

Classification of Pharmaco-Therapeutic Referrals



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TABLE OF CONTENTS

Foreword	7
Introduction	9
Ethical issues	11
Classification rationale	11
Classification guide	13
MEDAFAR Classification of Pharmaco-Therapeutic Referrals . . .	14
CPR Index of terms	32
Evaluation and follow-up	36
References	37
Acronyms	38
Glossary	39
Web-sites	41
Acknowledgements	42
Appendices	43

FOREWORD

Coordination between doctors and pharmacists is essential for the provision of optimal healthcare. Therefore complete understanding between these two professional groups is imperative if we are to ensure that the use of medicines is necessary, effective and safe.

SEMERGEN and the Pharmaceutical Care Foundation of Spain have already worked together on the MEDAFAR project, from which they gained very valuable experience. The first stage of this project resulted in the publication of two documents that determined coordination processes between doctors and those pharmacists who provide pharmaceutical care for patients with asthma or for patients with hypertension. The second phase of the MEDAFAR project comprised a field study that measured and analysed the referrals and coordination pathways between family doctors/general practitioners (FD/GP) and community pharmacists (CPh), with respect to pharmacotherapy issues. This study concluded that coordination is possible, effective and bi-directional.

The organisations that supported the MEDAFAR project ascertained that there is a need for a common language between the two groups of healthcare professionals, which will enable an agile, efficient classification of referrals between doctors and pharmacists. The healthcare process, which begins with the patient's consultation, entails many referrals amongst professionals involved in such care. Up to the time when the pharmaceutical care service is implemented, referrals mainly between doctors may be classified using the system developed for primary healthcare activities. However referrals which arise when pharmaceutical care is implemented lack a suitable terminology that will enable the classification of this last part of the healthcare process according to its contents. The aim of this project is to provide a classification for this special type of referral that affects the pharmaco-therapeutic care of individuals.

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INTRODUCTION

Classifications are much more than a simple list of labels ordered according to their characteristics: they enable the coded activities to be organised, quantified, compared and studied. Classifications help to standardise clinical, teaching, research and management functions. They prevent variability in terminology and solve the language problem. They also facilitate cost assessment.

Developing a classification that is easy to use but at the same time comprehensive and suitable for what it has been planned for, is not an easy task. It requires, documentation, professional experience, agreement amongst the authors and acceptance by the users.

The implementation of pharmaceutical care procedures (Art. 84, Law on the Guarantee and Rational Use of Medicinal Products) has led to the detection of pharmacotherapy related situations which cannot be resolved by pharmacists as such situations are not within their scope of competence. This means that the patient has to be referred to another healthcare professional in order to receive effective care. Community pharmacists (CPh) mainly refer patients to family doctors/general practitioners (FD/GP) as they are more accessible.

Family doctors are experienced in referring patients to other doctors in order to resolve health problems that are outside their scope of competence. The referral pathways are regulated and have evolved from basic printed forms to computerised inter-consultant forms. However, inter-professional relationships with pharmacists are not systemised in many countries and depend on the individual's own initiative.

In order to provide appropriate healthcare, therefore, the pharmacist's referral to a doctor (and vice versa) is a professional need and obligation. Classifying this activity will enable its standardisation, research and comparison.

The reasons why this document is useful are as follows:

1. Currently there is no specific classification for the pharmaco-therapeutic referral as a healthcare activity. The expression "pharmaco-therapy" rather than pharmacotherapy is used because it includes any kind of therapy, but priority is given to medicines.
2. It links pharmaceutical care (PhC) procedures with the terminology and conceptualisation of primary healthcare.
3. It contributes to integrating the work of community pharmacists into the National Healthcare System (NHS), by accepting their referrals as the end of the intervention and facilitating feedback from the doctors, if considered necessary.

4. The doctor is offered the possibility of inter-professional coordination with the pharmacist, thus widening the current scope.
5. It enables the quantity, quality, status and economic value of the healthcare procedures to be assessed.
6. It acts as a coordination link amongst the different healthcare professionals, irrespective of the type of service and the setting in which they provide it.
7. A comprehensive Classification of Pharmaco-Therapeutic Referrals is envisaged that covers all drug-related problems (DRP) or other kinds of treatment-related health problems. In order to achieve this, it was necessary to publish the MEDAFAR coordination protocols on asthma and hypertension and the subsequent field study, which have undoubtedly made a positive contribution. Through this we gained first hand experience and knowledge which we wish to share with other research groups.
8. A coded, standardised system of inter-professional referrals will help to create organisational links between professional healthcare groups.

OBJECTIVE

To develop a classification system that defines and classifies situations, related to patients' pharmaco-therapy, that require referral between pharmacists and doctors.

USERS

Mainly doctors and pharmacists.

Other professionals who will benefit from this classification are: health documentalists, health economists, nurses, healthcare administrators, epidemiology and public health researchers.

ETHICAL ISSUES

The ultimate aim of this document is to improve the healthcare service delivered by family doctors and community pharmacists.

The proposals are directly related to the healthcare professionals, but the activities and the objectives are related to persons: therefore complete respect for patients' opinions and decisions on how healthcare professionals should provide such service will be maintained.

The scientific organisations supporting this project, SEMERGEN and the Pharmaceutical Care Foundation of Spain, have agreed on the objectives, method and participating authors.

The pharmaceutical company, Esteve, as sponsor, will provide funding and logistics, according to a signed agreement. However, they have not chosen the authors, or directed the structure or content of the project. Neither do they have right of censorship or veto.

The limitations encountered when developing this document were:

- It is impossible to include all the situations that need referral. The most common and well known situations are given, bearing in mind that it is not a fully comprehensive classification and that there will always be specific or unforeseeable circumstances that will be resolved according to the context.
- This is a consensus document not the final text. Its purpose is to provide general guidance, however the CPHs and FDs may come to other agreements according to specific situations, the patient's circumstances or the environment in which they work.

The anticipated advantages of using this document are as follows:

- It will improve coordination between professionals who work in primary healthcare.
- It will help to provide more efficient, safer healthcare more quickly.

It is assumed that all actions taken by both patients and professionals are in good faith, and comply to the Bioethical Principles: justice, non-maleficence, autonomy and beneficence.

Professional secrecy must be maintained at all times, as well as the confidentiality and safety of information. This can be achieved by complying to the legislation on the safety and protection of personal data currently in effect in our country.

Inter-professional referral must not be confused with a formal complaint which is outside the scope of this classification. The reasons for reporting inappropriate behaviour are typified and comprise situations that offend people's dignity and rights and threatens the efficacy and success of the healthcare service.

An inter-professional referral classification is a tool that helps to provide good pharmacotherapy outcome and the best solution for health problems.

CLASSIFICATION RATIONALE

The structure and terminology used for the Classification of Pharmaco-Therapeutic referrals (CPR) follows the rules of the International classification of Primary Care (ICPC). Therefore the 2 digit alphanumeric codes are called "rubrics". The first digit is a letter which corresponds to the "chapters", in the CPR there are four ("E", "I", "N" and "S"). The second digit is a number from zero to nine, these are the "components". The word or expression that accompanies each rubric is the "rubric title".

