution or Scientific Society in accordance with the rules of this document, will be indispensable.

Training or practice, what to include

The training program, according to the curriculum developed by Uchmanowicz *et al.*,[40] aims to train the nurse in knowledge, techniques, procedures, and skills for use in clinical practice.

The nurse must show dexterity in the performance of the following activities:

- Promotion of healthy lifestyle habits.
- Proper use and training in techniques and tools for monitoring and identifying decompensation and its associated factors. Ability to interpret the severity of symptoms and implement appropriate care and monitor the evolution and response to treatment.
- Suitable performance of the physical examination (signs of HF, control and reading of vital signs).

- Performance and/or interpretation of diagnostic tests: electrocardiogram, blood tests, echocardiogram, chest x-ray, gait test, stress test with oxygen consumption, among others.
- Implementation of psychosocial assessment interventions and interpretation of rating scales.
- Education and transmission of knowledge, establishment of an individualised and consensual care plan, according to the patient's preferences. Provide advice.
- Relationship and communication skills necessary for the effective exchange of information and shared decision-making.
- Application of tools to evaluate the effectiveness of educational interventions, knowledge acquisition, and self-care compliance.
- Provide support in self-care, identify and work in a consensual way with the patient on facilitating factors and barriers to self-care and adherence. Ability to advise on doubts and difficulties.
- Ability to anticipate possible problems and implement strategies to monitor and increase adherence.
- Monitoring, titration, and pharmacological optimisation, identification of problems, proper use of protocols. Instruction in the flexible diuretic regimen.
- Provide psychosocial support, emotional support, and assistance to the caregiver.
- Detection of problems related to comorbidity and frailty. Adaptation of care plans.
- Data detection and recognition and warnings of implantable devices and remote-control systems.
- Detection and implementation of strategies for the follow-up of patients after heart transplantation and ventricular assist devices, provision of care, individualised education, and psychosocial support.
- Tools for the development of work within a team, and integration within the Unit, development of collaborative activities in problem-solving. Develop coordination and management activities, facilitating information and management of the process and clinical pathways of HF.
- Ensure patient safety and apply the Clinical Practice Guidelines.
- Participation in teaching activities to other professionals.
- Collaboration or development in research and data collection projects.

Teaching or dissemination of knowledge

The dissemination or transfer of knowledge pursues as objectives the transmission and dissemination of knowledge, experience, and skills of nursing professionals specialised in HF to other professionals, through:

- Periodic updating sessions of the multidisciplinary team, as a nexus to share knowledge among professionals.
- Training workshops for doctors and nurses in their area of reference, both aimed at PC professionals and specialised care. In reference to PC, collaborating for the development of community nurses in their area of reference.
- Collaboration in teaching with professional associations.
- Offer of training rotations within the HFU, within the health area for other professionals.
- Participation in national and international scientific meetings: Congresses, meetings of the HF Section of the SEC and the AEEC.
- Participation in research projects and dissemination in publications.

4.2 PLACE WHERE THEIR CLINICAL PRACTICE ID DEVELOPED

We distinguish different functions according to the work positions where the nurse develops their activity:

4.2.1 HEART FAILURE UNIT

The HFU, integrated into the care process, is recognised as the most appropriate management model for the care of this pathology. Its objective should be to accompany the patient throughout the process, from planning the transition to discharge to long-term follow-up, including end-of-life care. The management of the process must integrate all levels of care: primary and specialised, offering assistance and support, led by HF specialists integrated within the multidisciplinary team.

Within the quality standards of SEC[24] for HFU Accreditation, one of the professionals that must be incorporated into the multidisciplinary team is the nurse case manager/liaison, trained in cardiology. However, in Spain, we must differentiate the competencies of the nurse case manager and that of the HF specialist nurse: the former develops their activity, both in the community and hospital, aimed at patients with advanced chronic pathologies and high risk of hospitalisation[44.] The latter's professional profile is well defined in the CPG,

based on the curriculum of the HF nurse and developed by the ESC and expert recommendations.

There are differences in the human resources available in the health systems of different countries. Despite this variability, in most cases, it is based on the joint work of the specialised nurse with the multidisciplinary team. The HFA of the ESC proposed a set of standards for care programs, including the HF specialist nurse as an essential component. Given the characteristics of speciality development and training in our country, the need for a specialised nurse is therefore based on evidence, clinical experience, and expert consensus, which supports the development of this profile. It should be added that the ratio recommended by the SEC for nurses specialised in cardiology is one professional per 100,000 inhabitants[24].

The Units are classified by level of complexity and service portfolio, the previous requirement being common for all:

4.2.1.1 COMMUNITY HF UNIT

Its basic aspect is the development of a multidisciplinary program, with the fundamental collaboration of the nurse, with the integration of primary and specialised care. The services offered must include hospitalisation, outpatient consultation, PC, and day hospital, with an integrated process or care route, which must comply with the management recommendations of the CPG.

4.2.1.2 SPECIALISED HF UNIT

Develops a comprehensive HF management program, including follow-up of patients who are candidates for advanced HF devices or treatments. They must have electrophysiology services, ICD/Resynchroniser implantation and monitoring, and the possibility of administering inotropic drugs.

These nurses, in addition to training in HF management, education, and titrations, should also develop skills in the handling of inotropic drugs and device monitoring.

4.2.1.3 ADVANCED HF UNIT

Develops a comprehensive HF management program, including the follow-up of patients who are candidates for advanced HF devices or treatments, such as mechanical ventricular assist devices, heart transplantation, complex ventricular remodelling surgery, and a multidisciplinary unit for the immediate care of cardiogenic shock, and must have a cardiovascular surgery service.

Therefore, these nurses, in addition to training in HF management, must also develop skills in the handling of this type of patient and more complex interventions (heart transplantation, ventricular assistance, reconstructive cardiac surgery). In units where

specialised and advanced HFUs coexist, it is recommended that patients subsidiary to specialised unit care be cared for by the HF nurse and patients who require follow-up in the advanced unit be cared for by the advanced nurse (or one nurse for each care program for the patient with advanced HF). Enabling the training and rotation of the HF specialist nurse through the different programs.

4.2.2 UNITS FOR THE COMPREHENSIVE MANAGEMENT OF HF PATIENTS (UMIPIC)

The Spanish Society of Internal Medicine proposes programs for the creation and promotion of comprehensive management units for chronic HF patients, with the fundamental collaboration of nurses, focused on three aspects: education, involving the patient and their families in the disease, the comprehensive assessment and care of multi-pathological patients and continuity of care with integration of primary and specialised care[45].

4.2.3 DAY HOSPITAL

It is an alternative to hospitalisation. It mainly sees patients who need special treatments, such as intravenous diuretics, intravenous iron, and intravenous inotropes. However, there are variations in terms of its organisation and integration within the HFU, in different communities or health systems.

Thus, some HFUs integrate, from day hospitals, the care of patients who have had a recent admission or have a higher risk of readmission, to pharmacological optimisation and stabilisation. In these day hospitals, it is recommended that the specialised nurse with training in the management of HF be incorporated.

4.2.4 COMMUNITY

The development of the figure of a community nurse accredited in HF will be encouraged, who can give specific answers to patients in the field of primary care, in their respective health areas, enabling access to training rotations in HFUs.

4.2.5 RECOMMENDATIONS TO CONSIDER:

Nurse/patient ratio in each unit. HF management programs highlight the importance of the role of the specialist nurse, but there are many different experiences in different geographical areas of different countries. The research reviewed is mainly focused on describing models and experiences, and on obtaining results in terms of quality and cost-effectiveness with interventions in a high-risk population, including HF. Most of these programs have been developed in the U.S.A. and Canada. In Europe, some programs have been consolidated but with no solid literature and recommendations, as yet, regarding the portfolio of patients per nurse.

Guided Care is a complex chronic patient program in PC, where the nurse manages an approximate portfolio of 50-60 highly complex patients. The *Promoting Action for All-Inclusive Care for the Elderly* program, aimed at caring for the frail elderly, has a portfolio per centre of 250-300 subjects. The *Community Matrons*[46] program in the United Kingdom, with a wide variety in terms of endowment and ratios, treats 14 high-risk patients at ratios of 80-100 users in the Case Management program. All this can guide us on the heterogeneity of the implementation of different models. In Spain, similar models have been developed in the Basque Country, Andalusia, and Catalonia, where results have reported a capacity to care for 60-65 patients per nurse.

HF has been one of the most studied processes in case management[46]. The review of Takeda *et al*.,[47] with solid evidence in HF Case Management, analyses the figures of *specialist nurses* and *community nurses* with intervention groups of between 80 and 100 cases.

The evaluation carried out by Stewart *et al*.,[48] demonstrated cost-benefits with the HF specialist nurse model. After this evaluation, they recommended the implementation in the United Kingdom of one community HF specialist nurse per 100,000 inhabitants. They based this on the prevalence of HF with HFrEF at that time and a number of 60 patients per HF specialist nurse. The BHF project (2015)[49] cited similar cost savings and benefits based on the allocation of one full-time HF specialist nurse for every 60 HF patients with HFrEF. Masters *et al.*, describing an "epidemic" and increased prevalence of HF, recommended an increase in the number of HF specialist nurses in the range of 2 to 4 full-time equivalents per 100,000[50].

Analysing this heterogeneity, taking into account the recommendations of similar professional profiles described in the literature, clinical experience, and the consensus of the writing team, the following ratios are recommended:

Community HFU/UMIPIC: one specialist nurse per 60 active cases.

Specialised HF unit: one specialist nurse per 60 active cases.

Advanced HF Unit: one specialist nurse per 15 active cases.

5. ACCREDITATION PROGRAM

Given the need to identify the unique and specific profile of the HF specialist nurse, in addition to certifying the level of training achieved as a professional specialised in their field, below, we develop the AEEC accreditation program for the HF specialist nurse.

As indicated in RD 639/2015[43], the Advanced Accreditation diploma is "the credential that certifies that the health professional has achieved the advanced competencies and continued training requirements established in a specific functional area that admits and requires a professional practice of greater qualification, for a certain period of time".

In addition, it is important to highlight the direct relationship between the training of professionals and the services provided to users within the SNS. These should always be personalised, based on the most recent published evidence and principles of bioethics. Therefore, it is necessary to accredit the specific profile and training achieved within their professional development.

Objectives of the programme

- Recognise the value of the training of professionals dedicated to HF, to contribute to strengthening their problem-solving capacity in the practice in this functional area.
- Consolidate the profile of the HF specialist nurse accrediting their training and work experience, thus endorsing their skills and competencies at an excellent level.
- Accredit nurses dedicated to HF as specialised professionals within their field of work and in the face of health institutions, while progress is being made in the recognition of this figure by the Ministry of Health, Social Services and Equality and the Autonomous Communities (CCAA).

Principles

The accreditation system is voluntary, objective, independent, and standardised.

5.1 STRUCTURE OF THE ACCREDITATION COMMITTEE

ACCREDITATION COMMITTEE:

Responsible for the management of aspects related to accreditation as an HF specialist nurse, as well as proposals for improvement and updating.

OBJECTIVES:

- Rigorously evaluate accreditation requests.
- Assign the score via a homogeneous credit scale.

- Advise associates who request information on issues related to such accreditation.
- Issue accreditation and reaccreditation certificates.
- Maintain a register of accredited individuals.
- Prepare an annual report of the accreditation system, if applicable (according to the year of accreditation).

FUNCTIONS:

- Announce the deadline for submission of accreditation applications.
- Assess the merits of the professionals who undergo the accreditation process and attend the appeals that candidates consider appropriate to present.
- Register the accredited people and file their merits on the physical or digital platform (subject to current data protection regulations), provided by the AEEC.
- Adapt this document according to the rules contained therein, depending on the novelties, needs of professionals, and evolution of legislation.
- Meet at least once a year on an ordinary basis during the HF Nursing Meeting. At the request of the spokesperson or the members of the committee, with the approval of the spokesperson, as many meetings as are considered appropriate and duly justified may be convened extraordinarily.
- Publish an annual report with the number of accredited members of the most recent call.

INITIAL COMMITTEE:

An initial committee that will act in the extraordinary accreditation procedure is provisionally recognised since, at the time of putting this system into operation, there was no member of the AEEC HF Working Group accredited.

This committee will be formed by the spokesperson of the Working Group and another 4-6 members proposed by the spokesperson, taking into account their professional, academic, and scientific merits. The Board of Directors of the AEEC must approve or reject the inclusion of these members to the initial committee.

The members of the initial committee must submit themselves to the accreditation process.

After two years of validity of the initial committee, a definitive accreditation committee will be appointed.

STANDING COMMITTEE:

The standing committee will be formed by the spokesperson and four members of the HF Working Group of the who fulfil the following requirements:

- Be in possession of the HF Specialist Nurse Accreditation Certificate issued by the AEEC and the HF section of the SEC.
- Be a member of the AEEC with a seniority of at least five years.
- Be currently working a minimum of 28 hours per week in an HF Unit accredited by the SEC-EXCELLENT program or in a UMIPIC - SEMI Excellent.
- Have seniority of at least five years in HF.
- Provide a standardised *Curriculum vitae*.

The members of the Standing Committee will be renewed every three years (coinciding with the change of spokesperson) with replacements of 50 %, one by one, with the exception of the AEEC HF board member, who will do so according to the regulation in the general statutes of the AEEC. If several applicants meet the requirements, the AEEC Board of Directors will select the candidates. Calls will be announced at least three months in advance. The information regarding the call will be published on the AEEC website and will be disseminated via email to the members of the working group.

5.2 ACCREDITATION PROCEDURES

5.2.1 Extraordinary procedure (by exceptional route)

Nurses who wish to be accredited and who work with HF patients or in an HFU (Community, Specialised, or Advanced), who have an extensive professional career, are specialised in HF and, in addition, can accredit their experience with these patients or in the HF Unit for a period of dedication equal to or greater than three years, may apply for accreditation.

This procedure will only be valid during the first 2 years of implementation, from the date of publication of the call on the AEEC website.

The application period for accreditation of the extraordinary procedure will be limited to 60 calendar days as of the publication of the call.

Requirements:

- Hold the University Degree of Diploma in Nursing (DUE) or the Degree in Nursing.
- Be a member of the AEEC.

- Accredit three years (36 months) of work experience with HF patients or in an HF Unit (Community, Specialised), or accredit five years (60 months) of work experience in an HF Unit (Advanced).
- Provide a report on having acquired the specified knowledge/skills/professional behaviours signed by the Service Supervisor and/or the Head of Section or Heart Failure Unit (Annex 3) (Community, Specialised, or Advanced).
- Obtain a score on the merit scale equal to or greater than 30 points.
- Pass the training tests indicated in the corresponding call.

Documentation required:

- Fill out the standard form for accreditation (Annex 2).
- Pay the fees of the accreditation (the amount will be specified in the call).
- Provide a report on having acquired the specified knowledge/skills/professional behaviours signed by the Service Supervisor and/or the Head of Section or Heart Failure Unit (Annex 3) (Community, Specialised, or Advanced).
- Certificate of services provided with specification of the workplace, issued by the centre where the professional activity of the HF nurse is developed.
- Scanned certified copy of the qualifications accrediting continued education, specific in HF and cardiology.

Application Procedure:

The Accreditation Committee will publish, on the AEEC website, the call, requirements, and submission date of the application for the accreditation of the HF specialist nurse, via the website of the AEEC HF working group: https://insuficiencia.enfermeriaencardiologia.com and via Professional Nursing Associations. Annex IV contains the flow diagram for the accreditation process.

The applicant must gather and scan all documentation as specified in each document.

On the platform, before the determined call, all specific documents described in the call must be uploaded.

The accreditation committee will send participants an email with the number assigned to their accreditation application file.

In the event that the AEEC or the accreditation committee needs to confront any document with its original or certified copy, it will be requested from the participant, who must provide it for review.

The accreditation committee will evaluate the files and the AEEC secretariat will notify the resolution to each applicant via email.

5.2.2 Ordinary procedure (by standard route)

The Accreditation Committee will publish, on the AEEC website, the application submission date for accreditation.

Requirements:

- Hold the University Degree of Diploma in Nursing (DUE) or the Degree in Nursing.
- Be a member of the AEEC.
- Accredit, within the last five years, three years (36 months) of work experience with HF patients or in an HF Unit (Community, Specialised), or accredit five years (60 months) of work experience in an HF Unit (Advanced).
- Provide a report on having acquired the specified knowledge/skills/professional behaviours signed by the Service Supervisor and/or the Head of Section or Heart Failure Unit (Annex 3) (Community, Specialised, or Advanced).
- Obtain a score on the merit scale equal to or greater than 30 points.

