iComponent	Subcomponent	Description
D2.C1. Personal data of patients	C1.1 Identification of patients	In relation to medical records, whatever their format and scope (MR, EMR or EHR), patients should be unmistakably identified. This is not solely for administrative reasons, but proper identification of patients going beyond their full names, helps to assist them more safely by reducing the risk of errors. Furthermore, the existence of a correct identification system for patients is a sine qua non for moving forward with digitalization processes of medical records, by ensuring that each patient has exactly one, and only one, record.
	C1.2 Affiliation of patients (personal data)	Any medical record ought to contain such personal data as complement the identification of the patient (age, sex, etc.). These data, although not strictly clinical, are an informational complement indispensable for excellence in care. Moreover, as these are constant (or in some cases, they change infrequently), capturing them systematically from the first contact of the patient with the system facilitates categorizing the patients, and thus also abridges some stages of healthcare processes, because the need to capture them anew in each contact with the health system vanishes.
D2.C2. Uniqueness and capture	C2.1 Single medical record	Whatever be the format of an MR, it is a document associated to the patient. Consequently, for each health provider organization, each patient should possess a unique record, which will be the one used by all the professionals thereof at the moment they need it. As a fundamental requirement, the MR should so evolve as to not permit the existence of MRs linked to individual professionals, departments or any other entity within the organization providing health care.
D2.C3.: Healthcare information	C3.1 Prevention and education	One of the functions of healthcare systems is to carry out illness prevention actions. These actions may be undertaken in different ways, but in the event that they have an individual component (as part of medical or nursing activity), they should be registered in the MR of that organization, whether this is active in community, primary or hospital care.

iComponent	Subcomponent	Description
		The same is true of the educational actions which are carried out, in general, to furnish patients, family members and careers with tools to help them handle a condition properly.
	C3.2 Vaccinations	All vaccinations, which are generally administered in community or primary care, should be recorded individually in the MR of each healthcare provider organization.
	C3.3 Social data	All levels of the health system, whether community, primary or hospital care, could potentially capture data of a social nature in their contacts with patients, such as socioeconomic level, level of education, type of dwelling, etc.), not necessarily directly related to clinical processes, but which could potentially furnish useful information for taking decisions about their ability to handle their own condition, beyond the contacts with the health services. This information might complement or be complemented by that obtained outside the health system, in other words, at organizations linked to care for people in the strictly social arena.
	C3.4 Outpatient Reports	The information obtained in each consultation should be recorded locally (community, primary or hospital care) and individually. In advanced stages, with a well-developed EHR, this information is part of the content shared among all the actors in the health system. Consultation information is highly varied (basic processes, pregnancy tracking, specialist consultancy, etc.). All of these without exception should be recorded in the EMR/EHR.
	C3.5 Active diagnoses and history	Contacts between patients and health systems may be due to a wide variety of problems which could coexist over time or be solved following the attention given. As a consequence, each professional of the system should have access to up-to-date

iComponent	Subcomponent	Description
		information about those problems affecting patients, so as to act appropriately in each situation, and to take the decisions corresponding to each level of care. These diagnoses should be included in the records in a manner comprehensible for all the professionals and, apart from the question of using encoding systems, they should certainly avoid using local forms or abbreviations.
	C3.6 Physiological signs and assessment scales	Frequently, one of the results of contact between a patient and the health system is that data on physiological signs or assessments against some scale are obtained for different problems. Given that the results of these signs or scales may vary, apart from being obtained at any of the care levels of the health system, capturing them is fundamental for ensuring proper control over illness, matching the response to the needs at each moment and how the signs and scales are observed to evolve.
	C3.7 Medical orders	One outcome of medical acts is that indications which should be followed to obtain the results expected are given. Depending on the level of assistance, these orders may be directed to other professionals or to patients/families. In any case, recording these orders properly facilitates clear information and references about the recommendations given, for addressing the care process.
	C3.8 Identification of chronic or complex patients	The evolution of society, together with the successes of health systems themselves, is prompting a progressive rise in the prevalence of chronic illnesses. In general, all chronic or complex patients (those difficult to treat, who require ongoing reassessments at different levels of the health system, in addition to having, in general, a need for specific, continuous care), end up passing through different health providers, which renders it necessary for each professional to possess appropriate information about the categorization of this kind of patient at all times. The complexity associated to these patients means that the existence of reliable information available at all times is a requirement for dealing with their care processes properly.