The four **chapters** are identified by a letter which is mnemonic both in English and Spanish. The letter “E” stands for effectiveness (efectividad) or efficiency (eficiencia), “I” stands for information (información), “N” standards for need (necesidad) and “S” stands for safety (seguridad). These four concepts were chosen in order to facilitate the individual pharmaco-therapy evaluation process. The chapters categorise all the possible referrals in the course of pharmaceutical care. Furthermore, these concepts are in accordance with the quality criteria applied in the evaluation of medicinal products by healthcare agencies (EMA, FDA). Which define:

- Need, or existence of indication
- Effectiveness, or proof of therapeutic usefulness in the specified indication
- Safety, or the evaluated risk to which the patient is exposed is tolerable with respect to the demonstrated efficacy.

The pharmacists' system of providing service in the years before the pharmaceutical care procedures were developed was based on assessing the use of the medicinal product over a specific timeline: if there were errors in selection, prescription, dispensing or administration of medicinal products.

A growing number of CPs are accepting the pharmaceutical care procedures and understand that this implies achieving the desired pharmaco-therapy outcome, initiated by the doctor. In view of this, there is a need for further evaluation criteria that takes account of the everyday life situations of people who use medicinal products.

For this reason a chapter has been included that identifies situations in which there is a lack of information or healthcare education.

The **components** (the second numerical digit of each rubric) of the CPR are represented by a number. “Zero” is used when it is not possible to assign the situation to another component within the same chapter, and is termed “Unspecified”. The rest of the numbers (from one to nine) are independent of each other and specific to each chapter, although they follow a clinically significant order for easy understanding. By inter-professional consensus and in order to simplify the use of this classification, it was decided not to include more than nine components. This is why some rubric titles include more than one term.

Component 6 of the ICPC-2 concerns “referrals, follow up and other reasons for encounter”. It is a sub-classification **for who the patient** should be referred to, and very different from that of the CPR which is oriented towards **why the patient** should be referred. Thus the ICPC-2 rubrics that end in “-66” express “referral to other provider/nurse/therapist/social worker (excluding medical)”, and those ending in “-67” represent the referral to a physician/specialist/clinic/hospital”, and finally those that end in “-68” indicate “referrals not otherwise specified”. They are, therefore, complementary classifications both in content and in objectives.

To select the CPR **rubric titles** the following criteria were used:

1. Understandable: avoid acronyms or expressions that are difficult to understand.
2. Specific: use the most specific terms, minimising generalities and ambiguities.
3. Exclusive: choose terms and expressions that can easily be differentiated from each other.
4. There should be no repetitions in the rubric titles. To this end a problem severity criteria is used when choosing the chapter in which it will be included, the order being: 1st) safety, 2nd) effectiveness, 3rd) need, and 4th) information. For example, an “interaction” situation could imply referral for effectiveness or for safety: but following the severity order, this title has been included in the safety chapter.

CLASSIFICATION GUIDE

The MEDAFAR Classification of Pharmaco-Therapeutic Referrals (CPR) is designed to be intuitive and easy to use by healthcare professionals. It is based on real-life situations that may arise both at a visit to the doctor as well as to the pharmacist. However, it is open to criticism and recommendations from persons who wish to improve it: to this end the first appendix provides a suggestions form that can be sent to the authors by e-mail or by post through the scientific organisations supporting this project.

There are two ways to code the situations or reasons for referral using the CPR:

- A. Select the most appropriate chapter (effectiveness, information, need or safety), then choose a specific rubric related with the reason for referral. In this way choice starts with the general (chapter letter) and moves to the specific (code number).
- B. Using the index of terms find the one that best fits the reason for the referral. Then check that the rubric proposed for that term corresponds with your idea, based on its definition and inclusion/exclusion criteria. In this way you choose a term that approximates the rubric and then confirm that it is the one required.

Each rubric contains the following elements for ease of understanding:

- Related to: this is an alphabetical list of words and expressions connected to the rubric title. They may be synonyms, antonyms, products or related activities.
- Definition: explanation of the rubric title.
- Inclusion criteria: rules for accepting other terms not included in the “related to” section.
- Exclusion criteria: rules for rejecting other terms not included in the “related to” section, because they are included in another rubric.
- Examples: model situations to demonstrate or clarify the definition or inclusion criteria.

There may be occasions when the patient needs to be referred for more than one reason, and in this case it would be acceptable to use more than one CPR code for the same patient. However, the codes should be listed in order of importance. At other times there could be a very complicated case or one with many nuances. When this occurs there are two possibilities: again use more than one code listed in order of importance; or use one code that best reflects the most important reason for the visit. The second alternative is recommended in order to simplify the records, and reduce the time and effort of the referral.

The CPR can also be combined with other disease or pharmacology classifications in order to specify the health, diagnosis or medication problem for which the patient needs to be referred. Combined with the ICPC-2, which enables doctors to classify reasons for encounter, health problems and processes of care, the code CPR/ICPC-2 "N1/R02" would indicate that the referral is due to the need to initiate treatment as the patient presented with dyspnea. Another possibility is the integration with the International Classification of Diseases (ICD-10) which is mainly a diagnostic classification: therefore it would be feasible to create a rubric CPR/ICD-10 "I6/Z40.8" to provide information (or health education) on prophylactic surgery due to malignant tumour-related risk factors. Lastly, to clarify which group or type of drug was the reason for the referral, we would use the ATC Classification: and we would use the code CPR/ATC "S3/J01CA" to report allergy to a broad spectrum penicillin (such as: amoxicillin).

The second appendix provides a model of the referral form which may be adapted to the needs of each healthcare professional. Its aim is to provide brief but adequate, clear information on the patient, the medicinal product, the doctor and the institutions involved, a summary of the situation and the reason for referral. There is also a section for the relevant response.

MEDAFAR CLASSIFICATION OF PHARMACO-THERAPEUTIC REFERRALS

CHAPTERS

E. Effectiveness / Efficiency

Effectiveness is the capacity to achieve the desired or anticipated effect in real life circumstances. Degree to which an intervention improves the result in a patient in everyday medical practice.

Efficiency is the capacity to achieve the programmed objectives and goals with the minimum use of resources and time. It is the rational use of available resources to meet a predetermined objective.

I. Information / Health education

Information is the communication or acquisition of knowledge that enables that which is already known on a certain subject to be enhanced or qualified. Information can be created, maintained, stored and transmitted. The organisation of all work processes are based on information. It may be requested by a patient, a family member or care giver.

Healthcare (or health) education comprises activities directed towards increasing the capacity of individuals and the community to participate in and be responsible for promoting healthcare and for maintaining and recovering their health.

N. Need

Situation in which a person requires assistance or help. In PhC, a health problem related to the lack of necessary medication or the use of unnecessary medication is understood as being a situation of need. It entails the request for starting, controlling or withdrawing treatment.