Required documentation:

- Fill out the standard form for accreditation (Annex 2).
- Pay the fees of the accreditation (the amount will be specified in the call).
- Provide a report on having acquired the specified knowledge/skills/professional behaviours signed by the Service Supervisor and/or the Head of Section or Heart Failure Unit (Annex 3) (Community, Specialised, or Advanced).
- Certificate of services provided with specification of the workplace, issued by the centre where the professional activity of the HF nurse is developed.
- Scanned certified copy of the qualifications accrediting continued education, specific in HF and cardiology.

Application Procedure:
The Accreditation Committee will publish, on the AEEC website, the call, requirements, and submission date of the application for the accreditation of the HF specialist nurse, via the website of the AEEC HF working group:

https://insuficiencia.enfermeriaencardiologia.com. Annex IV contains the flow diagram for the accreditation process.

The applicant must gather and scan all documentation as specified in each document.

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The accreditation committee will send participants an email with the number assigned to their accreditation application file.

In the event that the AEEC or the accreditation committee needs to confront any document with its original or certified copy, it will be requested from the participant, who must provide it for review.

The accreditation committee will evaluate the files and the AEEC secretariat will notify the resolution to each applicant via email.

5.3 POINTS SCALE

Work experience:

- For each year worked: 3 points. Months will be counted as annual fractions (1 month = 0.25 points).
- For working in an HF Unit accredited by SEC-Excellent (Community, Specialised, or Advanced) or in a UMIPIC accredited by SEMI-Excellent: 1 point.

Maximum points to be acquired for work experience: 15 points in the extraordinary call; 10 points in the ordinary call.

HF-related training:

- Doctoral thesis: 20 points.
- Master: 15 points.
- Online/Expert Course (AEEC): 8 points.
- HF, heart transplant, or ventricular assist courses:
    - 10 and 49 hours: 1 point.
    - 50 and 99 hours: 2 points.
    - More than 100 hours: 3 points.

Training related to cardiology:

- Doctoral thesis: 15 points.
- Master's degree related to Cardiology Nursing, Medical Surgical: 10 points (single score, regardless of the hours dedicated to HF in the syllabus).
- Postgraduate courses in Cardiology: 6 points (single score, regardless of the hours dedicated to HF subject in the syllabus).
- Other courses: Cardiopulmonary resuscitation (up to a maximum of 5 points), Arrhythmias and electrocardiography (up to a maximum of 5 points), Pharmacology in cardiology (up to a maximum of 3 points), ischemic heart disease and AMI (up to a maximum of 3 points), heart valve disease (up to a maximum of 3 points).

  Point allocation based on duration (Modification/Details):

  - 10 and 49 hours: 1 point.
  - 50 and 99 hours: 2 point.
  - More than 100 hours: 3 points.

If the diplomas do not show the duration of the courses in hours, but in credits, it is established that the credits specified as ECT are equivalent to 25 hours and the unspecified credits are equivalent to 10 hours.

Important: When a certificate does have the number of hours or credits, the minimum score will be given.

Research courses:

- 10 and 49 hours: 0.5 points.
- 50 and 99 hours: 1 point.
- More than 100 hours: 2 points.

The revised version includes cardiology-related research courses, maintaining the same point allocation.

Research grant awarded: 10 points.

Attendance at Congresses, Conferences, and Meetings:

- For each meeting, congress, or workshop specific to HF: 1 point.
- For each non-HF-specific cardiology congress: 0.25 points.

Important: The training received in congresses will not be counted, only attendance.

Publications:

- In journals: first author: 10 points (international journal), 7 points (national journal). Other authors: 3 points (international journal) and 2 points (national journal).
- In books: First author: 8 points. Other authors: 3 points.

Communications:

- Lecture/teacher of cardiology courses: 7 points.
- Oral communication: first author: 5 points. Other authors: 3 points.
- Poster/poster forum: first author: 3 points. Other authors: 1 point.
- Clinical case: first author: 3 points. Other authors: 1 point.

5.4 EVALUATION REPORT OF THE CAPABILITIES OF THE HEART FAILURE SPECIALIST NURSE (HFSN)

The Heart Failure Specialist Nurse, from hereon in HFSN, must incorporate their skills into their work context, to efficiently perform their role. The competency framework provides us with a structure and guide to measure the HFSN's capabilities. Previously, we developed the entire competency framework (Annex 1), now we must provide an effective tool to assess these capabilities described in the seven roles (Annex 3), along with the knowledge, skills, and professional behaviours that characterise them.

The evaluation of the competencies of the HFSN must be a dynamic, planned, and structured process. This evaluation has to be provided by different professionals working in the HF discipline (HF unit cardiologist or cardiology supervisor or expert nurse*), with the purpose of evaluating the HFSN in a fair and transparent manner, and also offering feedback and feed-forward on competencies acquired or not.

In the event that HFSN has achieved the capacities via the master's degree in HF, only the service Supervisor, Head of the cardiology section, or the HFU cardiologist need sign annex 3. On the contrary, if we must evaluate the capabilities of the HFSN, we have developed a template to guide and support this evaluation through the perspective of Patricia Benner[51], which allows the learning and development of the nurse through five levels of competence, adapted from the Dreyfus model (beginner, advanced beginner, competent, efficient, and expert). In this document, we will dispense with level I beginner or novice and level II advanced beginner, for not having the necessary professional experience to initiate the accreditation process, in which the nurse must endorse an experience for a dedication period equal to or greater than three years, in the HF domain.

Patricia Benner's Competency Table[51]

Competency levels		Description
III	Competent	The HFSN has experience in the field of HF equal to or greater than three years. The competent nurse is characterised by their coherence, foresight, time management, and organisation of activities. They are confident in their performance and have experienced situations that afford them autonomy to make decisions with arguments learned from relevant facts.
IV	Efficient	They possess an innate ability in their activities. Experience is used to make priority decisions and carry out their activities. Quickly identifies problems and makes the right decisions.
V	Expert*	Experience and theoretical and practical knowledge allow them to master their performances/situations. Acts intuitively and uses directives or guidelines when faced with a new situation or experience for the HFSN.

The future HFSN will be able to self-evaluate and thus establish feedback with their formal evaluator.

To use the template (Annex 3) you should consider the following tips to help you establish the different levels described above:

1. Each role described, with its capabilities, will be evaluated separately.

2. In turn, capacities in knowledge, skills, and professional behaviours will be evaluated in a comprehensive manner.

3. The sum of all items globally must be equal to or greater than 60%. At the same time, there cannot be any role with a score lower than 60 %. If the nurse does not reach a score equal to 60% of the items in a specific role, they cannot be accredited.

4. The level of competence acquired will be established according to the number of items obtained in the overall evaluation. The evaluation levels are:

- Level III: The competent HFSN, if the achievement of each item is equal to 60% of the total items.

- Level IV: The efficient HFSN, if the achievement of each item ranges from 61 to 89% of the total items.

- Level V: The expert HFSN, if the achievement of each item ranges from 90 to 100% of the total items.

5. The accreditation will specify the competence level of the HFSN.

5.5 ISSUANCE OF THE ACCREDITING TITLE

After the committee has evaluated the dossiers admitted, the interested party will be informed of the approval or non-approval (duly justified) of their accreditation. Subsequently, within a maximum period of three months, you will receive the corresponding title signed by the spokesperson of the AEEC HF working group, the president of the AEEC, and the president of the HF Section of the SEC. Automatically, the accredited professional will form part of the list of members with current accreditation, which will be published on the web page of the AEEC HF working group: https://insuficiencia.enfermeriaencardiologia.com.

It should be added that the validity of this diploma will appear both in the degree and in the list of accredited professionals.

5.5.1 Accreditation periods

The calls for Accreditation will be held biannually.

5.5.2 Accreditation renewal

The diploma of Accreditation of the HF nurse will be valid for five years, as stipulated in RD 639/2015 of July.

The application for renewal of said title must be submitted within three months immediately prior to its effective date. This request must be accompanied by a series of documentation that will be detailed in future versions of this document. However, at the moment, the minimum requirements requested are:

- Be a member of the AEEC.
- Confirm that you continue to exercise your professional activity in the care of HF patients (certificates of services rendered).

- Obtain a score in the merit scale equal to or greater than 20 points, taking into account that those merits dated before the issuance of the accreditation diploma to be renewed cannot be presented.

5.6 RULES FOR AMENDING THIS DOCUMENT

5.6.1 Request for modification of the document

Any member of the HF Working Group associated with the AEEC, who belongs to the group and has done so for more than three years, may request in writing, to the Spokesperson of the Working Group, the specific component that they wish to modify, upon justification. Subsequently, the request will be transferred to the Accreditation Committee, which will study and assess the relevance of the application and rewrite the key point revised, if they deem it appropriate. In the event that the modification does not proceed, the applicant shall be notified in writing justifying the decision.

5.6.2 Modification procedure

Once the proposal to change the content of the document has been amended, a draft must be sent to all AEEC associates belonging to the HF Working Group, detailing the modified section and the reason.

All amendments to the document must be approved by the AEEC associates belonging to the HF Working Group at the Annual Meeting of the HF Section. For approval, a simple majority of those attending the HF group meeting will be required.

Only members of the HF group may delegate their vote to a colleague of the group or the secretary of the AEEC by email. For this purpose, an official delegation form will be generated in which you must include a photocopy of your DNI.

In the event that the document has the support of an official body or a non-profit association external to the AEEC, the member of the HF group must communicate the modification and send the new document to said body.

Finally, and after this process, the complete document must be published on the AEEC website.

REFERENCES

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Annex I:

Framework of competencies

FRAMEWORK OF COMPETENCIES						
ROLES						
Clinical care/evaluator role **Educational and advisory role**		**Rehabilitation role** **Psychosocial role**		**Coordinating role** **Research role** **Leadership role**		
SPECIFIC FUNCTIONS						
Clinical care/evaluator role	**Educator/advisor role**	**Rehabilitation role**	**Psycho-social role**	**Coordinating role**	**Research and teaching role**	**Care Leadership Role**
• Ability to assess the patient: clinical and non-clinical aspects. • Ability to monitor pharmacological treatment, drug titration, and adherence. • Ability to recognise comorbidities. • Ability to recognise signs and symptoms of decompensation. • Ability to apply palliative care in patients with refractory HF.	• Ability to educate and inform the patient and family. • Ability to educate about illness, diet, physical exercise, and sexuality. • Ability to educate about self-care. • Ability to educate about drug treatment. • Ability to recognise the use of alcohol, tobacco, drugs, and other substances. • Ability to teach the triggers of decompensation. • Ability to facilitate the patient and caregiver to cope with the disease. • Ability to educate on the management of the flexible diuretic regimen.	• Ability to educate and encourage the practice of physical exercise. • Ability to choose exercises according to the patient's need and tolerance. • Ability to assess tolerance and response to physical exercise. • Ability to select patients to refer to the rehabilitation program.	• Ability to recognise inappropriate behaviour or social interaction of the patient. • Ability to recognise emotional stress of the patient and/or family. • Ability to recognise caregiver overload.	• Ability to coordinate a hospital discharge to primary. • Ability to coordinate different medical visits. • Ability to coordinate palliative care. • Ability to coordinate the different members of the multidisciplinary group.	• Ability to recognise and evaluate a problem in the care of HF patients. • Ability to study a problem to improve HF patient care. • Ability to exercise teaching responsibilities in the area of heart failure.	• Ability to be efficient in the direction of patient care. • Ability to meet all patient needs. • Planning and organisation skills.

	CAPABILITIES		KNOWLEDGE	SKILLS	PROFESSIONAL BEHAVIOUR
SPECIFIC FUNCTIONS	CLINICAL CARE/EVALUATOR ROLE	**Ability to assess the patient: clinical and non-clinical aspects**.	✓ Know and comply with judgments and local, national and EU legislation related to patient care and health service delivery: informed consent, patient capacity and autonomy, confidentiality, data protection, documentation standards, and safe working environment. ✓ Knowledge of normal heart rhythm and early detection and management of ischemic alterations, rhythm disorders, and cardiac conduction (tachy/bradyarrhythmia, conduction defects). ✓ Knowledge of the presentation and evaluation of common cardiovascular symptoms: chest pain, respiratory distress, fatigue, palpitations, syncope, hypertension, Oedema... ✓ Knowledge of Heart Failure (HF). Pathophysiology, epidemiology, aetiology, diagnosis, classification, prevention, prognosis and health, and social impact of HF[8,11]. ✓ Knowledge of HF with "reduced, intermediate or preserved" ejection fraction according to the Clinical Practice Guidelines[8]. Classification of HF according to the New York Heart Association (NYHA) and stages of the American Heart Association/American College of Cardiology (AHA/ACC). ✓ Knowledge about predisposing causes (risk factors), determinant causes and precipitating causes. Clinical manifestations of HF, typical signs and/or symptoms. Clinical profile of patients with acute HF according to the presence/absence of congestion or hypofusion. ✓ Knowledge of complementary tests to establish the diagnosis: laboratory tests, chest x-ray, transthoracic ultrasound, coronary angiography, cardiac resonance, etc ... ✓ Knowledge of the alterations in each of the complementary tests and the appropriate corrective measures. ✓ Knowledge of the protocols established prior to the different diagnostic and/or therapeutic techniques and surgery.	✓ Verbal and non-verbal communication skills. ✓ Effective interpersonal communication skills with the multidisciplinary team. ✓ Bidirectional collaboration with the members of the work team. ✓ Identification of problems: a) clinical, b) educational, c) psychosocial, and coordinate with the cardiologist those that require treatment or intervention. ✓ History of the patient, background: cardiovascular risk factors, lifestyle habits (diet, exercise, work, sexual activity, consumption of tobacco, alcohol, others), cardiovascular and non-cardiovascular diseases, pharmacological treatment (all drugs), indication, contraindication, and possible interactions. ✓ Conduct an interview with the patient to see the evolution, review of medication (adherence and side effects), and identification of needs. ✓ Physical examination (auscultation, presence of oedema, dyspnea, orthopnoea ...), taking of constants (BP, HR, StO_2, weight, abdominal circumference), perform blood tests and ECG and evaluate/treat according to the centre's protocol. ✓ Monitor clinical-haemodynamic status, NYHA functional class, fluid volume, and laboratory data.	✓ Perform active listening and empathy. ✓ Early detection and management of electrocardiographic (ECG) alterations and signs and/or symptoms of haemodynamic destabilisation and act according to protocol. ✓ Promote the control of CVRF (dyslipidaemia, hypertension, DM, overweight, smoking, and sedentary lifestyle), identify warning signs, and encourage lifestyle changes that promote self-care and pharmacological adherence. ✓ Recognise the impact of HF diagnosis on the patient[21]. ✓ Respect the patient's choice about prognostic information[20]. ✓ Work together with the multidisciplinary team according to their functions and taking into account their limitations[20]. ✓ Maintain up-to-date training on pathology and the Clinical Practice Guidelines of the European Society of Cardiology[8]. ✓ Understand that patients interpret and express symptoms differently[21]. ✓ Know the trajectory of the HF. Recognise the patient's condition, interpret signs and symptoms, analyse tests. ✓ Provide adequate information to the patient about the alterations in each of the complementary tests. ✓ Application of the protocols established prior to the different diagnostic and/or therapeutic techniques and surgery.

SPECIFIC FUNCTIONS		CAPABILITIES	KNOWLEDGE	SKILLS	PROFESSIONAL BEHAVIOUR
	CLINICAL CARE/EVALUATOR ROLE	**Ability to monitor pharmacological treatment, drug titration, and adherence.**	✓ Knowledge of drugs, their indications, contraindications, action, and possible side effects of oral medical treatment[19]: ACEi, ARB II, BB, MRA, ARNI, SGLT2i, diuretics (flexible regimen), and interactions, preparation, and administration of IV drugs (antihypertensives, diuretics, lipid-lowering agents, antiplatelet agents, antithrombotic, thrombotic, antiarrhythmic, inotropic, etc.) ✓ Knowledge for drug titration: clinical control of the patient, analytical, adverse events, monitoring of parameters, and interactions with other medicinal products and factors that influence individual susceptibility to side effects. ✓ Knowledge of the factors that affect the lack of adherence related to the patient, with the treatment, with the health system, with the state of the disease, and socio-economic factors. ✓ Knowledge of strategies to measure and improve adherence.	✓ Monitoring of clinical status (compensated or decompensated), analytical parameters, medical treatment, and tolerance/adherence to pharmacological treatment. ✓ Follow the prescription plan for titration and treatment optimisation. ✓ Carry out drug titration following the clinical guidelines and existing protocols validated, agreed, approved, and with cardiologist and legal support[25, 26]. ✓ Identify medication side effects and interactions with other medications, herbal remedies, or foods[20]. ✓ Know ranges for medical consultation, according to the titration *checklist*[25] and coordination with the HF cardiologist or other specialists on the patient's health status, possible adverse effects associated with polypharmacy ... ✓ Ability to train the patient and family in the flexible regimen of diuretics: management and control. ✓ Ability to reconcile medication in all care transitions between levels and/or health professionals. ✓ Ability to encourage adherence to treatment and commitment to lifestyle change.	✓ Keep training on new drugs and changes in drug treatments up to date. ✓ Frequently assess adherence to pharmacological treatment. ✓ Explore the understanding of the patient and their family on knowledge of the treatment to follow. ✓ Review and follow the drug titration protocol and consult the titration checklist[25]. ✓ Be aware of your own limitations. Possess a solid theoretical knowledge and intensive practical training, with good support from the cardiologist. ✓ Work with nursing autonomy, within a culture and safety system, subject to audit and quality control[19]. ✓ Adequately report serious or adverse incidents arising from HF-specific pharmacological treatment according to the criteria of the unit, hospital, national policy, or protocols.