iComponent	Subcomponent	Description
	C3.9 Pharmacological prescriptions	Within medical orders, pharmacological prescriptions should be given individual consideration: the medication of patients may be undergoing constant revision, in addition to incorporating prescriptions given at different moments, and by different doctors at different care levels. Having the prescription given available enables, on the one hand, optimizing it to avoid redundancy and select the best therapeutic alternative at each moment, and on the other, managing the medication by avoiding interactions between different ones, and thus avoiding undesirable effects upon patients.
	C3.10 Laboratory	Determination by a laboratory is one of the most widely used complementary tests in the processes of patient diagnosis and tracking. Including the results of these tests in the MR, whatever may be the format, and their subsequent incorporation into the EHR, is considered to be a clinical information quality variable.
	C3.11 Imaging reports	Certain imaging tests, especially those whose interpretation requires a high degree of specialization, are generally accompanied by a report, initially destined for the doctor who requested the test. The presence of the report in the MR, irrespective of the format, and then in the EHR, should enable the professionals to have access to the relevant information about the processes the patient has gone through.
	C3.12 Imaging	Likewise, the image, not necessarily with a report, should be accessible, in the first place, to the doctor requesting it, but secondly also to all those who are to have contact with the patient, for whom reviewing images taken at another moment and, perhaps, by another health provider, could furnish valuable information for undertaking certain assistance processes.

iComponent	Subcomponent	Description
	C3.13 Other complementary tests	The results of certain complementary tests (electrophysiology, digestive or respiratory endoscopy, etc.) should also be included in the MR as components of the patient diagnosis or tracking process, and progressively made available to other professionals to support the decisions they take in their care activity.
	C3.14 Scheduling activities	The evolution of health information systems has allowed the scheduling of care activities envisaged for patients to be integrated into the EMR/EHR as an informational element, while also enabling medical and nursing offices to carry out programming both for their own center and at other centers.
	C3.15 Last wills	Patients might express wishes about the care they may receive, such as the case of a possible waiver of cardiopulmonary resuscitation. This is highly sensitive information which needs to be accessible rapidly to any professional who, wherever they may be, might have to confront the situations about which the patient has expressed their wishes.
	C3.16 Hospitalization of patients	Hospitalization of patients, their tracking and evolution, generally gives rise to a large amount of information which should be captured in the MR. This is one of the subcomponents of the information which is decisive in the level of quality of the records and is closely connected to the professional culture relating to the use of information. Standardization of this information is another quality requirement upon the MR, allowing all the professionals of an institution to deal with similar forms for capturing it, for its subsequent transfer to the EHR.
	C3.17 Emergency care	The information obtained in each emergency consultation should be registered locally (primary care if it possesses this service, or hospital care), individually. In advanced stages, with a well-developed EHR, this emergency information is part of the content shared among all the actors in the health system.

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	C3.18 Inpatient Reports	Care processes, which in many cases are drawn out in time, are usually structured into episodes (a hospitalization, a cycle of out-patient consultations, an emergency action, etc.). It is desirable for each episode to generate a care report, which should be delivered to patients, with a copy being retained in the MR. Furthermore, these reports, as summaries of the attention given, are a tool easy to consult for other professionals, whether or not they belong to the organization where the care was afforded. Indeed, and given how easy it is to consult the reports, this is one of the EHR subcomponents which is most commonly incorporated during the early stages of development of the tool.
	C3.19 Informed consent	Obtaining informed consent is a habitual requirement in the cases in which patients are to be subjected to surgery or any diagnostic or therapeutic procedure entailing risk to them. Obtaining informed consent is the final stage of the interaction between doctor and patient, in which priority is given to information about the procedure proposed, the advantages, the possible alternatives and the risk it entails for the patient. The consent document should form part of the MR, irrespective of its format. The availability of these documents, in due time and form, is a necessary condition for carrying out any procedure.
	C3.20 Surgical treatments	Carrying out surgical interventions, the great majority of which take place in hospitals, generates information about the preoperative process, the surgical process proper and the immediate postoperative tracking. The information about these three stages forms part of the MR, irrespective of its format, and can form part of the EHR, by selecting what kind of information should be carried to the EHR so as not to overload the system with information which, once the postoperative phase has passed, might not be very useful to persons not involved in that treatment.

iComponent	Subcomponent	Description
	C3.21 Non-surgical treatments	Just as do surgical treatments, non-surgical ones, generally in hospital (physiotherapy, hospital day treatment, etc.), also generate information which should be included in the MR, after selecting that which is relevant for managing care processes and should be carried to the EHR.