S. Safety

This aims to minimise the risk and conditioning factors associated with the use of diagnostic and therapeutic methods or patient information. Quality or condition that frees the patient of the risks and hazards inherent in medical activity.

Each of these chapters aims to answer the question “why should the patient be referred?” in a different way:

- Effectiveness / efficiency: establishes that “which conditions” the rubric titles.
- Information / health education: explains what the rubric titles “are about”.
- Need: clarifies “for what” the rubric titles are used.
- Safety: indicates “due to what” the rubric titles are applied.

RUBRICS

E. Effectiveness / Efficiency

E0. Effectiveness / Efficiency, unspecified

- Related to: idiopathic, provisional assignment, uncertain classification, unknown cause.
- Definition: refer a patient due to situations related to the effectiveness or efficiency of the pharmaco-therapeutic care without giving the characteristics or origin.

Table 1.- MEDAFAR Classification of Pharmaco-Therapeutic Referrals

E. Effectiveness / Efficiency

- E0. Effectiveness / efficiency, unspecified
- E1. Indication
- E2. Prescription and dispensing conditions
- E3. Active substance / excipient
- E4. Pharmaceutical form / how supplied
- E5. Dosage
- E6. Quality
- E7. Storage
- E8. Consumption
- E9. Outcome.

I. Information / Health education

- I0. Information / health education, unspecified
- I1. Situation / reason for consultancy
- I2. Health problem
- I3. Complementary examination
- I4. Risk
- I5. Pharmacological treatment
- I6. Non pharmacological treatment
- I7. Treatment goal
- I8. Socio-healthcare system

N. Need

- N0. Need, unspecified
- N1. Treatment based on symptoms and/or signs
- N2. Treatment based on socio-economic-work issues
- N3. Treatment based on public health issues
- N4. Prevention
- N5. Healthcare provision
- N6. Complementary test for treatment control
- N7. Administrative activity
- N8. On patient request (fears, doubts, wants).

S. Safety

- S0. Safety, unspecified
- S1. Toxicity
- S2. Interaction
- S3. Allergy
- S4. Addiction (dependence)
- S5. Other side effects
- S6. Contraindication
- S7. Medicalisation
- S8. Non-regulated substance
- S9. Data / confidentiality.

- Inclusion criteria:
 - The patient insists on being referred.
 - The health professional does not have sufficient time and/ or appropriate information.
- Exclusion criteria:
 - Corresponds to another chapter (information, need, safety).

E1. Indication

- Related to: clinical or therapeutic use, drug of choice, first (or second or third) choice treatment, novel treatment, restriction, selectivity, specificity, therapeutic indication (TI), treatment (combined, intensive, maintenance), treatment application, treatment goal.
- Definition: refer a patient whose treatment does not correspond to his/her health problem or after considering the risks and benefits there is a better, alternative treatment.
- Inclusion criteria:
 - Medical treatments.
 - Surgical treatments.
- Exclusion criteria
 - Contraindication [S6].
- Example 1: patient who is taking an NSAID and also taking ranitidine as a gastric protector. Complains of dyspepsia. Evaluate the use of omeprazole for this indication.

E2. Prescription and dispensing conditions

- Related to: active dispensing, authorised prescription, available stock, completion of records, informed consent (written or oral), legal limitations (disabled, illegal, minors, opioids), medical prescription (active, narcotics, not subsidised, occupational accident, ensioners, private, toxic syndrome), out of stock, pharmaco-therapeutic follow-up (PTF), problem of supply, reduced contribution, reimbursable, shortage, socio-economic limitations (deprived, homeless, isolated at home), specially controlled medication (compassionate use, foreign, hospital diagnosis, hospital use, restricted), substitution.
- Definition: refer a patient due to non-healthcare-related circumstances that restrict the possibility of prescription or dispensing of medicines.
- Inclusion criteria:
 - Conditioning factors: administrative, cultural, ethical, economical, institutional, work, legal, personal opinion (or belief) or social.
- Exclusion criteria:
 - Addiction or dependence [S4].
 - Allergy [S3].
 - Contraindication [S6].
 - Data protection [S9].
 - Interaction [S2].
 - Intoxication[S1].
 - Medicalisation [S7].
 - Non-regulated substance [S8].
 - Other side effects [S5].

- Example 1: cannot dispense a narcotic medicinal product due to lack of specific prescription.
- Example 2: cannot dispense a medicine due to lack of an authorised prescription.
- Example 3: cannot prescribe the drug because it is for hospital use only.
- Example 4: block treatment for a minor on parents' decision (abortion, contraceptives, morning after pill).
- Example 5: patient whose medication has been out of stock for a long time.

E3. Active substance / excipient

- Related to: bioavailability, bioequivalence, brand name, colourant, composition, contrast, drug, equivalence, essential drug, generic medicinal product, international non proprietary name (INN), magistral formula, medicinal product, over the counter product (OTC), preservative, sweeteners, therapeutic equivalent.
- Definition: refer a patient because the active substance (or excipient) prescribed does not correspond with that dispensed, or vice versa.
- Inclusion criteria:
 - Brand name, or drug substance or excipient does not currently exist.
 - Non-bioequivalent active substances.
- Exclusion criteria:
 - Allergy [S3].
 - Contraindicated [S6].
 - Non-regulated substance [S8].
 - Placebo [S7].
- Example 1: patient requesting a medicinal product that is not marketed in one country but it is in others.
- Example 2: patient requesting a medicinal product whose quantitative composition is not available in the country.

E4. Pharmaceutical form / how supplied

- Related to: ampoule/vial, blister, can be divided, capsule, container, cream, delayed release, dispersible, drinkable, effervescent, format, injectable, ointment, patch, pessary, pill, sachet, shampoo, single dose, solution, spray, suppository, syrup, tablet, vaginal ring.
- Definition: refer a patient because the pharmaceutical form of the prescribed/dispensed product is not suitable.
- Inclusion criteria:
 - Pharmaceutical form not currently in existence.
 - The pharmaceutical form is not suitable to the patient's preference, needs or physical characteristics.
- Exclusion criteria:
 - Do not refer the patient (or his/her representative) if he/she voluntarily accepts an alternative form with the same active substance and strength.
 - Contraindicated [S6].
- Example 1: diabetic patient who has been prescribed a medicinal product containing glucose.

- Example 2: hypertensive patient who has been prescribed, or takes, on his/her own account, an effervescent tablet (with a high sodium content).
- Example 3: the catheter (or an ankle support) prescribed or dispensed is not the right size for the patient.
- Example 4: patient who has difficulty in handling tablets or containers.