SPECIFIC FUNCTIONS		CAPABILITIES	KNOWLEDGE	SKILLS	PROFESSIONAL BEHAVIOUR
	CLINICAL CARE/EVALUATOR ROLE	**Ability to recognise comorbidities[2].**	✓ Knowledge of the prevalence of common non-cardiac comorbidities and their impact[20]. ✓ Knowledge of the management of non-cardiac comorbidities: Chronic obstructive pulmonary disease (COPD), sleep-disordered breathing (OSAS), renal dysfunction, hepatic, anaemia/iron deficiency, diabetes mellitus (DM), musculoskeletal disorders, depression, and cognitive impairment. ✓ Knowledge about diagnosis, clinical management, and self-care of the patient[20]. ✓ Knowledge of the risks associated with HF medications and of the different comorbidities[20].	✓ Comprehensive evaluation of comorbidities, as well as their clinical, functional, cognitive status, and quality of life of HF patients.	✓ Recognise the importance of comorbidities for comprehensive care[20] and their impact on the patient's disease.
		Ability to recognise signs and symptoms of decompensation.	✓ Knowledge of the different clinical manifestations of acute HF and signs and symptoms of decompensation.	✓ Identify the signs and symptoms of HF decompensation and other comorbidities early and initiate early care with pharmacological and non-pharmacological measures and coordination with the cardiologist to stabilise the patient.	✓ Periodically evaluate the signs and symptoms of HF decompensation. ✓ Evaluate the understanding of the patient and family on knowledge of the warning signs and pharmacological and non-pharmacological treatment to follow.
		Ability to apply palliative care in patients with refractory HF.	✓ Knowledge of HF trajectory and prognostic signs. ✓ Knowledge of palliative care goals. ✓ Knowledge of NECPAL criteria for severity/progression/advanced disease[52]. ✓ Knowledge of nursing care oriented and adapted to patients and their families in situations of advanced disease and/or end of life, which contribute to improving their comfort. ✓ Knowledge of coping with loss and death ✓ Knowledge of aspects of ethical and legal aspects at the end of life.	✓ Ability to identify the situation of advanced and/or final disease through validated instruments/NECPAL[52]. ✓ Skills to help the patient and family cope with situations of advanced illness and/or end of life.	✓ Assess the basic needs of patients in a palliative situation, from the planning, execution, and evaluation of care plans. ✓ Respect the personal, social, and cultural beliefs, and values of the patient and their family/social environment.

SPECIFIC FUNCTIONS	CAPABILITIES	KNOWLEDGE	SKILLS	PROFESSIONAL BEHAVIOUR
EDUCATOR/ADVISOR ROLE	**Ability to educate and inform the patient and family.**	✓ Knowledge of CPGs on recommendations for HF patients ✓ Knowledge regarding the pedagogical method of patient education[53]. ✓ Knowledge about education integrated to the needs of the HF patient. ✓ Knowledge about the patient's motivation to achieve behaviour change. ✓ Knowledge of strategies for self-management support, including telemedicine and remote monitoring.	✓ Provide information appropriate to the level of knowledge and understanding of the patient, according to the wishes/needs of the patient. ✓ Encourage learning for the patient and their family member/caregiver. ✓ Motivational interviewing techniques, management, and coping with the disease (self-care). ✓ Provide education and information promoting agreements with the patient: disease, causes, course of HF, prognosis, pharmacological and non-pharmacological treatment. ✓ Provide information on lifestyle modification, diet, alcohol, tobacco and drugs, exercise, travel, leisure, sleep and breathing disorders, and sexual activity[8] supported by educational materials illustrating the information. ✓ Have information on immunisation. ✓ Answer questions clearly and concisely.	✓ Keep training on pedagogical methods for patient education up to date. ✓ Identify the primary caregiver, if applicable. ✓ Evaluate the knowledge acquired, the understanding of the information. ✓ Encourage the use of health education assessment tools.
	Ability to educate about illness, diet, physical exercise, and sexuality.	✓ Knowledge of the risk factors associated with CVD and the ESC prevention guidelines (hypertension, smoking, dyslipidaemia, diabetes, metabolic syndrome, and lifestyle). ✓ Knowledge for the evaluation of the patient's knowledge about their disease and their state of health. ✓ Knowledge to educate the patient in self-care. ✓ Knowledge about physical exercise, nutrition and food, equivalences between sodium and salt, diets. Adapt low-sodium diet to comorbidities (RI, diabetes mellitus, cardiac ischemia, hyperuricaemia, etc.) ✓ Knowledge of physical exercise guidelines for HF patients and cardiac rehabilitation programs. ✓ Knowledge of sexual dysfunctions[54].	✓ Assessment of educational attainment and identify barriers to patient learning. **Diet** ✓ Evaluate the nutritional status of the patient and whether diet adjusted or not to the disease, comorbidities, and cardiovascular risk factors. **Physical exercise** ✓ Evaluate the daily physical activity performed. ✓ Evaluate their ability with the 6-minute test. **Sexuality** ✓ Evaluation of sexual medical history: detection of sexual dysfunction[54]. ✓ Recognise drugs that cause sexual dysfunction. ✓ Ability to cope with the patient.	✓ Adopt patient-centred education. ✓ Recognise that their learning is linked to the stage of acceptance of the disease. ✓ Establish effective communication with the multidisciplinary team, the patient, and their family/social environment. ✓ Keep training updated on diet, physical exercise, and sexuality according to CPGs[8]. ✓ Plan the diet according to disease, comorbidities, and risk factors. ✓ Plan exercises and increases in effort individually according to the patient's condition. ✓ Monitor and evaluate the exercise scheduled. ✓ Encourage a clinical sexual interview in the office to detect sexual dysfunction[54].

		CAPABILITIES	KNOWLEDGE	SKILLS	PROFESSIONAL BEHAVIOUR
SPECIFIC FUNCTIONS	EDUCATOR/ADVISOR ROLE	**Ability to educate about self-care.**	✓ Knowledge about self-care theory and patient-specific self-care behaviours in HF[55-57].	✓ Ability to involve the family in compliance with the therapeutic regimen and lifestyle modification towards heart-healthy habits. ✓ Ability to facilitate learning, management, and coping with the disease (self-care) to patients and families[20]: knowledge of the disease, diet, exercise, pharmacological treatment, self-management (flexible diuretic regimen), monitoring of BP, HR, diuresis, weight, dyspnea, orthopnoea, fever...) and appropriate use of health resources (HF consultation, day hospital, and primary and specialised emergency services. ✓ Ability to identify barriers to self-care using validated tools and early addressing of difficulties. ✓ To assess the effectiveness of self-management.	✓ Keep training on self-care theory up to date[20]. ✓ Evaluate HF patient self-care: pharmacological and non-pharmacological adherence, and identification of warning signs and/or symptoms. ✓ Encourage the use of self-care assessment instruments to verify that the patient performs the necessary actions for self-care and adapts to new situations.
		Ability to educate about drug treatment.	✓ Knowledge of the drugs, their indications, contraindications, action, and possible side effects of oral medical treatment[20]: ACEi, ARB II, BB, MRA, ARNI, SGLT2i, diuretics (flexible regimen), etc... ✓ Knowledge of drugs, their indications, contraindications, action, and possible side effects of medical treatment[20]: interactions, preparation, and administration of IV drugs (antihypertensives, diuretics, lipid-lowering agents, antiplatelet agents, antithrombotic, thrombotic, antiarrhythmic, inotropic agents, etc.) ✓ Knowledge of the optimal doses of each drug[20]. ✓ Knowledge for drug titration: clinical control of the patient, analytical, adverse events, monitoring of parameters and interactions with other medicinal products, and factors that influence individual susceptibility to side effects.	✓ Ability to provide knowledge about the pharmacological treatment to be followed regarding indication, dosage, possible adverse effects, contraindicated drugs (NSAIDs, effervescent...) ✓ Ability to explain strategies for drug treatment control to the patient and their family.	✓ Explain the benefits/risks of medication, adherence or not to drug treatment, and help on taking drugs. ✓ Review the regimen and dose of drugs prescribed and evaluate adherence with direct and indirect instruments. ✓ Remember potential side effects/adverse events and the importance of communicating them to their nurse and/or doctor responsible for HF.

SPECIFIC FUNCTIONS	CAPABILITIES	KNOWLEDGE	SKILLS	PROFESSIONAL BEHAVIOUR
EDUCATOR/ADVISOR ROLE	**Ability to recognise the use of alcohol, tobacco, drugs, and other toxic substances.**	✓ Knowledge about the effects of alcohol, tobacco, drugs, and other toxic substances. ✓ Knowledge of the different evidence-based strategies for smoking cessation.	✓ Conduct the empathic interview to evaluate the different consumptions of toxic substances. ✓ Monitor the amount of toxic substances consumed.	✓ Keep training updated on toxic effects on health (alcohol, smoking, and drugs). ✓ Provide professional help for cognitive behavioural therapy. ✓ Inform about the centres to help with the discontinuation of toxic substances.
	Ability to teach the triggers of decompensation.	✓ Knowledge about the triggers of decompensation in HF.	✓ Ability to educate the patient in the recognition of signs and/or symptoms of decompensation, triggers, and initiation of appropriate measures to reverse decompensation.	✓ Keep training updated on the triggers of possible decompensations. ✓ Provide direct contact if they show signs of decompensation.
	Ability to facilitate the patient and caregiver to cope with the disease.	✓ Knowledge of coping strategies for the disease.	✓ Ability to evaluate how the person perceives and copes with the disease and treatments and assess their emotional state. ✓ Ability to assess whether it is effective coping (good emotional adjustment) or ineffective coping (emotional maladjustment). ✓ Monitor symptoms of stress in the face of the disease, treatments and decisions made.	✓ Keep training updated on coping with the disease and its strategies. ✓ Encourage decision-making about life, evolution, and treatment of the disease.
	Ability to educate on the management of the flexible diuretic regimen.	✓ Knowledge of minimum and maximum doses of all diuretics used in HF. ✓ Knowledge of drug titration and timing of application.	✓ Ability to educate the patient and family about the flexible diuretic regimen if signs of decompensation appear. ✓ Ability to assess understanding of the management of the flexible diuretic regimen.	✓ Keep training updated on management of the flexible diuretic regimen. ✓ Provide direct contact if you have doubts about the flexible diuretic regimen.

		CAPABILITIES	KNOWLEDGE	SKILLS	PROFESSIONAL BEHAVIOUR
SPECIFIC SERVICES	REHABILITATION ROLE	**Ability to educate and encourage the practice of physical exercise.**	✓ Knowledge of CPGs on recommendations for the practice of physical exercise in heart failure and heart transplantation: indications, contraindications, and ideal time of initiation. ✓ Knowledge of the concepts and characteristics of physical activity: modalities and physiological responses to physical exercise. ✓ Knowledge of the physiological and clinical benefits of exercise in patients with heart failure. ✓ Knowledge of strategies and didactic resources to promote the practice of physical exercise: training sessions, monographic workshops, videos, brochures, guides...	✓ Ability to recruit the patient both in the hospital and in the HF nurse's office. ✓ Ability to obtain information about the patient's exercise habits and barriers perceived by the patient. ✓ Ability to motivate and support the patient psychologically in the initiation and/or maintenance of physical exercise, taking into account their clinical status and preferences. ✓ Ability to prescribe, individually, the most appropriate type of exercise, intensity, duration, frequency, and rate of progression, according to the response to exercise: symptoms and/or clinical status.	✓ Advise on exercise taking into account physical and functional limitations, such as frailty and comorbidities. ✓ Identify, develop, and encourage activities that promote the habit of physical exercise in each patient. ✓ Schedule sessions at home with or without supervision and plan exercises and augmentations individually according to the patient's condition. ✓ Monitor and evaluate the exercise scheduled, according to the severity of the disease and comorbidities, the place of the sessions (supervised versus home), the patient's age, and adherence. ✓ Regularly assess the improvement in functional capacity and quality of life through the validated Minnesota 6-minute test tools. ✓ Follow-up of pharmacological adherence and monitoring of BP and HR, for the adequate titration of drugs and avoid situations that prevent reaching adequate levels of PE intensity.
		Ability to choose exercises according to the patient's need and tolerance.	✓ Knowledge of the modalities of exercise and sports participation in the different stages of HF.		
		Ability to assess exercise tolerance and response.	✓ Knowledge of the necessary tools to assess tolerance to physical exercise.		
		Ability to select patients to refer to the cardiac rehabilitation program.	✓ Knowledge of referral protocols to rehabilitation and occupational therapy programs.		

		CAPABILITIES	KNOWLEDGE	SKILLS	PROFESSIONAL BEHAVIOUR
SPECIFIC FUNCTIONS	PSYCHOSOCIAL ROLE	**Ability to recognise inappropriate behaviour or social interaction of the patient.**	✓ Knowledge of tools for detecting inappropriate behaviours.	✓ Ability to perform a comprehensive assessment of the patient and their family, with special emphasis on their emotional state, level of dependence, and coping ability. ✓ Ability to use communication techniques and social skills such as empathy, understanding, active listening, etc ... ✓ Ability to promote the expression of feelings, expectations and fears, and self-assessment of behaviour change. ✓ Ability to refer specialist psychological, social, and spiritual support in a timely manner. ✓ Ability to develop family support measures. ✓ Ability to detect patients at risk and develop specific strategies that respond to their needs.	✓ Establish an effective therapeutic relationship that allows you to know the needs and preferences of the patient and establish a relationship of help. ✓ Inform, support, and advise the family and primary caregiver about the disease process and offer them the necessary resources to enable them to play the role of primary caregiver. ✓ Encourage the use of family assessment instruments to identify the role that the family may be playing in the health-disease process and involve family members in the disease process. ✓ Encourage the use of techniques to improve communication, such as *briefings*, short multidisciplinary meetings, meetings between different care levels, shift changes, etc.
		Ability to recognise emotional stress of the patient and/or family.	✓ Knowledge of tools to identify patients and/or family members in vulnerable situations and/or in the process of mourning. ✓ Knowledge of the emotional impact of the disease and/or advanced HF treatments on patients and families. ✓ Knowledge of strategies to facilitate the understanding of information. ✓ Knowledge of those measures (pharmacological, non-pharmacological, interpersonal) that facilitate anxiety relief: relaxation techniques, breathing techniques...		
		Ability to recognise caregiver overload.	✓ Knowledge of scales for assessing the role of the caregiver.		

		CAPABILITIES	KNOWLEDGE	SKILLS	PROFESSIONAL BEHAVIOUR
SPECIFIC FUNCTIONS	COORDINATING ROLE	**Ability to coordinate a hospital discharge to primary.**	✓ Knowledge of the hospitalised patient care process. ✓ Knowledge of the circuits/protocols of the institution, as well as the care resources available.	✓ Involve and develop strategies to empower the patient or their immediate environment as active participants. ✓ Ability in leadership techniques of the multidisciplinary team. ✓ Ability to establish a decision-making plan at the end of the patient's life. ✓ Lead a multidisciplinary strategy.	✓ Plan discharge and ensure the transmission of information between the different areas of care, by making continuity of care reports as a tool to guarantee continuity of care. ✓ Ensure the reconciliation of medication in care transitions. ✓ Detection and resolution of discrepancies with the patient's active medication. ✓ Effective communication of changes in clinical evolution and/or pharmacological prescription between health personnel in the HF field (cardiologists, nurses, and family doctors-nurses), other specialists, and the patient themselves. ✓ Activate multidisciplinary procedures related to evaluation, comprehensive treatment, and reviews according to the shared care model via structured follow-up of the different resources available. ✓ Ensure that all members of the multidisciplinary team provide consistent information.
		Ability to coordinate different medical visits.	✓ Knowledge of the computer system and scheduling of tests/visits.		
		Ability to coordinate palliative care.	✓ Knowledge of the palliative care approach, physical aspects, psychological, social, and spiritual needs of patients and families. ✓ Knowledge of health resources for palliative care of the health area and referral process.		
		Ability to coordinate with the different members of the Multidisciplinary group.	✓ Knowledge of the functions of all members of the multidisciplinary team. ✓ Knowledge of the factors that influence care coordination and effective transition throughout the process. ✓ Knowledge of the referral protocols for the different specialists (psychologist, nutritionist, internal med., oncologist, discontinuation of toxics ...).		

SPECIFIC FUNCTIONS	CAPABILITIES	KNOWLEDGE	SKILLS	PROFESSIONAL BEHAVIOUR
RESEARCH AND TEACHING ROLE	**Ability to recognise and evaluate a problem in the care of HF patients.**	✓ Knowledge about research in general, good practices, legal aspects, and their application in HF, development of search and information management protocols, scientific writing, bibliographic search, publication standards, data collection and analysis, and dissemination and communication of results. ✓ Knowledge of your own organisation's standards of care and evidence in HF.	✓ Ability to recognise problems and evaluate whether it is a product of research. ✓ Ability to plan the research process, search and manage information, data analysis and dissemination, and communication of results, in the context of cardiology and heart failure.	✓ Encourage research on problems related to heart failure practice and its context. ✓ Communicate research results, knowledge gained, and implications for practice. ✓ Recognise the knowledge provided by research to modify clinical practice.
	Ability to study a problem to improve HF patient care.		✓ Ability to apply the knowledge acquired in research methodology. ✓ Ability to adhere to evidence-based standards in HF and ensure optimal care. ✓ Ability to recognise and relate the basic principles of research in the field of HF and resolution in HF patient care. ✓ Ability to plan research according to problems related to the practice of HF, in consideration of theoretical advances in the field of knowledge. ✓ Participate within the multidisciplinary team in the elaboration of procedures, protocols, and clinical practice guidelines and guarantee the safety of the patient and the professional. ✓ Design, coordinate, and lead or collaborate in research projects in the field of heart failure knowledge: clinical, ventricular assist devices, heart transplants, cardio-oncology, and familial heart disease. ✓ Disseminate and apply the results of research conducted in the area of HF to improve health care, nursing care, and professional development.	
	Ability to exercise teaching responsibilities in the area of heart failure.	✓ Knowledge about methods, educational theory, and learning resources. ✓ Knowledge of aspects related to the HF speciality.	✓ Ability to transmit knowledge and promote continued training in the field of HF. ✓ Ability to carry out teaching activities to other professionals and future professionals in HF. ✓ Ability to design, execute, and evaluate learning programs that respond to the needs of health professionals and services related to HF.	✓ Involvement and responsibility with the promotion of lifelong learning, contributing to professional development.

		CAPABILITIES	KNOWLEDGE	SKILLS	PROFESSIONAL BEHAVIOUR
SPECIFIC FUNCTIONS	CARE LEADERSHIP ROLE	**Ability to be efficient in the direction of patient care.**	✓ Knowledge of the integrated process of HF. ✓ Knowledge of the methodology to orientate and guide the team in a certain direction, anticipating scenarios, inspiring values, confidence, and motivation. ✓ Knowledge of the objectives of the group, integrating opinions of the team members, establishing guidelines to maintain the effectiveness and quality of the work. ✓ Knowledge of methods for evaluating health services provided. ✓ Knowledge of the key points for improving health.	✓ Collaboration in data collection for national and international HF registries. ✓ Conducting a feasibility study for the development of an effective multidisciplinary HF service. ✓ Select appropriate outcome assessment measures, including patient-centred outcomes for a defined patient population. ✓ Collaborate with quality controls/audits. ✓ Identify areas for improvement, implementation of changes, and continued evaluation. ✓ Critical and self-critical ability: distinguish between qualities and defects, being able to exploit those positive areas.	✓ Recognise the roles of the other members of the multidisciplinary HF team (such as the cardiologist, internist, psychologist, family doctor, geriatrician, manager...) and the impact of any change in the provision of the service. ✓ Positive predisposition to undertake or create new opportunities, without the need for external stimulation.
		Ability to meet all patient needs.	✓ Knowledge of developing individualised care plans for each patient. ✓ Knowledge of the different levels of the health system to meet the needs of HF patients.		
		Planning and organisation skills.	✓ Knowledge of programming of care activity, efficiency indicators, expenditure control... ✓ Knowledge of the priorities and/or goals of the group to establish a route, protocol in the care of HF patients. ✓ Knowledge of new technologies, procedures, and techniques that help provide solutions to problems according to the needs and objectives of the HF unit. ✓ Knowledge of the different methods and measures to obtain patient-centred results that include the patient's own assessment, counting on their experience, perception, and degree of satisfaction.		

ADVANCED FEATURES				
CLINICAL CARE/EVALUATOR ROLE				
TRICAMERAL-ICD **TRACKING**	**LONG-ACTING VENTRICULAR ASSIST DEVICES**	**HEART TRANSPLANT**	**NEW CONSULTATIONS**	
			CARDIO – ONCOLOGY	**FAMILIAL CARDIOMYOPATHIES**
• Ability to give information about the entire process. • Ability to recognise arrhythmias. • Ability to recognise signs of both appropriate/inappropriate discharge. • Remote device tracking capability. Electro-stimulation.	• Ability to give information about the entire process. • Ability to recognise signs of infection in the driveline. • Ability to recognise pump malfunction.	• Ability to inform about the entire heart transplant process. • Ability to recognise signs of rejection. • Ability to recognise the specific pharmacological treatment of the transplant. • Ability to recognise non-adherence to medical treatment. • Ability to recognise self-care.	• Ability to give information about the entire process. • Ability to identify CVRF and recognise signs of cardiotoxicity. • Ability to recognise cardiovascular and oncological pharmacological treatment. • Ability to organise different visits to specialists and continuity of care.	• Ability to give information about the entire process. • Ability to perform genetic counselling. • Ability to structure and organise the unit.

			CAPABILITIES	KNOWLEDGE	SKILLS	PROFESSIONAL BEHAVIOUR
ADVANCED FEATURES	Clinical care/Evaluator role	TRICAMERAL-ICD FOLLOW-UP	**Ability to give information about the entire process.**	✓ Know the current different monitoring and control platforms for the detection of the risk of decompensation. ✓ Knowledge of the effective use of the Implantable Cardioverter-defibrillator (ICD) and cardiac resynchronisation therapies (CRT): objective, indication, contraindication, and potential complications: wound dehiscence, pocket infection, cable and/or wall breakage. ✓ Know the surgical protocol in patients with indications for implantation of cardiac devices (pacemaker, ICD, CRT ...). ✓ Knowledge of the tracking required for optimal device operation (including remote monitoring). ✓ Knowledge of the effective use of respiratory support devices [oxygen therapy and continuous positive airway pressure (CPAP)], their side effects and contraindications.	✓ Ability to counsel on the purpose of ICD, complications related to the implant (mainly inappropriate shocks), and under what circumstances it should be deactivated (terminal illness) or explanted (infection, recovery of LV function). ✓ Ability to inform and educate the patient about the purpose of CRT, its functions, precautions and recommendations. ✓ Develop an individualised educational plan for each patient: type of device, lifestyle modification, physical activity, possibilities of discharges and how to act. ✓ Ability to address limitations in daily life, work, physical activity, relationships, and sexuality. ✓ Ability to favour the expression of emotions regarding sudden death, pain, fear of possible discharges, being left alone ...	✓ Keep training updated on the ICD process. ✓ Recognise the impact of the diagnosis on the patient and family. ✓ Education: specific therapies, purpose of the device, complications, changes at the physical and emotional level, acceptance and adaptation to the new device, and improvement in quality of life. ✓ Apply the different monitoring and control platforms for the detection of the risk of decompensation. ✓ Apply the surgical protocol in patients with indications for implantation of cardiac devices.

			CAPABILITIES	KNOWLEDGE	SKILLS	PROFESSIONAL BEHAVIOUR
ADVANCED FEATURES	Clinical care/Evaluator role	TRICAMERAL-ICD FOLLOW-UP	**Ability to recognise arrhythmias.**	✓ Knowledge for the identification of normal heart rhythm and early detection and management of ischemic alterations, rhythm disorders, and cardiac conduction (tachy/bradyarrhythmia, conduction defects). ✓ Knowledge of the indications, contraindications, action, and possible side effects of antiarrhythmic drugs. ✓ Knowledge of protocols and/or procedures of action for discharges. ✓ Up-to-date knowledge of vehicle driving rules: explicit limitations and prohibitions.	✓ Ability to assess, diagnose, and address arrhythmias, and speed in decision-making following protocols, procedures, and practical guidelines for patients with heart failure.	✓ Keep training up-to-date on electrophysiology and electrocardiography procedures. ✓ Keep training up to date on antiarrhythmic drugs. ✓ Recognise the importance of making a correct diagnosis in the reading of the device. ✓ Assess knowledge about driving rules and the patient's fitness or not to drive.
			Ability to recognise signs of both appropriate/inappropriate discharge.		✓ Ability to monitor effectiveness and side effects/adverse events related to ICD/CRT function in the immediate and long-term phases. ✓ Ability to solve the problem of discharges.	
			Remote device tracking capability. **Electro-stimulation.**			✓ Collection of data transmitted in the patient's history. ✓ Interpretation of the data correctly. ✓ If obtaining abnormal data, resolution of the problem.

ADVANCED FEATURES	Clinical care/Evaluator role	LONG-ACTING VENTRICULAR ASSIST DEVICES	CAPABILITIES	KNOWLEDGE	SKILLS	PROFESSIONAL BEHAVIOUR
			Ability to give information about the entire process.	✓ Knowledge of the different mechanical systems of circulatory support such as destination therapy or bridge to transplant: indications, objectives, and potential complications derived from surgery or the device itself (haemorrhage, thromboembolism, pump thrombosis, infection, right ventricular failure, and device failure). ✓ Know the surgical protocol in patients with indications for mechanical circulatory support systems.	✓ Ability to develop an individualised educational plan for the patient/caregiver based on providing individualised education on safety issues when carrying Mechanical Circulatory Support (MCS): limitations on daily life, physical activity, social relationships, and sexuality... ✓ Identify barriers to patient and caregiver learning. ✓ Ability for education in the handling of the device and the performance of driveline care according to the hospital protocol.	✓ Keep training up to date in ventricular assist devices. ✓ Patient and caregiver education: Device components, operation, maintenance, and controller change. To the caregiver: sterility, making a sterile field and carrying out care. ✓ Management of the different mechanical systems with efficiency and safety for patients ✓ Apply the surgical protocol in patients indicated for the implantation of the device.
			Ability to recognise signs of infection in the driveline.	✓ Knowledge of the protocols for the specific care of the different mechanical ventricular assist devices. ✓ Knowledge of evidence-based intervention protocols and guidelines to reduce the incidence rate of infections and complications arising from cardiac surgery.	✓ Ability to draw up a protocol for treatment of the driveline. ✓ Ability to recognise the signs of infection and manage them (care, dressings, pharmacological treatment, follow-up ...).	✓ Recognise the appearance of scarring by periods of time and signs/symptoms of infection. ✓ Maintain up-to-date product training for infected wounds. ✓ Therapeutic resources for wound care, according to their evolution and/or protocols of the centre
			Ability to recognise signs and/or symptoms related to anticoagulation.	✓ Know haemostasis, components, and blood alterations, the physiology of haemostasis and coagulation, and its peri- and post-extracorporeal circulation repercussions. ✓ Knowledge and management of anticoagulant and antiplatelet therapy and its potential complications: a. Signs and symptoms of gastrointestinal bleeding, central nervous system and anaemia. b. Signs and symptoms of stroke and transient ischemic attacks (TIAs).	✓ Evaluate and record coagulation disorders. ✓ Ability to review possible changes in habits with the patient.	✓ Ensure that the patient and caregiver have understood the importance of anticoagulant treatment and the care to follow derived from it.
			Ability to recognise pump malfunction.	✓ Knowledge of the use and maintenance of the device and accessories (power supplies, replacement controller, batteries, charger, parameter monitoring), parameters, and limits of the alarms established in each patient, cleaning and immobilisation of the conductor cable.	✓ Ability to solve the different alarms of the device. ✓ Ability to change the controller. ✓ Ability to recognise, with the parameters of the controller, problems of both hypo- and hypervolemia.	✓ Recognise the effect of pump malfunction. ✓ Evaluation of the data to make a diagnosis. ✓ Collaborate in the expression of emotions of both the patient and the caregiver. ✓ Evaluate the information given by the patient about signs, symptoms, and alarms of the device.

ADVANCED FEATURES	Clinical care/Evaluator role	HEART TRANSPLANT	CAPABILITIES	KNOWLEDGE	SKILLS	PROFESSIONAL BEHAVIOUR
			Ability to provide information about the entire Heart Transplant process.	✓ Knowledge of the entire heart transplant process: indications/contraindications/complications, diagnostic tests, and inclusion of the patient on the waiting list. ✓ Knowledge about the donation: how the organ is obtained, necessary tests and analyses of the donor, criteria for choosing the recipient on the waiting list, coordination of the day of transplant. ✓ Know the surgical protocol in patients with a heart transplant indication.	✓ Ability to develop an individualised educational plan for the patient and caregiver: hygienic-dietary habits, pharmacological treatment, signs and/or symptoms of infection, and/or rejection ...	✓ Apply the surgical protocol in patients with a heart transplant indication. ✓ Keep training updated in the heart transplant process. ✓ Promote self-care, integrate the patient and their family in detecting and preventing complications, as well as reducing and clarifying negative experiences. ✓ Education: dietetics, hygiene, exercise, travel, sun, dental hygiene.
			Ability to recognise signs of rejection.	✓ Knowledge of the anatomy of the transplanted heart. ✓ Knowledge of the conduction system in transplantation. ✓ Knowledge of complementary tests, treatment, and procedures for action against signs and/or symptoms of rejection, in any of its phases.	✓ Ability to assess, identify, and monitor the signs and symptoms of graft rejection, in the immediate and long-term postoperative period.	✓ Identify, recognise, assess, and alleviate rejection symptoms through the safe delivery of pharmacological and non-pharmacological interventions.
			Ability to recognise the specific pharmacological treatment of the transplant.	✓ Knowledge of specific pharmacology in heart transplantation: action, side effects, interactions, preparation, and administration (immunosuppression, inotropics, chronotropes, vasopressors and stress hormones, bacterial prophylaxis, antifungal, antituberculosis, anti-toxoplasmosis, anti-cytomegalovirus, and Staphylococcus).	✓ Ability to recognise immunosuppressive drugs establish barriers for each patient. ✓ Ability to monitor drugs and evaluate adverse effects caused.	✓ Frequently assess adherence to immunosuppressive therapy.

			CAPABILITIES	KNOWLEDGE	SKILLS	PROFESSIONAL BEHAVIOUR
ADVANCED FEATURES	Clinical care/Evaluator role	HEART TRANSPLANT	**Ability to recognise non-adherence to medical treatment.**	✓ Knowledge of the patient's family and social environment. ✓ Knowledge of the cost of treatment and the patient's possibilities of paying for the treatment.	✓ Ability to detect: ▪ The non-acceptance of their illness and the ignorance they have of it. ▪ The lack of understanding of the purpose of the treatment. ▪ The patient's refusal of treatment. ▪ Ignorance of the consequences of non-compliance. ▪ Drug non-compliance due to costs.	✓ Empathy with the patient and caregiver. ✓ Find a solution for social, family, and medication costs. ✓ Seek a solution to ineffective coping with the disease.
			Ability to recognise self-care.	✓ Knowledge of the hygienic-dietary measures of strict compliance in heart transplantation to avoid or reduce the incidence of rejection and/or infection.	✓ Ability to educate the patient in hygienic-dietary guidelines and pharmacological adherence that reduce the risk of rejection.	✓ Keep self-care measures updated: diet, hygiene, and technologies.