E5. Dosage

- Related to: dose (loading, multiple, recommended, single), dose adjustment, drug levels, duplication or replication, duration of action, interaction, overdosing, posology, regimen, underdosing.
- Definition: refer patient because the regimen or dose prescribed or dispensed are not suitable.
- Inclusion criteria:
 - Patient taking two of the same medicine which has different names, through lack of knowledge.
 - The patient is not following the prescribed regimen or dosage.
- Exclusion criteria:
 - Consumption [E8].
 - Overdose [S1].
 - Interactions which imply safety problems [S2].
 - Allergy [S3].
 - Contraindication [S6].
- Example 1: the times of taking the medicinal product needs to be modified due to work timetable.
- Example 2: patient being treated with the anti-platelet clopidogrel, has been prescribed clarithromycin for a bronchial infection (lowers clopidogrel efficacy).
- Example 3: patient being treated for acne with mynocylin has been prescribed amoxicillin for a dental infection (will need more doses of amoxicillin or will have to stop taking mynocylin whilst taking amoxicillin).

E6. Quality

- Related to: defect, expiry, good quality, poor quality, quality assurance.
- Definition: refer patient because one or several of the medicinal products he/she is taking does not comply to quality assurance criteria.
- Inclusion criteria:
 - Medical product past its expiry date.
 - Defective product.
 - Batch or product recalled from market.
- Exclusion criteria:
 - Adulterated or counterfeit medicinal product [S8].
 - Shortage of supply [E2].
- Example 1: the product cannot be dispensed because the packaging or contents does not comply to quality standards (package appears to be damaged).
- Example 2: cannot prescribe or dispense medicinal product because it has been temporally withdrawn from the market by the health authorities.

E7. Storage

- Related to: disposal, maintenance, special precautions for storage or disposal or transport, storage conditions or standards, storage.
- Definition: refer a patient because one or more of the prescribed medicinal products cannot be stored, transported or disposed of according to the manufacturer's specifications or current legislation.
- Inclusion criteria:
 - Patient who does not have the means to store the medication appropriately at home.
 - Medicinal product that needs cold chain management.
 - Medicinal products that need special disposal measures (methotrexate).
 - Improper disposal of antibiotics – thrown directly into the rubbish bin.
- Exclusion criteria:
 - Shortage of supply [E2].
- Example 1: patient does not have a refrigerator to store a vaccine.
- Example 2: patient needs a portable oxygen therapy system not one that is fixed at home.

E8. Consumption

- Related to: administration route (cutaneous, inhalation, intramuscular, intravenous, ocular, oral, auricular, parenteral, rectal, topical), application, co-administration, complex medicinal product (CMP), compliance, concurrent (or concomitant) administration, handling, method of administration or use, treatment compliance, treatment non-compliance, use.
- Definition: refer a patient due to incorrect consumption of prescribed medicine.
- Inclusion criteria:
 - CMP that the patient does not know how to prepare or handle.
 - Errors in the route or method of administration.
 - Lack of adherence or compliance to treatment.
 - Needs directly observed treatment (DOT).
- Exclusion criteria:
 - Self-medication [S7].
 - Dosing [E5].
 - Duplication or replication [E5].
 - Overdose [S1].
 - Interaction [S2].
- Example 1: patient who is taking omeprazole together with pantoprazole.
- Example 2: patient who is using an incorrect inhalation technique.
- Example 3: patient who is using a suppository as if it were a tablet.
- Example 4: patient who takes his/her medication "when he/she remembers".
- Example 5: patient who is not taking his/her methadone as DOT.
- Example 6: patient who crushes his/her tablet (delayed release form) because he/she cannot swallow it.

E9. Outcome

- Related to: analysis (cost-benefit, cost-effectiveness, cost-utility), benefit (medical), cost, drug-rela-

ted negative outcome (DNO), morbidity-mortality reduction, patient satisfaction, therapeutic usefulness, yield.

- Definition: refer a patient whose pharmaco-therapy does not achieve the expected results, in order to find an alternative.
- Inclusion criteria:
 - Monetary costs.
 - Health benefit.
 - Patient satisfaction.
 - Therapeutic usefulness.
- Exclusion criteria:
 - Provide information on treatment goals [17].
- Example 1: patient who complies to his/her anti-hypertensive treatment but does not achieve the expected outcome.
- Example 2: patient whose blood test shows very high cholesterol levels, but we know he/she is being treated with statins.

I. Information / Health education

10. Information / health education, unspecified

- Related to: provisional assignment, uncertain classification.
- Definition: refer a patient due to pharmaco-therapeutic situations related to information or health education without giving details of their characteristics or origin.
- Inclusion criteria:
 - The patient insists on being referred, with no justification.
 - The health professional does not have sufficient time and/or appropriate information.
- Exclusion criteria:
 - Corresponds to another chapter (effectiveness, need, safety).

11. Situation / reason for consultancy

- Related to: alarm, doubt, fear, reason for consultancy, request for information or healthcare education.
- Definition: refer a patient so that he/she may be given information or HE on that which he/she requires, from the patient's point of view; or refer a patient for an event that affects the patient's use of the medicinal product in a certain time and place.
- Inclusion criteria:
 - Patient requests information due to a doubt concerning his/her treatment.
 - Patient who wishes to be trained in the handling of his/her medicine.
 - Patient who requests information on the possible side effects of his/her treatment.
- Exclusion criteria:
 - When the information requested may be harmful to the patient or a third party (duty of abstinence).
 - Patient has an adverse reaction to a medicinal product [S5].

- Example 1: patient hears that the medication he/she is taking has been withdrawn from the market. He/she fears for his/her health.
- Example 2: patient has read the list of drug-related adverse reactions in the package leaflet and does not want to take the medicine.

12. Health problem

- Related to: co-morbidity, diagnosis, disease, drug related problem (DRP), episode, medical or diagnostic opinion, morbidity, mortality.
- Definition: referral on the initiative of the healthcare professional in order to provide information or HE on anything that requires or could require an action from a healthcare provider.
- Inclusion criteria:
 - Information on the treatment indication or indications.
 - Inform patient of the possible adverse effects and how to control them.
- Exclusion criteria:
 - When the information requested may be harmful to the patient or a third party (duty of abstinence).
- Example 1: hypertensive patient, who is taking a diuretic and thinks it's to make him/her "urinate", should be informed of the treatment indication.
- Example 2: healthcare professional informs a patient, who is going to start treatment with amitriptyline, how to control dry mouth and dry eyes.

13. Complementary examination

- Related to: complementary study, diagnostic test.
- Definition: referral for information or HE on one or more diagnostic procedures.
- Inclusion criteria:
 - Analytical: sputum, vaginal discharge, faeces, CSF, urine, saliva, blood.
 - Pathological anatomy.
 - Diagnostic imaging: ultrasound, radiography, NMR, CT.
 - Diagnosis using sound: audiometry, Doppler.
 - Electrogram: EEG, ECG EMG.
 - Endoscopy.
 - Spirometry.
 - Microbiological study.
- Exclusion criteria:
 - When the information requested may be harmful to the patient or a third party (duty of abstinence).
 - Persons who handle diagnostic procedures without training or professional rigor.
 - Study techniques with no scientific basis.
- Example 1: patient who has had an NMR and has been programmed for a Spect, he/she wants to know why.