			CAPABILITIES	KNOWLEDGE	SKILLS	PROFESSIONAL BEHAVIOUR
ADVANCED FEATURES	**Clinical care/Evaluator role**	Cardio-Oncology[58-65]	**Ability to give information about the entire process.**	✓ Knowledge of the oncological care process and the potential cardiovascular complications associated with antitumor treatment. ✓ Knowledge of the different complementary tests for the diagnosis of cardiovascular complications in the different stages of the cancer process.	✓ Ability to recognise the clinical manifestations of CVD before and during antitumor treatment. ✓ Ability to assess complex physical, psychological, social, and environmental needs relevant to CVD conditions throughout the oncology process. ✓ Ability to solve problems and make decisions to deal with cardiovascular events throughout the oncological process. ✓ Ability to establish a therapeutic relationship that allows providing nursing care that promotes the comfort and physical well-being of the cancer patient. ✓ Ability to guide, advise, and inform the patient about aspects related to health promotion, prevention, and treatment of cardiovascular complications, derived from cancer treatment, promoting the culture of demedicalisation of health and self-care.	✓ Identify, recognise, evaluate, and alleviate common symptoms of CV conditions (atherosclerosis, heart failure, heart rhythm and conduction, structural abnormalities, heart muscle disorders), and apply pharmacological and non-pharmacological measures in coordination with the cardiologist. ✓ Interpret and take measures according to protocol in diagnostic tests of the patient under antitumor treatment: electrocardiogram (ECG), chest X-ray, echocardiography, vital signs, and HF biomarkers suggestive of compromise of the patient's haemodynamic status. ✓ Availability for structured and planned follow-up, telephone and consultation, that favours monitoring and self-care: diet, exercise, pharmacological adherence, alarm signs, and/or symptoms...

			CAPABILITIES	KNOWLEDGE	SKILLS	PROFESSIONAL BEHAVIOURS
ADVANCED FEATURES	Clinical care/Evaluator role	Cardio-Oncology[58-65]	**Ability to identify CVRFs and recognise signs of cardiotoxicity.**	✓ Knowledge of the basic protocols of cardiovascular monitoring in patients with antitumor treatment and high risk of developing cardiotoxicity (>64 years, ≥2 CVRFs, CVD established regardless of symptoms and previous onco-haematological treatments). ✓ Knowledge of the adverse cardiological effects of radiotherapy, as well as its mechanism of action and the radiobiological bases involved.	✓ Ability to identify CVRFs, before and during the start of treatment. ✓ Ability to perform risk stratification and provide comprehensive assistance that includes prevention, diagnosis, treatment, and establish barriers to the prevention of adverse events and avoid interruption of antitumor treatment. ✓ Ability to identify and monitor signs and/or symptoms that allow the early detection of adverse events. ✓ Ability to agree on structured advice on heart-healthy lifestyle habits (diet, physical exercise, smoking cessation) common to the different levels of care before, during, and after antitumor treatment. ✓ Ability to organise patient and caregiver education projects in collaboration with scientific societies and cancer patient associations.	✓ Provide oral and written information about the disease, recognition, and management of acute cardiac symptoms, and CVRF management strategies that may lead to discontinuation of cancer treatment. ✓ Develop educational interventions that guide the person and their family in learning self-care, effective health management, and empowerment before, during, and after antitumor treatment. ✓ Reinforcement of preventive habits: vaccines, dental hygiene, avoiding exposure to extreme temperatures... ✓ Schedule face-to-face or telephone visits according to the patient's protocol and/or clinical status. ✓ Assess interdisciplinary collaboration according to the clinical evolution of the patient. ✓ Plan and provide training on advanced care for people with cancer.
			Ability to recognise cardiovascular and oncological pharmacological treatment.	✓ Knowledge of different cancer therapies. Know the onco-haematological treatments that can aggravate or induce hyper-coagulability, hypertension, diabetes, or dyslipidaemia. ✓ Knowledge of the basic protocols for monitoring antitumor treatment.	✓ Ability to encourage adherence to treatment and commitment to lifestyle change.	✓ Keep antitumor treatments updated and their potential negative effect on cardiovascular health. ✓ Periodically evaluate the signs and/or symptoms of cardiovascular disease by antitumor treatment. ✓ Participate in the development of cardiovascular monitoring protocols in patients with antitumor treatment and high risk of developing cardio-toxicity and long survivors.
			Ability to organise different visits to specialists and continuity of care.	✓ Knowledge of the coordination of care and effective transition throughout the oncological process. ✓ Knowledge of the coordination channels that ensure effective communication with oncology and/or primary care nursing.	✓ Ability to plan a care plan (prevention/cardiotoxicity detection) coordinated with the receiving teams and with Primary Care (patient roadmap) and shared with the patient (individual action plan).	✓ Availability to discuss antitumor treatments and changes in care plans with other members of the multidisciplinary team. ✓ Coordinate the follow-up of the patient with the Day Hospital, oncology nurse responsible for the patient, and/or primary care.

		CAPABILITIES	KNOWLEDGE	SKILLS	PROFESSIONAL BEHAVIOUR
NEW CONSULTATIONS	Clinical care/Evaluator role Familial heart disease[66-69]	**Ability to provide information about familial heart disease.**	✓ Knowledge of the definition and classification of Familial Heart Disease (FHD). ✓ Knowledge of familial heart diseases (hereditary or genetic): cardiomyopathies and genetic channelopathies (hypertrophic, dilated, arrhythmogenic myopathy, spongiform, idiopathic restrictive cardiomyopathy ..., Brugada syndrome, long QT syndrome, short QT, and catecholamine ventricular tachycardia. ✓ Knowledge of the tools for constructing the family tree, stratification of the risk of sudden death, and begin the clinical study of the relatives of FHD patients. ✓ Knowledge of the specific treatment of familial heart disease (whether medical, pharmacological, invasive, or surgical). ✓ Knowledge of the function and the organisation chart of the Familial Heart Disease Unit. ✓ Knowledge of therapies and drugs involved in FHD: ICD, implantable Holter, septal ablation/ablation, myectomy. ✓ Knowledge of supports for self-care in FHD: Kardia mobile. ✓ Knowledge of the implications of FHD in pregnancy and physical exercise. ✓ Knowledge of ECG reading in FHD.	✓ Ability to identify potential problems with their employment or future situation based on their diagnosis.	✓ Inform the patient of the purpose and functioning of the FHD unit. ✓ Recognise the emotional impact of the genotype and phenotype of the patient and family members. ✓ Provide education regarding their FHD and provide tools for specific self-care, dietary hygienic measures, signs and symptoms of physical exercise alarms, and how to act. ✓ Schedule follow-up of family members at risk of developing the disease, according to the disease and the severity of the phenotype.
		Ability to perform genetic counselling.	✓ Knowledge of genetics in CF FHD: inheritance patterns and technological advances. ✓ Knowledge of the yield of the different genetic studies (GS) and their application in each case: panels, trios, exomes, and times to obtain results. ✓ Knowledge of the type of results and their implications: pathogenic, variant of uncertain significance, familial cosegregation. ✓ Knowledge of the different reproductive alternatives. ✓ Knowledge of the implication of genetic studies in minors and disabled. ✓ Knowledge of the legal implications at the labour and insurance level. ✓ Knowledge of the different techniques for the collection of biological samples for genetic study: blood, saliva, thick drop.	✓ Ability to know the patient's decision to inform their relatives about the disease and legal aspects. ✓ Ability for proper handling, labelling, sending, and conservation of samples.	✓ Keep training up to date on technological advances and the interpretation of results. ✓ Evaluate if you have understood the usefulness of GS and false expectations regarding it. ✓ Promote children's rights. ✓ Evaluate psychological implications. ✓ Transmit information with a neutral attitude to the decisions and reactions of patients.

		CAPABILITIES	KNOWLEDGE	SKILLS	PROFESSIONAL BEHAVIOUR
NEW CONSULTATIONS	Clinical care/Evaluator role Familial heart disease[66-69]	**Ability to structure and organise the unit.**	✓ Knowledge of the health areas and logistic processes of referral between centres and autonomous communities. ✓ Knowledge of the coordination of tests of the initial clinical evaluation and follow-ups. ✓ Knowledge and organisation of adult and paediatric consultations. ✓ Knowledge of other professionals involved in the management of CF patients: forensics, paediatricians, biologists, biobank...	✓ Ability to identify differences in patient and family care. ✓ Ability to identify fast effective direct contact, and organise families.	✓ Keep training updated on the process. ✓ Facilitate access to the unit. ✓ Coordinate appointments/tests to generate the least possible impact on patients and families. ✓ Provide tools for patient referral.
		Capacity for processing and interpreting family trees.	✓ Knowledge of the technique of graphical representation of medical history and kinship of a family in the family tree (FT) or pedigree. ✓ Knowledge of the organisation chart, signs, and international symbols for its elaboration. ✓ Knowledge of terms implicit in the realisation and interpretation of the FT (proband, consultant, phenotype, effected, carrier). ✓ Knowledge of technological and computerised tools for its elaboration. ✓ Know the data protection law in this type of document, (informed consent).	✓ Ability to recognise hereditary patterns. ✓ Ability to identify family members at risk. ✓ Ability to generate a reliable, complete, summarised and updated FT.	✓ Interrogate in a detailed and directed way according to FHD type one-to-one. ✓ Take the necessary time in its elaboration, the expression of feelings, fears and doubts, foster an environment of trust and empathy. ✓ Afford attention to psychosocial aspects, interpersonal relationships, and life experiences. ✓ Identify and plan families. ✓ Recognise the emotional impact of the genotype and phenotype of the patient and relatives.

Annex II:

Standardised form for the acreditation of the Heart Failure Specialist Nurse of the AEEC

ANNEX II
Standardised Form for the Accreditation of the Heart Failure Specialist Nurse of the AEEC.

I hereby request that my file be evaluated to obtain the corresponding accreditation of the AEEC as a Heart Failure Specialist Nurse (HFSN), for which I provide the following documentation:

Data of the interested party (please fill out **all** fields):

Name:

Surnames:

DNI:

Contact Telephones: Mobile: Landline (if available):

Postal address (where the title will be sent once issued):

Contact e-mail:

Documentation provided (scanned):

☐ Certificate with destination specification (issued by the work centre).

☐ Evaluation report of specific Capacities ENFESPIC (Supervisor and Head of Section or Heart Failure Unit).

☐ Title Accrediting the Title of DUE or Degree in Nursing.

☐ Completed auto-scale of Training in the Heart Failure Unit.

☐ Proof of Payment of Fees for issuing the accreditation.

☐ Certificates of the courses, presentations, posters, publications, grants awarded...

	Auto-scale (to be filled in by the interested party)	Recognised by Accreditation Committee (to be filled in by the committee)
Total Score		

Work Experience in Heart Failure:

Years (certificates) in Heart Failure	Points

For each year worked: 3 points. Per single month: 0.25 points

For working in a Unit accredited by the SEC- Excellent or SEMI- Excellent: No ☐ (0 Points) Yes ☐ (1 point)

For the evaluation of any merit reflected in the auto-scale, you must send photocopies of the titles accrediting the courses, publications, grant awards, presentations, posters, clinical cases, attendance at congresses, etc...

Training exclusively in heart failure and cardiology:

PDF/JEPG file	Course Name	Date	Hours/Credits	Applicant Points	AC Points
	TOTAL				

Research courses:

- 10 and 49 hours: 0.5 points.
- 50 and 99 hours: 1 point.
- More than 100 hours: 2 points.

Attendance at Congresses, Conferences, and Meetings:

- For each HF-specific meeting, congress, or workshop: 1 point.
- For each non-HF-specific cardiology congress: 0.25 points.

Important: The training received in the congresses will not be counted, only attendance.

Important: If the diplomas do not show the duration of the courses in hours but in credits, it is established that the credits specified as ECTs are equivalent to 25 hours and the credits not specified are equivalent to 10 hours.

Presentations and Communications (except table moderations) exclusively on heart failure:

PDF/JEPG file	Communication/ Research Grant/Poster/ Clinical Case	Date	Type	Applicant Points	AC Points
	TOTAL				

For each lecture/teacher of cardiology courses: 7 points.

For each oral communication: 5 points.

For each Poster/poster forum: first author: 3 Points. Other authors: 1 point.

For each clinical case: first author: 3 points. Other authors: 1 point.

Research grant awarded: 10 points.

Publications exclusively on heart failure

PDF/JEPG file	Publication (journal or book)	Type	Author Order	Applicant Points	AC Points
	TOTAL				

Publications:

- In journals: first author: 10 points (international journal), 7 points (national journal). Other authors: 3 points (international journal) and 2 points (national journal).
- In books: First author: 8 points. Other authors: 3 points.

Attendance at Congresses/scientific meetings:

PDF/JEPG file	Communication	Type	Applicant Points	AC Points
	TOTAL			

For each HF-specific meeting, congress, or workshop: 1 point.

For each non-HF-specific cardiology congress: 0.25 points.

Annex III:

Evaluation report of the capabilities of the Heart Failure Specialist Nurse (HFSN)

ANNEX III

Report evaluating the capabilities of the Heart Failure Specialist Nurse (HFSN)

Name of the interested party: ....

MR/MS ..... Supervisor/Head of Service/Head of Section of the Heart Failure Unit of the

Hospital.....

Certify that:

	YES/PASS	NO/FAIL
Consider that the nurse subject to accreditation is eligible or not to receive it:		

The Heart Failure Unit	YES	NO
Accredited by SEC-Excellent or SEMI-Excellent		
Considered an Advanced Unit		

Consider that the nursing staff subject to this accreditation has:	YES	NO
Sufficient knowledge with autonomy		
Extensive experience in the field		
Performs specific nursing functions in a Heart Failure Unit		

The HFSN must accredit a total of 7 roles, that is, the clinical care/evaluator role that corresponds to their place of work, plus the other roles (educator, rehabilitator, coordinator, researcher, and care leadership).

ROLES	TOTAL NUMBER OF ITEMS ACHIEVED
Clinical care/evaluator role	
Educator/advisor role	
Rehabilitation role	
Psychosocial role	
Coordinating role	
Research and teaching role	
Leadership Role	
Clinical care/Evaluator role: Follow-up of the patient with ICD-CRT	
Clinical care/Evaluator role: Patient care with long-term ventricular assist	
Clinical care/evaluator role: Patient care in the heart transplant process	
Clinical care/Evaluator role: Cardio-oncology patient care	
Clinical care/Evaluator role: Care for patients with familial cardiomyopathies	
TOTAL SUM of ITEMS	

Level of competence acquired by the HFSN (only to be completed by the accreditation committee):

Competent (= 60 %)	Efficient (61 to 89%)	Expert (90 to 100%)

CLINICAL CARE/EVALUATOR ROLE			
Capabilities	**KNOWLEDGE** **SKILLS** **PROFESSIONAL BEHAVIOUR**	**Achieved**	**Not Achieved**
Ability to assess the patient: clinical and non-clinical aspects.	1. Know and comply with judgments and local, national and EU legislation related to patient care and health service delivery: informed consent, patient capacity and autonomy, confidentiality, data protection, documentation standards and safe working environment.		
	2. Knowledge of normal heart rhythm and early detection and management of ischemic alterations, rhythm disorders and cardiac conduction (tachy/bradyarrhythmia, conduction defects).		
	3. Knowledge of the presentation and evaluation of common cardiovascular symptoms: chest pain, respiratory distress, fatigue, palpitations, syncope, hypertension, oedema...		
	4. Knowledge of Heart Failure (HF). Pathophysiology, epidemiology, aetiology, diagnosis, classification, prevention, prognosis and health and social impact of HF[9,10].		
	5. Knowledge of HF with "reduced, intermediate or preserved" ejection fraction according to the Clinical Practice Guidelines[10]. Classification of HF according to the New York Heart Association (NYHA) and stages of the American Heart Association/American College of Cardiology (AHA/ACC).		
	6. Knowledge about predisposing causes (risk factors), determinant causes and precipitating causes. Clinical manifestations of HF, typical signs and/or symptoms. Clinical profile of patients with acute HF according to the presence/absence of congestion or hypofusion.		
	7. Knowledge of complementary tests to establish the diagnosis: laboratory tests, chest x-ray, transthoracic ultrasound, coronary angiography, cardiac resonance, etc ...		
	8. Knowledge of the alterations in each of the complementary tests and the appropriate corrective measures.		
	9. Knowledge of the protocols established prior to the different diagnostic and/or therapeutic techniques and surgery.		
	10. Verbal and non-verbal communication skills.		
	11. Effective interpersonal communication skills with the multidisciplinary team.		
	12. Bidirectional collaboration with the members of the work team.		
	13. Identification of problems: a) clinical, b) educational, c) psychosocial, and coordinate with the cardiologist those that require treatment or intervention.		
	14. History of the patient, background: cardiovascular risk factors, lifestyle habits (diet, exercise, work, sexual activity, consumption of tobacco, alcohol, others), cardiovascular and non-cardiovascular diseases, pharmacological treatment (all drugs), indication, contraindication and possible interactions.		
	15. Conduct an interview with the patient to see the evolution, review of medication (adherence and side effects), and identification of needs.		
	16. Physical examination (auscultation, presence of oedema, dyspnea, orthopnoea ...), taking of constants (BP, HR, StO_2, weight, abdominal circumference), perform blood tests and ECG and evaluate/treat according to the centre's protocol**.**		
	17. Monitor clinical-hemodynamic status, NYHA functional class, fluid volume, and laboratory data.		

Ability to assess the patient: clinical and non-clinical aspects	18. Perform active listening and empathy.		
	19. Early detection and management of electrocardiographic (ECG) alterations and signs and/or symptoms of haemodynamic destabilisation and act according to protocol.		
	20. Promote the control of CVRF (dyslipidaemia, hypertension, DM, overweight, smoking, and sedentary lifestyle), identify warning signs, and encourage lifestyle changes that promote self-care and pharmacological adherence.		
	21. Recognise the impact of HF diagnosis on the patient[17].		
	22. Respect the patient's choice about prognostic information[17].		
	23. Work together with the multidisciplinary team according to their functions and taking into account their limitations[17].		
	24. up-to-date training on pathology and the Clinical Practice Guidelines of the European Society of Cardiology[10]. 25. Understand that patients interpret and express symptoms differently[18]. 26. Know the trajectory of the HF. Recognise the patient's condition, interpret signs and symptoms, analyse tests. 27. Provide adequate information to the patient about the alterations in each of the complementary tests. 28. Application of the protocols established prior to the different diagnostic and/or therapeutic techniques and surgery.		

CLINICAL CARE/EVALUATOR ROLE			
Capabilities	**KNOWLEDGE** **SKILLS** **PROFESSIONAL BEHAVIOUR**	**Achieved**	**Not Achieved**
Ability to monitor pharmacological treatment, drug titration, and adherence.	29. Knowledge of drugs, their indications, contraindications, action, and possible side effects of oral medical treatment[16]: ACEi, ARB II, BB, MRA, ARNI, SGLT2i, diuretics (flexible regimen), and interactions, preparation, and administration of IV drugs (antihypertensives, diuretics, lipid-lowering agents, antiplatelet agents, antithrombotic, thrombotic, antiarrhythmic, inotropic, etc.).		
	30. Knowledge for drug titration: clinical control of the patient, analytical, adverse events, monitoring of parameters and interactions with other medicinal products and factors that influence individual susceptibility to side effects.		
	31. Knowledge of the factors that affect the lack of adherence related to the patient, with the treatment, with the health system, with the state of the disease, and socio-economic factors.		
	32. Knowledge of strategies to measure and improve adherence.		
	33. Monitoring of clinical status (compensated or decompensated), analytical parameters, medical treatment, and tolerance/adherence to pharmacological treatment.		
	34. Follow the prescription plan for titration and treatment optimisation.		
	35. Carry out the titration of drugs following the clinical guidelines and existing protocols validated, agreed, approved, and with cardiologist and legal support[22, 23].		
	36. Identify medication side effects and interactions with other medications, herbal remedies, or foods[15].		
	37. Know ranges for medical consultation, according to the titration *checklist* [20] and coordination with the HF cardiologist or other specialists on the patient's health status, the possible adverse effects associated with polypharmacy ...		
	38. Ability to train the patient and family in the flexible regimen of diuretics: management and control.		
	39. Ability to reconcile medication in all care transitions between levels and/or health professionals.		
	40. Ability to encourage adherence to treatment and commitment to lifestyle change.		
	41. Keep training on new drugs. and changes in drug treatments up to date.		
	42. Frequently assess adherence to pharmacological treatment.		
	43. Explore the understanding of the patient and their family on knowledge of the treatment to follow.		
	44. Review and follow the drug titration protocol and consult the titration checklist[22].		
	45. Be aware of your limitations. Possess solid theoretical knowledge and intensive practical training, with good support from the cardiologist.		
	46. Work with nursing autonomy, within a culture and safety system, subject to audit and quality control[16].		
	47. Adequately report serious or adverse incidents arising from HF-specific pharmacological treatment according to the criteria of the unit, hospital, national policy, or protocols.		

CLINICAL CARE/EVALUATOR ROLE			
Capabilities	**KNOWLEDGE** **SKILLS** **PROFESSIONAL BEHAVIOUR**	**Achieved**	**Not Achieved**
Ability to recognise comorbidities[2].	48. Knowledge of the prevalence of common non-cardiac comorbidities and their impact[17].		
	49. Knowledge of the management of non-cardiac comorbidities: Chronic obstructive pulmonary disease (COPD), sleep-disordered breathing (OSAS), renal dysfunction, hepatic, anaemia/iron deficiency, diabetes mellitus (DM), musculoskeletal disorders, depression, and cognitive impairment.		
	50. Knowledge about diagnosis, clinical management, and patient self-care[17].		
	51. Knowledge of the risks associated with HF medications and of the different comorbidities[17].		
	52. Comprehensive evaluation of comorbidities, as well as their clinical, functional, cognitive status and quality of life of HF patients.		
	53. Recognise the importance of comorbidities for comprehensive care[17] and their impact on the patient's disease.		
	54. Knowledge of the different clinical manifestations of acute HF and signs and symptoms of decompensation.		
	55. Identify the signs and symptoms of HF decompensation and other comorbidities early and initiate early care with pharmacological and non-pharmacological measures and coordination with the cardiologist to stabilise the patient.		
	56. Periodically evaluate the signs and symptoms of HF decompensation.		
	57. Evaluate the understanding of the patient and family on knowledge of the warning signs and pharmacological and non-pharmacological treatment to follow.		
Ability to recognise signs and symptoms of decompensation.	58. Knowledge of the different clinical manifestations of acute HF and signs and symptoms of decompensation.		
	59. Identify the signs and symptoms of HF decompensation and other comorbidities early and initiate early care with pharmacological and non-pharmacological measures and coordination with the cardiologist to stabilise the patient.		
	60. Periodically evaluate the signs and symptoms of HF decompensation.		
	61. Evaluate the understanding of the patient and family on the knowledge of the warning signs and pharmacological and non-pharmacological treatment to follow.		

CLINICAL CARE/EVALUATOR ROLE					
CAPABILITIES	**KNOWLEDGE** **SKILLS** **PROFESSIONAL BEHAVIOUR**			**Achieved**	**Not Achieved**
Ability to apply palliative care in patients with refractory HF.	62. Knowledge of HF trajectory and prognostic signs.				
	63. Knowledge of palliative care goals.				
	64. Knowledge of NECPAL criteria for severity/progression/advanced disease[49].				
	65. Knowledge of nursing care oriented and adapted to patients and their families in situations of advanced disease and/or end of life, which contribute to improving their comfort.				
	66. Knowledge of coping with loss and death.				
	67. Knowledge of aspects of ethical and legal aspects at the end of life.				
	68. Ability to identify the situation of advanced and/or final disease through validated instruments/NECPAL[49].				
	69. Skills to help the patient and family cope with situations of advanced disease and/or end of life.				
	70. Assess the basic needs of patients in palliative situations, from the planning, execution, and evaluation of care plans				
	71. Respect the personal, social, and cultural beliefs and values of the patient and their family/social environment.				
Equal to 60%→ 42 items		61% to 89% →43-63 items	90%-100% →64-71 items		

EDUCATOR/ADVISOR ROLE			
Capabilities	**Knowledge** **Skills** **Professional Behaviour**	**Achieved**	**Not Achieved**
Ability to educate and inform the patient and family	1. Knowledge of CPGs on recommendations for HF patients		
	2. Knowledge regarding the pedagogical method of patient education[50].		
	3. Knowledge about education integrated to the needs of the HF patient.		
	4. Knowledge about the patient's motivation to achieve behaviour change.		
	5. Knowledge of strategies for self-management support, including telemedicine and remote monitoring.		
	6. Provide information appropriate to the level of knowledge and understanding of the patient, according to the wishes/needs of the patient.		
	7. Encourage learning for the patient and their family member/caregiver.		
	8. Motivational interviewing techniques, management, and coping with the disease (self-care).		
	9. Provide education and information promoting agreements with the patient: disease, causes, course of HF, prognosis, pharmacological and non-pharmacological treatment.		
	10. Provide information on lifestyle modification, diet, alcohol, tobacco and drugs, exercise, travel, leisure, sleep and breathing disorders, and sexual activity[10] supported by educational materials illustrating the information.		
	11. Have information on immunisation.		
	12. Answer questions clearly and concisely.		
	13. Keep training on pedagogical methods of patient education up to date.		
	14. Identify the primary caregiver, if applicable.		
	15. Evaluate the knowledge acquired and the understanding of the information.		
	16. Encourage the use of health education assessment tools.		

EDUCATOR/ADVISOR ROLE				
CAPABILITIES	**Knowledge** **Skills** **Professional Behaviour**		**Achieved**	**Not Achieved**
Ability to educate about illness, diet, physical exercise, and sexuality.	17. Knowledge of the risk factors associated with CVD and the ESC prevention guidelines (hypertension, smoking, dyslipidaemia, diabetes, metabolic syndrome, and lifestyle).			
	18. Knowledge for the evaluation of the patient's knowledge about their disease and their state of health.			
	19. Knowledge to educate the patient in self-care.			
	20. Knowledge about physical exercise, nutrition and food, equivalences between sodium and salt, diets. Adapt low-sodium diet to comorbidities (RI, diabetes mellitus, cardiac ischemia, hyperuricaemia, etc.).			
	21. Knowledge of physical exercise guidelines for HF patients and cardiac rehabilitation programs.			
	22. Knowledge of sexual dysfunctions[51].			
	23. Assessment of educational attainment and identify barriers to patient learning.			
	Diet	24. Evaluate the nutritional status of the patient and whether diet adjusted or not to the disease, comorbidities, and cardiovascular risk factors		
	Physical exercise	25. Evaluate the daily physical activity performed.		
		26. Evaluate their ability with the 6-minute test.		
	Sexuality	27. Evaluation of sexual medical history: detection of sexual dysfunction[45].		
		28. Recognise drugs that cause sexual dysfunction[51].		
		29. Ability to cope with the patient.		
	30. Adopt patient-centred education.			
	31. Recognise that their learning is linked to the stage of acceptance of the disease.			
	32. Establish effective communication with the multidisciplinary team, with the patient, and their family/social environment.			
	33. Keep training updated on diet, physical exercise, and sexuality according to CPGs[10].			
	34. Plan the diet according to disease, comorbidities, and risk factors.			
	35. Plan exercises and effort increases individually according to the patient's condition.			
	36. Monitor and evaluate the scheduled exercise.			
	37. Encourage a clinical sexual interview in the office to detect sexual dysfunction[51].			

EDUCATOR/ADVISOR ROLE			
Capabilities	**Knowledge** **Skills** **Professional Behaviour**	**Achieved**	**Not Achieved**
Ability to educate about self-care.	38. Knowledge about self-care theory and patient-specific self-care behaviours in HF[52-54].		
	39. Ability to involve the family in compliance with the therapeutic regimen and lifestyle modification towards heart-healthy habits.		
	40. Ability to facilitate learning, management, and coping with the disease (self-care) to patients and families[16]: knowledge of the disease, diet, exercise, pharmacological treatment, self-management (flexible diuretic regimen), monitoring of BP, HR, diuresis, weight, dyspnea, orthopnoea, fever ...) and appropriate use of health resources (HF consultation, day hospital, and primary and specialised emergency services.		
	41. Ability to identify barriers to self-care using validated tools and early addressing of difficulties.		
	42. To assess the effectiveness of self-management.		
	43. Keep training on self-care theory up to date[17].		
	44. Evaluate HF patient self-care, pharmacological and non-pharmacological adherence, and identification of alarm signs and/or symptoms.		
	45. Encourage the use of self-care assessment instruments to verify that the patient performs the necessary actions for self-care and adapts to new situations.		
Ability to educate about drug treatment.	46. Knowledge of the drugs, their indications, contraindications, action, and possible side effects of oral medical treatment[17]: ACEi, ARB II, BB, MRA, ARNI, SGLT2i, diuretics (flexible regimen), etc.		
	47. Knowledge of drugs, their indications, contraindications, action, and possible side effects of medical treatment[17]: interactions, preparation and administration of IV drugs (antihypertensives, diuretics, lipid-lowering agents, antiplatelet agents, antithrombotic, thrombotic, antiarrhythmic, inotropic agents, etc.).		
	48. Knowledge of the optimal doses of each drug[17].		
	49. Knowledge for drug titration: clinical control of the patient, analytical, adverse events, monitoring of parameters and interactions with other medicinal products, and factors that influence individual susceptibility to side effects.		
	50. Ability to provide knowledge about the pharmacological treatment to be followed regarding indication, dosage, possible adverse effects, contraindicated drugs (NSAIDs, effervescent ...).		
	51. Ability to explain strategies for drug treatment control to the patient and their family.		
	52. Explain the benefits/risks of medication, adherence or not to drug treatment, and help on taking drugs.		
	53. Review the regimen and dose of drugs prescribed and evaluate adherence with direct and indirect instruments.		
	54. Remember potential side effects/adverse events and the importance of communicating them to their nurse and/or doctor responsible for HF.		

EDUCATOR/ADVISOR ROLE			
Capabilities	**Knowledge** **Skills** **Professional Behaviour**	**Achieved**	**Not Achieved**
Ability to recognise the use of alcohol, tobacco, drugs, and other toxic substances.	55. Knowledge about the effects of alcohol, tobacco, drugs, and other toxic substances.		
	56. Knowledge of the different evidence-based strategies for smoking cessation.		
	57. Conduct the empathic interview to evaluate the different consumptions of toxic substances.		
	58. Monitor the amount of toxic substances consumed.		
	59. Keep training updated on toxic effects on health (alcohol, smoking, and drugs).		
	60. Provide professional help for cognitive behavioural therapy.		
	61. Inform about centres to help with the discontinuation of toxic substances.		
Ability to teach the triggers of decompensation.	62. Knowledge about the triggers of decompensation in HF.		
	63. Ability to educate the patient in the recognition of signs and/or symptoms of decompensation, triggers, and initiation of appropriate measures to reverse decompensation.		
	64. Keep training updated on the triggers of possible decompensations.		
	65. Provide direct contact if they show signs of decompensation.		
Ability to facilitate the patient and caregiver coping with the disease.	66. Knowledge of coping strategies for the disease.		
	67. Ability to evaluate how the person perceives and copes with the disease and treatments and assess their emotional state.		
	68. Ability to assess whether it is effective coping (good emotional adjustment) or ineffective coping (emotional maladjustment).		
	69. Monitor symptoms of stress in the face of the disease, treatments, and decisions made.		
	70. Keep training updated on coping with the disease and its strategies.		
	71. Encourage decision-making about life, evolution and treatment of the disease.		
Ability to educate on the management of the flexible diuretic regimen.	72. Knowledge of minimum and maximum doses of all diuretics used in HF.		
	73. Knowledge of drug titration and timing of application.		
	74. Ability to educate the patient and family about the flexible diuretic regimen if signs of decompensation appear.		
	75. Ability to assess understanding of the management of the flexible diuretic regimen.		
	76. Keep training updated on management of the flexible diuretic regimen.		
	77. Provide direct contact if you have doubts about the flexible diuretic regimen.		
Equal to 60%→ 46 items	61% to 89%→ 47-69 items	90%-100% →70-77 items		

REHABILITATION ROLE			
Capabilities	**Knowledge** **Skills** **Professional Behaviour**	**Achieved**	**Not Achieved**
Ability to educate and encourage the practice of physical exercise.	1. Knowledge of CPGs on recommendations for the practice of physical exercise in heart failure and heart transplantation: indications, contraindications, and ideal time of initiation.		
	2. Knowledge of the concepts and characteristics of physical activity: modalities of physical exercise and physiological responses to physical exercise.		
	3. Knowledge of the physiological and clinical benefits of exercise in patients with heart failure.		
	4. Knowledge of strategies and didactic resources to promote the practice of physical exercise: training sessions, monographic workshops, videos, brochures, guides...		
Ability to choose exercises according to the patient's need and tolerance.	5. Knowledge of the modalities of exercise and sports participation in the different stages of HF.		
Ability to assess exercise tolerance and response.	6. Knowledge of the necessary tools to assess tolerance to physical exercise.		
Ability to select patients to refer to the cardiac rehabilitation program.	7. Knowledge of referral protocols to rehabilitation and occupational therapy programs.		
Skills common to these four capabilities	8. Ability to recruit the patient both in the hospital and in the HF nurse's office. 9. Ability to obtain information about the patient's exercise habits and barriers perceived by the patient. 10. Ability to motivate and support the patient psychologically in the initiation and/or maintenance of physical exercise, taking into account their clinical status and preferences. 11. Ability to prescribe, individually, the most appropriate type of exercise, intensity, duration, frequency, and rate of progression, according to response to exercise: symptoms and/or clinical status.		
Professional behaviours common to these four abilities	12. Advise on exercise taking into account physical and functional limitations, such as frailty and comorbidities. 13. Identify, develop, and encourage activities that promote the habit of physical exercise in each patient. 14. Schedule sessions at home with or without supervision and plan exercises and augmentations individually according to the patient's condition. 15. Monitor and evaluate the scheduled exercise, according to the severity of the disease and comorbidities, the place of the sessions (supervised versus at home), the patient's age, and adherence. 16. Regularly assess the improvement in functional capacity and quality of life through the validated Minnesota 6-minute test tools. 17. Monitoring of pharmacological adherence and monitoring of BP and HR, for the adequate titration of drugs and avoid situations that prevent reaching adequate levels of PE intensity.		
Equal to 60% → 10 items	61% to 89% → 11-15 items	90%-100% → 16-17 items		