14. Risk

- Related to: disease prevention, epidemiological information, evolution, health promotion (protection

or maintenance), life style, prevention (primary, secondary, tertiary, quaternary), prognosis, risk factor, risk marker.

- Definition: referral for information or HE on the expectations of the patient or health professional with respect to the patient's state of health.
- Inclusion criteria:
 - Information on life style (sedentary, obesity).
 - Information on dependency (alcoholism, smoking).
- Exclusion criteria:
 - When the information requested may be harmful to the patient or a third party (duty of abstinence).
 - Need for a prevention activity [N4].
- Example 1: patient who drinks and does not know that alcohol interferes with his/her pharmacological treatment.

15. Pharmacological treatment

- Related to: instructions for use, investigational drug, investigational studies on medicinal products, magistral formulae, medicinal products, package leaflet, pharmacotherapy, special warnings and precautions for use, summary of product characteristics.
- Definition: referral for providing or enhancing information on the appropriate use of the medicine and/or treatment compliance.
- Inclusion criteria:
 - Information on the handling of medicinal products that cannot be divided.
 - Information on the use of magistral formulae.
 - Explaining the terminology used in package leaflets.
- Exclusion criteria:
 - When the information requested may be harmful to the patient or a third party (duty of abstinence).
 - Information on non-pharmacological treatment [I6].
- Example 1: that stated in the package leaflet does not coincide with the prescription.

16. Non-pharmacological treatment

- Related to: acupuncture, chemotherapy, exercise, herbal drugs, hydrotherapy, hygiene-nutrition measures, physiotherapy, psychotherapy, radiotherapy, rehabilitation, surgery.
- Definition: referral for providing or enhancing information on non-pharmacological treatments.
- Inclusion criteria:
 - Information on cognitive-behavioural therapy.
 - Information on non-pharmacological treatment for weight loss.
- Exclusion criteria:
 - When the information requested may be harmful to the patient or a third party (duty of abstinence).
 - Information on pharmacological treatments [I5].
- Example 1: patient who is taking dietary products and wishes to know if he/she should have the liver tests mentioned in the press.

17. Treatment goal

- Related to: analysis, clinical benefit, cure, drug-related negative outcome (DNO), evaluation, limitations, reduction of morbidity-mortality, resolution, results (desired, expected, found), sequelae.
- Definition: referral to inform the patient on the results of a treatment or to receive HE on health benefits.
- Inclusion criteria:
 - Provide information on the concepts or results of a treatment.
 - Provide information on the health benefits of a treatment.
- Exclusion criteria:
 - When the information requested may be harmful to the patient or a third party (duty of abstinence).
- Example 1: inform a patient that the statin he/she is taking is to achieve certain LDL-cholesterol levels.

18. Socio-healthcare system

- Related to: ambulatory, community pharmacy, doctor's surgery, health centre, health insurance (private or public), healthcare and non-healthcare benefits, healthcare cover, hospital, individual healthcare card (IHC), living will, management, National Health System (NHS), optician, organ donation, patients' rights and duties, podology, Regional Health Authority, Regional Health Service, service portfolio, social services, veterinary clinic.
- Definition: referral when sufficient information is not available and/or the problem cannot be resolved.
- Inclusion criteria:
 - Inform a patient of the possibility of obtaining healthcare benefits.
- Exclusion criteria:
 - When the information requested may be harmful to the patient or a third party (duty of abstinence).
- Example 1: patient with low financial means whose medication may be substituted by a cheaper one (essential drugs).

N. Need

N0. Need, unspecified

- Related to: provisional assignment, uncertain classification.
- Definition: refer a patient due to pharmaco-therapeutic situations related to need without giving details of their characteristics or origin.
- Inclusion criteria:
 - The patient insists on being referred.
 - The health professional does not have sufficient time and/ or appropriate information.
- Exclusion criteria:
 - Corresponds to another chapter (effectiveness, information or safety).

N1. Treatment based on symptoms and/or signs

- Related to: emotional state, evidence, minor symptoms, signs, suspicion, symptomatology.

- Definition: refer patient because he/she shows signs or symptoms that need treatment.
- Inclusion criteria:
 - Patient request for treatment for a subjective change in health.
 - Needs treatment for a lesion, or due to a change in health detected by the healthcare professional.
- Exclusion criteria:
 - Information on a situation or reason for consultancy [I1].
 - Information on health problems [I2].
 - Information on complementary examinations [I3].
 - Information on risks [I4].
- Example 1: patient who complains of suffering from headaches.
- Example 2: patient who is injured.
- Example 3: patient who says he/she is infertile.
- Example 4: minor symptoms of more than seven days duration, constant gastrointestinal function problems, cystitis with fever, frequent thirst.
- Example 5: pregnant women with blood pressure changes.
- Example 6: patient with high blood pressure not diagnosed with hypertension.

N2. Treatment based on socio-economic-work issues

- Related to: domestic violence, house-bound, physical abuse, poverty, professional exhaustion (burned-out).
- Definition: referral of patient who has social, financial or work problems and has limited access to the healthcare professional he/she needs.
- Inclusion criteria:
 - Problems that need the service of a social worker.
 - Problems that need legal advice or that of a trade union.
 - Problems that need public resources (town council, county councils, regional government ministries) or private resources (savings banks, non-profit organisations).
 - Problems that need occupational risk assessment.
- Exclusion criteria:
 - Information on a situation or reason for consultancy [I1].
 - Information on health problems [I2].
 - Information on complementary examinations [I3].
 - Information on risks [I4].
 - Prescription conditioning factors [E2].
- Example 1: patient with no economic means needs treatment (dental prosthesis, glasses, incontinence pads, etc.).
- Example 2: house-bound patient with no family or social support and therefore cannot acquire/consume the prescribed medicine.
- Example 3: woman who needs social support and protection due to physical abuse by her partner.
- Example 4: a minor who complains of physical or psychological abuse.

N3. Treatment based on public health issues

- Related to: contagion, contamination (acoustic, chemical, microbiology, nuclear), epidemic, non-drinkable water, outbreak, quarantine, resistance to antibiotics, unhealthiness.
- Definition: refer a patient who is in a situation of risk related to his/her place of residence, work or leisure.
- Inclusion criteria:
 - Family members of a patient with a contagious disease.
 - Patient returning from a trip/holiday with non-specific symptomatology.
 - Patient evacuated due to a catastrophe (natural or artificial) that needs care and treatment.
- Exclusion criteria:
 - Information on a situation or reason for consultancy [I1].
 - Information on health problems [I2].
 - Information on complementary examinations [I3].
 - Information on risks [I4].
- Example 1: patient diagnosed with tuberculosis is not complying to the prescribed treatment.
- Example 2: person living with a person with tuberculosis has not been tested or treated.
- Example 3: epidemic (measles, meningitis, etc).
- Example 4: vomiting or diarrhoea in several persons from the same institution.