PSYCHOSOCIAL ROLE			
Capabilities	**Knowledge** **Skills** **Professional Behaviour**	**Achieved**	**Not Achieved**
Ability to recognise inappropriate behaviour or social interaction of the patient.	1. Knowledge of tools for detecting inappropriate behaviours.		
Ability to recognise emotional stress of the patient and/or family.	2. Knowledge of the tools to identify patients and/or family members in vulnerable situations and/or in the process of mourning.		
	3. Knowledge of the emotional impact of the disease and/or advanced HF treatments on patients and families.		
	4. Knowledge of strategies to facilitate the understanding of information.		
	5. Knowledge of those measures (pharmacological, non-pharmacological, interpersonal) that facilitate anxiety relief: relaxation techniques, breathing techniques...		
Ability to recognise caregiver overload.	6. Knowledge of scales for assessing the role of the caregiver.		
Skills common to these 3 abilities.	7. Ability to perform a comprehensive assessment of the patient and their family, with special emphasis on their emotional state, level of dependence, and coping ability.		
	8. Ability to use communication techniques and social skills such as empathy, understanding, active listening, etc.		
	9. Ability to promote the expression of feelings, expectations and fears, and self-assessment of behaviour change.		
	10. Ability to refer specialist psychological, social, and spiritual support in a timely manner.		
	11. Ability to develop family support measures.		
	12. Ability to detect patients at risk and develop specific strategies that respond to their needs.		
Professional behaviours common to these 3 capacities.	13. Establish an effective therapeutic relationship that allows you to know the needs and preferences of the patient and establish a relationship of help.		
	14. Inform, support, and advise the family and primary caregiver about the disease process and offer them the necessary resources to enable them to play the role of primary caregiver.		
	15. Encourage the use of family assessment instruments to identify the role that the family may be playing in the health-disease process and involve family members in the disease process.		
	16. Encourage the use of techniques to improve communication, such as *briefings*, short multidisciplinary briefings, meetings between different levels of care, shift changes, etc.		
Equal to 60% → 9 items	61% to 89% → 10-14 items	90%-100% → 15-16 items		

COORDINATING ROLE			
Capabilities	**Knowledge** **Skills** **Professional Behaviour**	**Achieved**	**Not Achieved**
Ability to coordinate a hospital discharge to primary.	1. Knowledge of the hospitalised patient care process.		
	2. Knowledge of the circuits/protocols of the institution, as well as the assistance resources available.		
Ability to coordinate different medical visits.	3. Knowledge of the computer system and scheduling of tests/visits.		
Ability to coordinate palliative care.	4. Knowledge of the palliative care approach, physical aspects, psychological, social, and spiritual needs of patients and families.		
	5. Knowledge of health resources on palliative care in the health area and referral process.		
Ability to coordinate with the different members of the Multidisciplinary group.	6. Knowledge of the functions of all members of the multidisciplinary team.		
	7. Knowledge of the factors that influence care coordination and effective transition throughout the process.		
	8. Knowledge of the referral protocols to the different specialists (psychologist, nutritionist, internal med., oncologist, discontinuation of toxics ...).		
Skills common to these 4 abilities.	9. Involve and develop strategies to empower the patient or their immediate environment as active participants.		
	10. Ability in leadership techniques of the multidisciplinary team.		
	11. Ability to establish a decision-making plan at the end of the patient's life.		
	12. Lead a multidisciplinary strategy.		
Professional behaviours common to these 4 capacities.	13. Plan discharge and ensure the transmission of information between the different areas of care, by making continuity of care reports as a tool to guarantee continuity of care.		
	14. Ensure the reconciliation of medication in care transitions.		
	15. Detection and resolution of discrepancies with the patient's active medication.		
	16. Effective communication of changes in clinical evolution and/or pharmacological prescription between health personnel in the HF field (cardiologists, nurses, and family doctors-nurses), other specialists, and the patient themselves.		
	17. Activate multidisciplinary procedures related to evaluation, comprehensive treatment, and reviews according to the shared care model through structured follow-up of the different resources available.		
	18. Ensure that all members of the multidisciplinary team provide consistent information.		
Equal to 60% → 10 items	61% to 89% → 11-16 items	90%-100% → 17-18 items		

RESEARCH AND TEACHING ROLE			
Capabilities	**Knowledge** **Skills** **Professional Behaviour**	**Achieved**	**Not Achieved**
Ability to exercise teaching responsibilities in the area of heart failure.	1. Knowledge about methods, educational theory, and learning resources.		
	2. Knowledge of aspects related to the HF speciality.		
	3. Ability to transmit knowledge and promote continued training in the field of HF.		
	4. Ability to carry out teaching activities to other professionals and future professionals in HF.		
	5. Ability to design, execute and evaluate learning programs that respond to the needs of health professionals and services related to HF.		
	6. Involvement and responsibility with the promotion of lifelong learning, contributing to professional development.		
Ability to recognise and evaluate a problem in the care of HF patients.	7. Ability to recognise problems and evaluate whether it is a product of research.		
	8. Ability to plan the research process, search and manage information, data analysis and dissemination and communication of results, in the context of cardiology and heart failure.		
Ability to study a problem to improve HF patient care.	9. Ability to apply the knowledge acquired in research methodology.		
	10. Ability to adhere to evidence-based standards in HF and ensure optimal care.		
	11. Ability to recognise and relate the basic principles of research in the field of HF and resolution in HF patient care.		
	12. Ability to plan research according to problems related to the practice of HF, in consideration of theoretical advances in the field of knowledge.		
	13. Participate within the multidisciplinary team, in the elaboration of procedures, protocols, and clinical practice guidelines and guarantee the safety of the patient and the professional.		
	14. Design, coordinate, and lead or collaborate in research projects in the field of heart failure knowledge: clinical, ventricular assist devices, heart transplants, cardio-oncology, and familial heart disease.		
	15. Disseminate and apply the results of research conducted in the area of HF to improve health care, nursing care, and professional development.		
Knowledge common to these last two skills.	16. Knowledge about research in general, good practices, legal aspects, and their application in HF, development of, search and information management protocols, scientific writing, bibliographic search, publication standards, data collection and analysis and dissemination and communication of results.		
	17. Knowledge of your organisation's standards of care and evidence in HF.		
Professional behaviour common to these last two capacities.	18. Encourage research on problems related to heart failure practice and its context.		
	19. Communicate research results, knowledge gained, and implications for practice.		
	20. Recognise the knowledge provided by research to modify clinical practice.		
Equal to 60% → 12 items	61% to 89% → 13-18 items	90%-100% → 19-20 items	

CARE LEADERSHIP ROLE			
Capabilities	**Knowledge** **Skills** **Professional Behaviour**	**Achieved**	**Not Achieved**
Ability to be efficient in the direction of patient care.	1. Knowledge of the integrated process of HF.		
	2. Knowledge of the methodology to orientate and guide the team in a certain direction, anticipating scenarios, inspiring values, confidence, and motivation.		
	3. Knowledge of the objectives of the group integrating opinions of the team members, establishing guidelines to maintain the effectiveness and quality of the work.		
	4. Knowledge of methods for evaluating health services provided.		
	5. Knowledge of the key points for improving health.		
Ability to meet all patient needs.	6. Knowledge of developing individualised care plans for each patient.		
	7. Knowledge of the different levels of the health system to meet the needs of HF patients.		
Planning and organisation skills.	8. Knowledge of programming of care activity, efficiency indicators, expenditure control...		
	9. Knowledge of the priorities and/or goals of the group to establish a route, protocol in the care of HF patients.		
	10. Knowledge of new technologies, procedures, techniques that help provide solutions to problems according to the needs and objectives of the HF unit		
	11. Knowledge of the different methods and measures to obtain patient-centred results that include the patient's assessment, counting on their experience, perception, and degree of satisfaction.		
Skills common to these 3 capabilities	11. Collaboration in data collection for national and international HF registries.		
	12. Conducting a feasibility study for the development of an effective multidisciplinary HF service.		
	13. Select appropriate outcome assessment measures, including patient-centred outcomes for a defined patient population.		
	14. Collaborate with quality controls/audits		
	15. Identify areas for improvement, implementation of changes and continuous evaluation.		
	16. Critical and self-critical ability: distinguish between qualities and defects, being able to exploit those positive areas		
Professional behaviours common to these 3 abilities	17. Recognise the roles of the other members of the multidisciplinary HF team (such as the cardiologist, internist, psychologist, family doctor, geriatrician, manager...) and the impact of any change in the provision of the service.		
	18. Positive predisposition to undertake or create new opportunities, without the need for external stimulation.		
Equal to 60% → 11 items	61% to 89% → 12-16 items	90%-100% → 17-18 items	

CLINICAL CARE ROLE →TRICAMERAL-ICD, FOLLOW-UP			
Capabilities	**Knowledge** **Skills** **Professional Behaviour**	**Achieved**	**Not Achieved**
Ability to give information about the entire process.	1. Know the current different monitoring and control platforms for the detection of the risk of decompensation.		
	2. Knowledge of the effective use of the Implantable Cardioverter-defibrillator (ICD) and cardiac resynchronisation therapies (CRT): objective, indication, contraindication, and potential complications: wound dehiscence, pocket infection, cable and/or wall breakage.		
	3. Know the surgical protocol in patients with indications for implantation of cardiac devices (pacemaker, ICD, CRT ...).		
	4. Knowledge of the tracking required for optimal device operation (including remote monitoring).		
	5. Knowledge of the effective use of respiratory support devices [oxygen therapy and continuous positive airway pressure (CPAP)], their side effects and contraindications.		
	6. Ability to counsel on the purpose of ICD, complications related to the implant (mainly inappropriate shocks) and under what circumstances it should be deactivated (terminal illness) or explanted (infection, recovery of LV function).		
	7. Ability to inform and educate the patient about the purpose of CRT, its functions, precautions, and recommendations.		
	8. Develop an individualised educational plan for each patient: type of device, lifestyle modification, physical activity, possibilities of discharges and how to act.		
	9. Ability to address limitations in daily life, work, physical activity, relationships, and sexuality.		
	10. Ability to favour the expression of emotions regarding sudden death, pain, fear of possible discharges, being left alone ...		
	11. Keep training updated on the ICD process.		
	12. Recognise the impact of the diagnosis on the patient and family.		
	13. Education: specific therapies, purpose of the device, complications, changes at the physical and emotional level, acceptance and adaptation to the new device, and improvement in quality of life.		
	14. Apply the different monitoring and control platforms for the detection of the risk of decompensation.		
	15. Apply the surgical protocol in patients with indications for implantation of cardiac devices.		

CLINICAL CARE ROLE →TRICAMERAL-ICD, FOLLOW-UP			
Capabilities	**Knowledge** **Skills** **Professional Behaviour**	**Achieved**	**Not Achieved**
Ability to recognise arrhythmias.	19. Knowledge for the identification of normal heart rhythm and early detection and management of ischemic alterations, rhythm disorders, and cardiac conduction (tachy/bradyarrhythmia, conduction defects).		
	20. Knowledge of the indications, contraindications, action, and possible side effects of antiarrhythmic drugs.		
	21. Ability to assess, diagnose, and address arrhythmias, and speed in decision-making following protocols, procedures, and practical guidelines for patients with heart failure.		
Ability to recognise signs of both appropriate/inappropriate discharge.	22. Knowledge of protocols and/or procedures of action for discharges.		
	23. Knowledge of the information to give the patient and family member before a shock.		
	24. Up-to-date knowledge of vehicle driving rules: explicit limitations and prohibitions.		
	25. Ability to monitor effectiveness and side effects/adverse events related to ICD/CRT function in the immediate and long-term phases.		
	26. Ability to solve the problem of discharges.		
Professional behaviour of the two previous capacities.	27. Keep training up to date on electrophysiology and electrocardiography procedures.		
	28. Keep training up to date on antiarrhythmic drugs.		
	29. Recognise the importance of making a correct diagnosis in the reading of the device.		
	30. Assess knowledge about driving rules and the patient's fitness or not to drive.		
Remote device tracking capability. Electrostimulation.	31. Collection of data transmitted in the patient's history.		
	32. Interpretation of the data correctly.		
	33. If obtaining abnormal data, resolution of the problem.		
→Equal to 60% 20 items	→61% to 89% 21-29 items	→90%-100% 30-33 items		

CLINICAL CARE/EVALUATOR ROLE →LONG-ACTING VENTRICULAR ASSIST DEVICES			
Capabilities	**Knowledge** **Skills** **Professional Behaviour**	**Achieved**	**Not Achieved**
Ability to give information about the entire process.	1. Knowledge of the different mechanical systems of circulatory support such as destination therapy or bridge to transplantation: indications, objectives, and potential complications derived from surgery or the device itself (haemorrhage, thromboembolism, pump thrombosis, infection, right ventricular failure, and device failure).		
	2. Know the surgical protocol in patients with indications for mechanical circulatory support systems.		
	3. Ability to develop an individualised educational plan for the patient/caregiver, based on providing individualised education on safety issues when carrying a Mechanical Circulatory Support (MCS): limitations in daily life, physical activity, social relationships, and sexuality...		
	4. Identify barriers to patient and caregiver learning.		
	5. Ability for education in the handling of the device and the performance of driveline care according to the hospital protocol.		
	6. Keep training up to date in ventricular assist devices.		
	7. Patient and caregiver education: Device components, operation, maintenance, and controller change. To the caregiver: sterility, making a sterile field and carrying out care.		
	8. Management of the different mechanical systems with efficiency and safety for patients.		
	9. Apply the surgical protocol in patients who are indicated for the implantation of the device.		
Ability to recognise signs of infection in the driveline.	10. Knowledge of the protocols for the specific care of the different mechanical ventricular assist devices.		
	11. Knowledge of evidence-based intervention protocols and guidelines to reduce the incidence rate of infections and complications arising from cardiac surgery.		
	12. Ability to draw up a protocol for treatment of the driveline.		
	13. Ability to recognise the signs of infection and manage them (cares, dressings, pharmacological treatment, follow-up ...).		
	14. Recognise the appearance of scarring by periods of time and signs/symptoms of infection.		
	15. Maintain up-to-date product training for infected wounds.		
	16. Therapeutic resources for wound care, according to their evolution and/or protocols of the centre.		
Ability to recognise signs and/or symptoms related to anticoagulation.	17. Know haemostasis, components and blood alterations, the physiology of haemostasis and coagulation and its peri- and post-extracorporeal circulation repercussions.		
	18. Knowledge and management of anticoagulant and antiplatelet therapy and its potential complications: a. signs and symptoms of gastrointestinal bleeding, central nervous system, and anaemia. b. Signs and symptoms of stroke and transient ischemic attacks (TIAs).		
	19. Evaluate and record coagulation disorders.		
	20. Ability to review possible changes in habits with the patient.		
	21. Ensure that the patient and caregiver have understood the importance of anticoagulant treatment and the care to follow derived from it.		

CLINICAL CARE/EVALUATOR ROLE →LONG-ACTING VENTRICULAR ASSIST DEVICES					
Capabilities	**Knowledge** **Skills** **Professional Behaviour**			**Achieved**	**Not Achieved**
Ability to recognise pump malfunction.	22. Knowledge of the use and maintenance of the device and accessories (power supplies, replacement controller, batteries, charger, parameter monitoring), parameters and limits of the alarms established in each patient, cleaning and immobilisation of the conductor cable.				
	23. Ability to solve the different alarms of the device.				
	24. Ability to change the controller.				
	25. Ability to recognise, with the parameters of the controller, problems of both hypo- and hypervolemia.				
	26. Recognise the effect of pump malfunction.				
	27. Evaluation of the data to make a diagnosis.				
	28. Collaborate in the expression of emotions of both the patient and the caregiver.				
	29. Evaluate the information given by the patient about the signs, symptoms, and alarms of the device.				
→Equal to 60% 17 items		→61% to 89% 18-25 items	→90%-100% 26-29 items		

CLINICAL CARE/EVALUATOR ROLE →HEART TRANSPLANT			
Capabilities	**Knowledge** **Skills** **Professional Behaviour**	**Achieved**	**Not Achieved**
Ability to provide information about the entire Heart Transplantation process.	1. Knowledge of the entire heart transplant process: indications/contraindications/complications, diagnostic tests, and inclusion of the patient on the waiting list.		
	2. Knowledge about the donation: how the organ is obtained, necessary tests and analyses of the donor, criteria for choosing the recipient on the waiting list, coordination of the day of the transplant.		
	3. Know the surgical protocol in patients with a heart transplant indication.		
	4. Ability to develop an individualised educational plan for the patient and caregiver: hygienic-dietary habits, pharmacological treatment, signs and/or symptoms of infection, and/or rejection ...		
	5. Apply the surgical protocol in patients with a heart transplant indication.		
	6. Keep training updated in the heart transplant process.		
	7. Promote self-care, integrate the patient and their family in detecting and preventing complications, as well as reducing and clarifying negative experiences.		
	8. Education: dietetics, hygiene, exercise, travel, sun, dental hygiene.		
Ability to recognise signs of rejection.	9. Knowledge of the anatomy of the transplanted heart.		
	10. Knowledge of the conduction system in transplantation.		
	11. Knowledge of complementary tests, treatment, and procedures for action against signs and/or symptoms of rejection, in any of its phases.		
	12. Ability to assess, identify, and monitor the signs and symptoms of graft rejection, in the immediate and long-term postoperative period.		
	13. Identify, recognise, assess, and alleviate rejection symptoms through the safe delivery of pharmacological and non-pharmacological interventions.		
Ability to recognise the specific pharmacological treatment of the transplant.	14. Knowledge of specific pharmacology in heart transplantation: action, side effects, interactions, preparation, and administration (immunosuppression, inotropics, chronotropes, vasopressors and stress hormones, bacterial prophylaxis, antifungal, antituberculosis, anti-toxoplasmosis, anti-cytomegalovirus, and Staphylococcus).		
	15. Ability to recognise immunosuppressive drugs and the appropriate dose for each patient.		
	16. Ability to monitor drugs and evaluate adverse effects caused.		
	17. Frequently assess adherence to immunosuppressive therapy.		

CLINICAL CARE/EVALUATOR ROLE →HEART TRANSPLANT			
Capabilities	**Knowledge** **Skills** **Professional Behaviour**	**Achieved**	**Not Achieved**
Ability to recognise non-adherence to medical treatment.	18. Knowledge of the patient's family and social environment.		
	19. Knowledge of the cost of treatment and the patient's possibilities of paying for the treatment.		
	20. Ability to detect the non-acceptance of their disease and the ignorance they have of it. 21. Ability to detect misunderstanding of the purpose of the treatment. 22. Ability to detect patient's refusal of treatment. 23. Ability to detect ignorance of the consequences of non-compliance. 24. Ability to detect drug non-compliance due to costs.		
	25. Empathy with the patient and caregiver.		
	26. Find a solution for social, family, and medication costs.		
	27. Seek a solution to ineffective coping with the disease.		
Ability to recognise self-care.	28. Knowledge of the hygienic-dietary measures of strict compliance in heart transplantation to avoid or reduce the incidence of rejection and/or infection.		
	29. Ability to educate the patient in hygienic-dietary guidelines and pharmacological adherence that reduce the risk of rejection.		
	30. Keep self-care measures updated: diet, hygiene, and technologies.		
Equal to 60%→ 18 items	61% to 89% →19-27 items	90%-100% →28-30 items		

CLINICAL CARE/EVALUATOR ROLE →CARDIO-ONCOLOGY[55-62]			
Capabilities	**Knowledge** **Skills** **Professional Behaviour**	**Achieved**	**Not Achieved**
Ability to give information about the entire process.	1. Knowledge of the oncological care process and the potential cardiovascular complications associated with antitumor treatment.		
	2. Knowledge of the different complementary tests for the diagnosis of cardiovascular complications in the different stages of the cancer process.		
	3. Ability to recognise the clinical manifestations of CVD before and during antitumor treatment.		
	4. Ability to assess complex physical, psychological, social, and environmental needs relevant to CVD conditions throughout the oncology process.		
	5. Ability to solve problems and make decisions to deal with cardiovascular events throughout the oncological process.		
	6. Ability to establish a therapeutic relationship that allows providing nursing care that promotes the comfort and physical well-being of the cancer patient.		
	7. Ability to guide, advise, and inform the patient about aspects related to health promotion, prevention, and treatment of cardiovascular complications, derived from cancer treatment, promoting the culture of demedicalisation of health and self-care.		
	8. Identify, recognise, evaluate, and alleviate common symptoms of CV conditions (atherosclerotic, heart failure, heart rhythm and conduction, structural abnormalities, heart muscle disorders), and apply pharmacological and non-pharmacological measures in coordination with the cardiologist.		
	9. Interpret and take measures according to protocol in diagnostic tests of the patient in antitumor treatment: electrocardiogram (ECG), chest X-ray, echocardiography, vital signs, and HF biomarkers suggestive of compromise of the patient's haemodynamic status.		
	10. Availability for structured and planned follow-up, telephone and consultation, that favours monitoring and self-care: diet, exercise, pharmacological adherence, alarm signs, and/or symptoms...		
Ability to identify CVRFs and recognise signs of cardiotoxicity.	11. Knowledge of the basic protocols of cardiovascular monitoring in patients with antitumor treatment and high risk of developing cardiotoxicity (>64 years, ≥2 CVRFs, CVD established regardless of symptoms and previous onco-haematological treatments).		
	12. Knowledge of the adverse cardiological effects of radiotherapy, as well as its mechanism of action and the radiobiological bases involved.		
	13. Ability to identify CVRFs, before and during the start of treatment.		
	14. Ability to perform risk stratification and provide comprehensive assistance that includes prevention, diagnosis, treatment, and establish barriers to the prevention of adverse events and avoid interruption of antitumor treatment.		
	15. Ability to identify and monitor signs and/or symptoms that allow the early detection of adverse events.		
	16. Ability to agree on structured advice on heart-healthy lifestyle habits (diet, physical exercise, smoking cessation) common to the different levels of care before, during and after antitumor treatment.		
	17. Ability to organise patient and caregiver education projects in collaboration with scientific societies and cancer patient associations.		
	18. Provide oral and written information about the disease, recognition, and management of acute cardiac symptoms, and CVRF management strategies that may lead to discontinuation of cancer treatment.		
	19. Develop educational interventions that guide the person and their family in learning self-care, effective health management, and empowerment before, during, and after antitumor treatment.		
	20. Reinforcement of preventive habits: vaccines, dental hygiene, avoiding exposure to extreme temperatures...		
	21. Schedule face-to-face or telephone visits according to the patient's protocol and/or clinical status. Assess interdisciplinary collaboration according to the clinical evolution of the patient.		
	22. Plan and provide training on advanced care for people with cancer.		

CLINICAL CARE/EVALUATOR ROLE →CARDIO-ONCOLOGY[55-62]					
Capabilities	**Knowledge** **Skills** **Professional Behaviour**			**Achieved**	**Not Achieved**
Ability to recognise cardiovascular and oncological pharmacological treatment.	23. Knowledge of different cancer therapies. Know the onco-haematological treatments that can aggravate or induce hyper-coagulability, hypertension, diabetes, or dyslipidaemia.				
	24. Knowledge of the basic protocols for monitoring antitumor treatment.				
	25. Ability to encourage adherence to treatment and commitment to lifestyle change.				
	26. Keep antitumor treatments updated and their potential negative effect on cardiovascular health.				
	27. Periodically evaluate the signs and/or symptoms of cardiovascular disease by antitumor treatment.				
	28. Participate in the development of cardiovascular monitoring protocols in patients with antitumor treatment and high risk of developing cardio-toxicity and long survivors.				
Ability to organise different visits to specialists and continuity of care.	29. Knowledge of the coordination of care and effective transition throughout the oncological process.				
	30. Knowledge of the coordination channels that ensure effective communication with oncology and/or primary care nursing.				
	31. Ability to plan a care plan (prevention/cardiotoxicity detection) coordinated with the receiving teams and with Primary Care (patient roadmap) and shared with the patient (individual action plan).				
	32. Availability to discuss antitumor treatments and changes in care plans with other members of the multidisciplinary team.				
	33. Coordinate the follow-up of the patient with the Day Hospital, oncology nurse responsible for the patient, and/or primary care.				
Equal to 60%→ 20 items		61% to 89% →21-29 items	90%-100%→ 30-33 items		

CLINICAL CARE/EVALUATOR ROLE →FAMILIAL HEART DISEASE			
Capabilities	**Knowledge** **Skills** **Professional Behaviour**	**Achieved**	**Not Achieved**
Ability to provide information about familial heart disease.	1. Knowledge of the definition and classification of Familial Heart Disease (FHD).		
	2. Knowledge of familial heart diseases (hereditary or genetic): cardiomyopathies and genetic channelopathies (hypertrophic, dilated, arrhythmogenic myopathy, spongiform, idiopathic restrictive ..., Brugada syndrome, long QT syndrome, short QT, and catecholaminergic ventricular tachycardia).		
	3. Knowledge and ability to perform cardiological assessment, construct the family tree, stratification of the risk of sudden death, and begin the clinical study of relatives of FHD patients, if appropriate.		
	4. Knowledge of the specific treatment of familial heart disease (whether pharmacological, invasive, or surgical).		
	5. Knowledge of the function and organisation chart of the CF Familial Heart Disease Unit		
	6. Knowledge of therapies and drugs involved in FHD: ICD, implantable Holter, septal ablation/ablation, myectomy.		
	7. Knowledge of supports for self-care in FHD: Kardia mobile		
	8. Knowledge of the implications of pregnancy in FHD.		
	9. Knowledge of ECG reading in FHD.		
	10. Ability to identify potential problems with their employment or future situation based on their diagnosis.		
	11. Inform the patient of the purpose and functioning of the FHD unit.		
	12. Recognise the emotional impact of the genotype and phenotype of the patient and family members.		
	13. Provide education regarding their FHD and provide tools for specific self-care, dietary hygienic measures, signs and symptoms of physical exercise alarms, and how to act.		
	14. Schedule follow-up of family members at risk of developing the disease, according to the disease and the severity of the phenotype.		
Ability to perform genetic counselling.	15. Basic knowledge of genetics: role of genetics, inheritance patterns, and technological advances.		
	16. Knowledge of the yield of the genetic study (GS).		
	17. Knowledge of the type of GS to be performed: panels, trios, exomes, and the times to obtain results.		
	18. Knowledge of the type of results and their implications: pathogenic, variant of uncertain significance, familial cosegregation.		
	19. Knowledge of the different reproductive alternatives.		
	20. Knowledge of the legal implications at the labour and insurance level.		
	21. Knowledge of the different techniques for the collection of biological samples for genetic study: blood, saliva, thick drop.		
	22. Ability to know the patient's decision to inform their relatives about the disease and legal aspects.		
	23. Ability to correctly handle, label, and preserve samples.		
	24. Keep training up to date on technological advances and the interpretation of results.		
	25. Identify whether performance of the GS is profitable.		
	26. Evaluate whether you have understood the usefulness of GS and false expectations regarding it.		
	27. Promote children's rights.		
	28. Evaluate psychological implications.		
	29. Transmit information with a neutral attitude to the decisions and reactions of patients.		

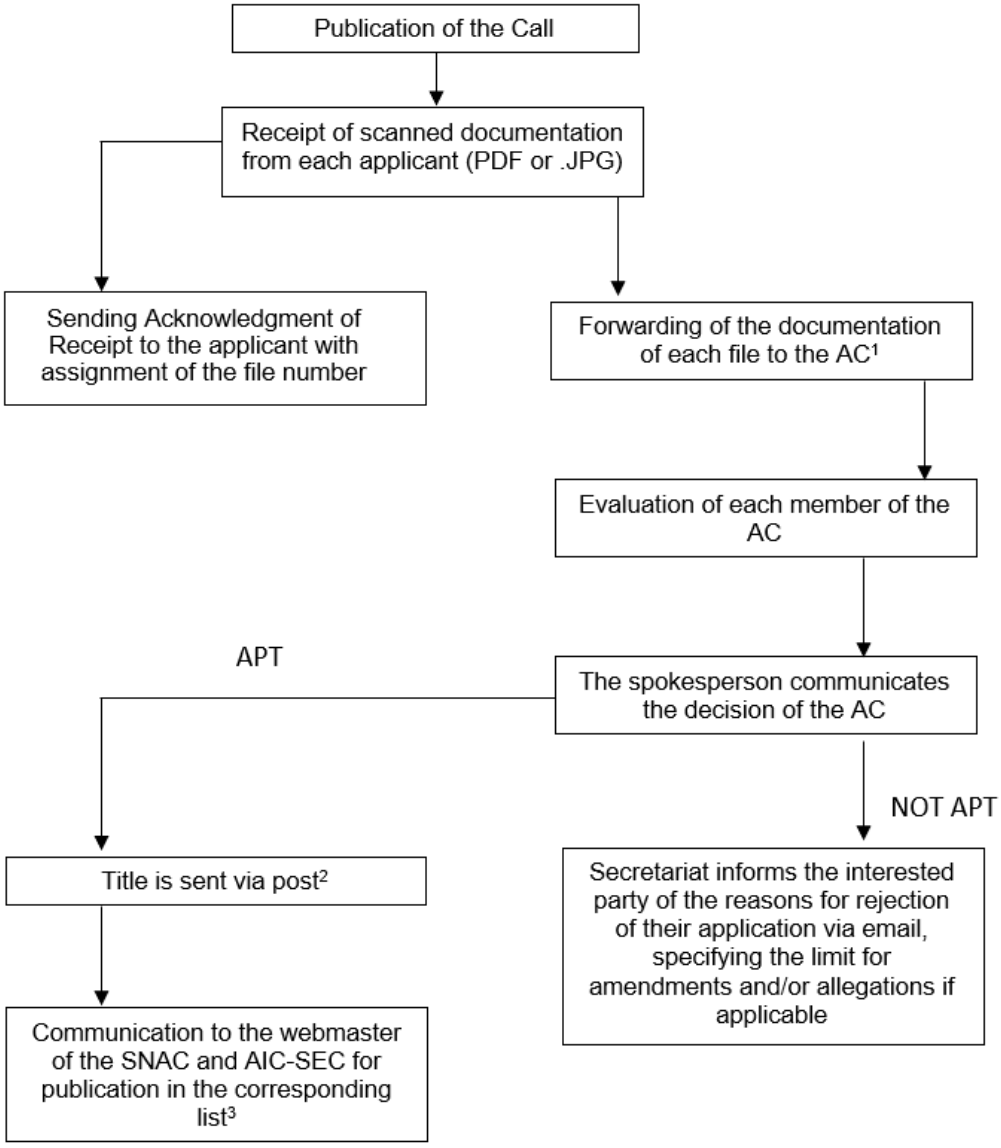
CLINICAL CARE/EVALUATOR ROLE →FAMILIAL HEART DISEASE					
Capabilities	**Knowledge** **Skills** **Professional Behaviour**			**Achieved**	**Not Achieved**
Ability to structure and organise the unit.	30. Knowledge of the health areas and logistic processes of referral between centres and autonomous communities.				
	31. Knowledge of the coordination of tests of the initial clinical evaluation and follow-ups.				
	32. Knowledge and organisation of adult and paediatric consultations.				
	33. Knowledge of other professionals involved in the management of patients with FHD: forensics, paediatricians, biologists, biobank.				
	34. Ability to identify differences in patient and family care.				
	35. Ability to identify fast, effective direct contact, and organise families.				
	36. Keep training updated on the process.				
	37. Facilitate access to the unit.				
	38. Coordinate appointments/tests to generate the least possible impact on patients and relatives: appointment on the same day for several relatives, perform the tests on the same day of the appointment for patients who live far away.				
Equal to 60%→ 23 items		61% to 89%→ 24-33 items	90%-100% →34-38 items		

Annex IV:

Flow chart for accreditation applications

ANNEX IV

Flowchart for accreditation applications.



1) AC: Accreditation Committee
2) The postal address to which the titles will be sent will be that indicated in the accreditation application.
3) The lists will be sent within 15 calendar days after the last day of the period established for the file evaluation by the AC.

Asociación Española de Enfermería en Cardiología