N4. Prevention

- Related to: heredity, trips, vaccines.
- Definition: refer a patient who needs to take preventive action.
- Inclusion criteria:
 - Vaccination.
 - Advice on genetics.
 - Preparation of a medical kit for a trip.
 - Treatment for disease prevention.
- Exclusion criteria:
 - Information on risks [I4].
 - Treat addictions or dependencies [S4].
- Example 1: patient who needs vaccinations for a trip to a foreign country.
- Example 2: pregnant woman in third term who is not taking folic acid.
- Example 3: patient who has not completed his/her vaccination programme.

N5. Healthcare provision

- Related to: consultancy, medical care, pharmaceutical care.
- Definition: refer a patient who needs healthcare to another professional to determine if treatment is required.
- Inclusion criteria:

- Patient who is taking a medicine without medical control.
- Need to install coadjuvant treatment.
- Exclusion criteria:
 - Information on health problems [I2].
 - Effectiveness of active substance [E3].
 - Effectiveness of pharmaceutical form [E4].
 - Effectiveness of dosing [E5].
- Example 1: patient requests the pharmacist for an antibiotic and does not have a doctor's prescription, pharmacist refers patient to the doctor.
- Example 2: patient who is taking bisphosphonate and is not taking calcium.
- Example 3: patient who is taking contraceptives without medical control.

N6. Complementary test for treatment control

- Related to: treatment monitoring.
- Definition: refer a patient who needs complementary tests for the correct administration of a medicine.
- Inclusion criteria:
 - Pharmaco-therapeutic follow up.
 - Not complying to the monitoring established in the current clinical guidelines.
- Exclusion criteria:
 - Persons who handle diagnostic procedures without training or professional rigor.
 - Study techniques with no scientific basis.
- Example 1: patient who is taking insulin and not complying to his/her blood sugar controls.
- Example 2: patient being treated with digoxin (valproic acid, carbamazepine, phenytoin, phenobarbital, lithium, theophylline) whose blood levels of the drug need to be controlled.
- Example 3: anticoagulated patient who needs an INR test because other simultaneous treatments have been changed.

N7. Administrative activity

- Related to: administrative error in the dispensing or prescription, bureaucratic tasks, incomplete healthcare documentation, incorrect healthcare document.
- Definition: refer a patient due to an administrative error in the healthcare documentation.
- Inclusion criteria:
 - Administrative procedures that do not imply a danger or risk to patient.
- Exclusion criteria:
 - Documentation without patient identification [S9].
 - Document without identification of medicinal product [S9].
 - Documentation without identification of healthcare professional [S9].
- Example 1: prescription that needs to be authorised.
- Example 2: prescription that has not been signed by the doctor.

- Example 3: prescription in the wrong format, it is for an active person and should be for a pensioner.
- Example 4: need for a narcotics prescription.

N8. On patient's request (fear, doubts, wants)

- Related to: doubts on a diagnosis or treatment, fear of having a disease, request for a complementary test or a treatment, request from a family member, care giver or friend.
- Definition: refer a patient based on his/her request for a specific treatment.
- Inclusion criteria:
 - Request from a family member or friend.
- Exclusion criteria:
 - Irrational or unjustifiable requests.
 - Requests that violate the patient's rights.
 - Referral from a healthcare professional.
- Example 1: patient believes that he/she has a venereal disease and requests treatment.
- Example 2: a parent considers that his/her son needs surgery for phimosis, because he has blood in his urine.
- Example 3: a neighbour (or the police) consider that a patient needs to be treated for schizophrenia due to the problems he/she is causing in the community.

S. Safety

S0. Safety, unspecified

- Related to: idiopathic, provisional assignment, uncertain classification, unknown cause.
- Definition: refer a patient due to pharmaco-therapeutic situations related to safety without giving details of their characteristics or origin.
- Inclusion criteria:
 - The patient insists on being referred.
 - The health professional does not have sufficient time and/ or appropriate information.
- Exclusion criteria:
 - Corresponds to another chapter (effectiveness, information or need).

S1. Toxicity

- Related to: administration or ingestion (accidental, involuntary, voluntary), autolysis, exposure to toxic substances, intoxication, overdose, phototoxicity, suicide (thoughts or attempt), teratogenic, teratogenic effect, toxic reaction.
- Definition: refer a patient with toxic reaction, voluntary or involuntary, due to a therapeutic measure or exposure to other elements.
- Inclusion criteria:
 - Agricultural, household or industrial products.
 - Drugs of abuse.
 - Insect or animal bites.
 - Medicinal products.

- Mushrooms.
- Sun.
- Exclusion criteria:
 - Overdosing [E5].
 - Interaction [S2].
 - Allergy [S3].
 - Consumption [E8].
- Example 1: elderly patient being treated with methotrexate and now has renal failure.

S2. Interaction

- Related to: co-treatment, drug-drug incompatibilities, drug interactions.
- Definition: refer a patient showing signs of a medicinal product interaction due to the concomitant administration of several medicinal products or of a medicinal product with other substances.
- Inclusion criteria:
 - List of interactions: <http://medicine.iupui.edu/flockhart/index.htm>
- Exclusion criteria:
 - Allergy [S3].
 - Dosing [E5].
 - Consumption [E8].
 - Toxic reaction [E1].
- Example 1: patient taking digoxin, for whom the dentist has prescribed Ibuprofen 600 for seven days.
- Example 2: patient being treated for diabetes has been prescribed long term oral corticoids.
- Example 3: patient being treated with sulphiride has been prescribed diltiazem, but there is an increased risk of torsade de pointes.

S3. Allergy

- Related to: allergic reaction, hypersensitivity.
- Definition: refer a patient who has had an allergic reaction to a treatment.
- Inclusion criteria:
 - Allergic reactions (immediate, accelerated, delayed).
 - Anaphylaxis.
 - Due to histamine release.
- Exclusion criteria:
 - Toxicity reaction [S1].
 - Interaction [S2].
 - Addiction or dependence [S4].
 - Possible or documented contraindication [S6].
- Example 1: patient allergic to penicillin who has been prescribed cefalexin.

S4. Addiction (dependence)

- Related to: legal or illegal substance abuse and/or dependence, tolerance, withdrawal syndrome.
- Definition: refer a patient who is suffering a reaction to a medicinal product or other substance to which he/she is psychologically or physically addicted or dependent on.
- Inclusion criteria:
 - Alcoholism.
 - Illegal substance dependence (heroin, cocaine, cannabis, designer drugs).
 - Dependence on prescription or OTC drugs.
 - Smoking.
- Exclusion criteria:
 - Problems of effectiveness or efficiency of pharmaco-therapy consumption [E8].
 - Patient requests treatment [N8].
 - Contraindication [S6].
 - Medicalisation [S7].
 - Consumption of non-regulated substances, without addiction [S8].
- Example 1: patient who every week buys a large bottle of cough medicine containing codeine.

S5. Other side effects

- Related to: adverse drug reaction (ADR), adverse effects (or collateral or unexpected or unwanted), clinical relevance, tolerability (good or poor).
- Definition: refer a patient who has unwanted side effects, whether they are predictable or unexpected, due to a treatment measure.
- Inclusion criteria:
 - Due to metabolic disorders.
 - Due to rehabilitation, surgical or diagnostic interventions.
- Exclusion criteria:
 - Toxicity reaction [S1].
 - Interaction [S2].
 - Allergic reaction [S3].
 - Addiction S4].
- Example 1: patient gains weight due to the use of an antidepressant (mirtazapine).
- Example 2: patient abandons amitriptyline treatment due to dry mouth.
- Example 3: hypertensive patient taking a beta blocker. His/her blood pressure is controlled but it causes bradycardia.
- Example 4: patient does not want to be dispensed or prescribed the hypertensive agent (antidepressant) he/she is taking, and during the conversation hints at a sexual dysfunction problem.

S6. Contraindication

- Related to: precautions.
- Definition: refer a patient whose circumstances lead to a partial or total rejection of a treatment.
- Inclusion criteria:

- Risk markers:
 - Age: embryo, foetus, neonate, infant, child, adolescent, adult, elderly person.
 - Sex: women, man, first menstruation, menstruation, pregnancy, lactation, menopause, andropause.
 - Race or ethnic group.
- Physical conditions:
 - Allergy or hypersensitivity to an active substance or excipient.
 - Disease: alcoholism, blood coagulation disorder, asthma, diabetes mellitus, peptic acid disease, coeliac disease, epilepsy, phenylketonuria.
 - Consumption of incompatible medicines, anticoagulants, oral contraceptives.
 - Immunosuppression.
 - Failure: hepatic, renal respiratory.
 - Intolerance to: fructose, galactose, lactose.
 - Disabled or handicapped: blind, deaf.
 - Organ transplant.
- Psychiatric conditions:
 - Dementia.
 - Mentally retarded.
- Social conditions:
 - Capacity to drive or handle, machinery, tools.
 - Use of: contact lenses, prosthesis.
- Exclusion criteria:
 - Occurrence of an allergic reaction [S3].
- Example 1: patient with sporadic episodes of gout, is prescribed chlorthalidone for hypertension.

S7. Medicalisation

- Related to: consumerism, dehumanising therapy, doping (sport or work), institutionalisation, massification, multi-medication, placebo, self-medication, technification, therapeutic obstinacy, treatment cascade.
- Definition: refer a patient due to excessive consumption of unjustified or dangerous medicines.
- Inclusion criteria:
 - Medicines taken by the patient with no professional guidance.
 - Medicines provided by the patient's family or friends.
 - Medicines administered by the socio-healthcare system (prisons, schools, hospitals, old people's homes).
- Exclusion criteria:
 - Problems of effectiveness and efficiency in pharmaco-therapeutic consumption [E8].
 - Addiction or dependence [S4].
 - Patient request for treatment [N8].
- Example 1: patient who has been prescribed alprazolam delayed release together with alprazolam, has difficulty in speaking.

S8. Non-regulated substance

- Related to: altered or counterfeit product, designer drug, illegal substance, miracle product.
- Definition: refer a person consuming non-regulated products that are harmful or could damage his/her health, without such person being addicted to the product.
- Inclusion criteria:
 - Non-authorized treatment.
 - Unknown substances.
 - Unknown composition.
- Exclusion criteria:
 - Legally controlled, regulated active substances [E3].
 - Known pharmaceutical form/presentation [E4].
 - Dosing [E5].
 - Quality [E6].
 - Storage [E7].
 - Consumption [E8].
 - Addiction or dependence [S4].
- Example 1: patient who is taking a miracle product to lose weight is having health problems.
- Example 2: patient who is using a foreign medicinal product with unknown composition and who is having health problems.

S9. Data / confidentiality

- Related to: clinical documentation, communication pathway, data reliability, data veracity, encoding, information integrity, information privacy, information systems, masking, patient and/or medicinal product identification, personal data, professional secrecy, protection of patients' privacy, safety (clinical, medicinal products, patient), safety indicators.
- Definition: refer a person due to problems of personal or treatment data safety.
- Inclusion criteria:
 - Falsification of healthcare data.
 - Violation of confidentiality.
 - Lack of safety in the recording, storage, transmission or use of data.
- Exclusion criteria:
 - Administrative activities that do not imply danger or a safety risk to the patient [N7].
 - Prescription and dispensing conditions [E2].
- Example 1: patient hands over a prescription that appears to have been manipulated (data on medicine, patient or doctor).
- Example 2: patient who does not want his data to be recorded electronically for safety or confidentiality reasons.
- Example 3: police request for the personal health data of a specific patient.

CPR INDEX OF TERMS

Alphabetic list of words or expressions used in the rubric titles (upper case) and in the “related to” section (lower case), followed by the alphanumerical code corresponding to the MEDAFAR Classification of Pharmaco-Therapeutic Referrals.

Active dispensing [E2]	Broken packaging [E2]
ACTIVE INGREDIENT [E3]	Bureaucratic tasks [N7]
Acupuncture [I6]	Burned-out [N2]
ADDICTION [S4]	Can be divided [E4]
Administration route [E8]	Capsules [E4]
Administration route, auricular [E8]	Change [N1]
Administration route, cutaneous [E8]	Chemotherapy [I6]
Administration route, inhalation [E8]	Clinical benefit [E9] [I7]
Administration route, intramuscular [E8]	Clinical documentation [S9]
Administration route, intravenous [E8]	Clinical relevance [S5]
Administration route, ocular [E8]	Clinical use [E1]
Administration route, oral [E8]	Co-administration [E8]
Administration route, parenteral [E8]	Colorant [E3]
Administration route, rectal [E8]	Combined treatment [E1]
Administration route, topical [E8]	Communication pathway [S9]
Administration, accidental [S1]	Community pharmacy [I8]
Administration, concomitant [E8]	Co-morbidity [I2]
Administration, concurrent [E8]	COMPLEMENTARY EXAMINATION [I3]
Administration, involuntary [S1]	Complementary study [I3]
Administration, voluntary [S1]	COMPLEMENTARY TEST FOR TREATMENT
ADMINISTRATIVE ACTIVITY [N7]	CONTROL [N6]
Administrative error in dispensing [N7]	Completion of records [E2]
Administrative error in prescription [N7]	Complex medicinal product [E8]
Adverse drug reaction [S5]	Compliance [E8]
Alarm [I1]	Composition [E3]
Allergic reaction [S3]	CONFIDENTIALITY [S9]
ALLERGY [S3]	Consultation [N5]
Ambulatory [I8]	Consumerism [S7]
Ampoule [E4]	CONSUMPTION [E8]
Analysis [I7]	Contagion [N3]
Application [E8]	Container [E4]
Authorised prescription [E2]	Contamination [N3]
Autolysis [S1]	Contamination, acoustic [N3]
Benefit [E9]	Contamination, chemical [N3]
Benefits, healthcare [I8]	Contamination, microbiological [N3]
Benefits, non healthcare [I8]	Contamination, nuclear [N3]
Bioavailability [E3]	CONTRAINDICATION [S6]
Bioequivalence [E3]	Contrast [E3]
Blister [E4]	Cost [E9]
Brand name [E3]	Cost-benefit analysis [E9]

Cost-effectiveness analysis [E9]
 Cost-utility analysis [E9]
 Co-treatment [S2]
 Cream [E4]
 Cure [I7]
 DATA [S9]
 Data veracity [S9]
 Defect [E6]
 Dehumanising therapy [S7]
 Delayed release [E4]
 DEPENDENCE [S4]
 Dependence on illegal substances [S4]
 Dependence on legal substances [S4]
 Designer drug [S8]
 Diagnosis [I2]
 Diagnostic test [I3]
 Disease [I2]
 DISPENSING CONDITIONS [E2]
 Dispersible [E4]
 Doctor's surgery [I8]
 Domestic violence [N2]
 Doping (sport) [S7]
 Doping (work) [S7]
 Doping [S7]
 DOSAGE [E5]
 Dose [E5]
 Dose adjustment [E5]
 Dose, loading [E5]
 Dose, multiple [E5]
 Dose, recommended [E5]
 Dose, single [E5]
 Doubt [I1]
 Doubts on diagnosis [N8]
 Doubts on treatment [N8]
 Drinkable [E4]
 Drug [E3]
 Drug of choice [E1]
 Drug related negative outcome [E9] [I7]
 Drug related problem [I2]
 Drug-drug incompatibility [S2]
 Drug-therapy follow-up [E2]
 Duplication or replication [E5]
 Duration of action [E5]
 Effect, teratogenic [S1]
 EFFECTIVENESS, UNSPECIFIED [E0]
 Effects, adverse [S5]
 Effects, collateral [S5]
 Effects, undesirable [S5]
 Effects, unexpected [S5]
 Effervescent [E4]
 EFFICIENCY, UNSPECIFIED [E0]
 Elimination [E7]
 Encoding [S9]
 Epidemic [N3]
 Epidemiological information [I4]
 Episode [I2]
 Equivalence [E3]
 Evaluation [I7]
 Evidence [N1]
 Evolution [I4]
 EXCIPIENT [E3]
 Experiments with medicinal products [I5]
 Expiry [E6]
 Exposure to toxic substance [S1]
 Fear [I1]
 Fear of having a disease [N8]
 Format [E4]
 Generic medicinal product [E3]
 Generic medicinal product [E3]
 Good quality [E6]
 Good tolerability [S5]
 Health centre [I8]
 Health maintenance [I4]
 HEALTH PROBLEM [I2]
 Health promotion [I4]
 Health protection [I4]
 Healthcare cover [I8]
 HEALTHCARE EDUCATION, UNSPECIFIED [I0]
 HEALTHCARE PROVISION [N5]
 Herbal drugs [I6]
 Hospital [I8]
 House-bound [N2]
 HOW SUPPLIED [E4]
 Hydrotherapy [I6]
 Hygiene-nutrition measures [I6]
 Hypersensitivity [S3]
 Idiopathic [E0] [S0]
 Illegal substance [S8]
 Incomplete healthcare documentation [N7]
 Incorrect healthcare document [N7]
 INDICATION [E1]
 Individual healthcare card [I8]
 Information integrity [S9]
 Information privacy [S9]

Information systems [S9]
 INFORMATION, UNSPECIFIED [I0]
 Informed consent [E2]
 Informed consent, oral [E2]
 Informed consent, written [E2]
 Ingestion, accidental [S1]
 Ingestion, involuntary [S1]
 Ingestion, voluntary [S1]
 Inherited [N4]
 Injectable [E4]
 INN [E3]
 Institutionalisation [S7]
 Instructions for use [I5]
 Insurance, health [I8]
 Insurance, private health [I8]
 Insurance, public health [I8]
 Intensive treatment [E1]
 INTERACTION [S2] [E5]
 Interactions, medicinal [S2]
 Interactions, pharmacological [S2]
 International non-propriety name [E3]
 Intoxication [S1]
 Investigational study on medicinal products [I5]
 Last will and testament [I8]
 Life style [I4]
 Limitation, socio-economical [E2]
 Limitations [I7]
 Limitations, legal [E2]
 Living will [I8]
 Magistral formula [E3] [I5]
 Maintenance [E7]
 Maintenance treatment [E1]
 Management [I8]
 Manipulation [E8]
 Masking [S9]
 Massification [S7]
 Medical care [N5]
 Medical prescription [E2]
 MEDICALISATION [S7]
 Medicinal product [E3] [I5]
 Medicinal product [E3] [I5]
 Medicinal product for compassionate use [E2]
 Medicinal product for hospital diagnosis [E2]
 Medicinal product for hospital use [E2]
 Medicinal product identification [S9]
 Medicinal product, altered [S8]
 Medicinal product, complex [E8]
 Medicinal product, counterfeit [S8]
 Medicinal product, essential [E3]
 Medicinal product, foreign [E2]
 Medicinal product, restricted use [E2]
 Medicinal product, specially controlled [E2]
 Method of administration [E8]
 Method of use [E8]
 Ministry of health [I8]
 Ministry of social welfare [I8]
 Minor symptoms [N1]
 Minors [E2]
 Miracle product [S8]
 Morbidity [I2]
 Mortality [I2]
 Multi-medication [S7]
 National Health System [I8]
 NEED, UNSPECIFIED [N0]
 Non compliance to treatment [E8]
 Non-drinkable water [N3]
 NON-PHARMACOLOGICAL TREATMENT [I6]
 Novel treatment [E1]
 Ointment [E4]
 Ointment [E4]
 ON PATIENT'S REQUEST [N8]
 Opinion, diagnostic [I2]
 Opinion, medical [I2]
 Opioid [E2]
 Optician [I8]
 Organ donation [I8]
 OTC [E3]
 OTC medicinal product [E3]
 OTHER ADVERSE EFFECTS [S5]
 Outbreak [N3]
 Overdose [S1]
 Overdosing [E5]
 Package leaflet [I5]
 Patch [E4]
 Patient doubt [N8]
 Patient duties [I8]
 Patient fears [N8]
 Patient identification [S9]
 Patient requests [N8]
 Patient rights [I8]
 Patient satisfaction [E9]
 Patient, deprived [E2]
 Patient, disabled [E2]
 Patient, homeless [E2]

Patient, in an illegal situation [E2]
Patient, isolated at home [E2]
Personal data [S9]
Pessaries [E4]
Pharmaceutical care [N5]
PHARMACEUTICAL FORM [E4]
PHARMACOLOGICAL TREATMENT [I5]
Pharmacotherapy [I5]
Phototoxicity [S1]
Physical abuse [N2]
Physical exercise [I6]
Physiotherapy [I6]
Pill [E4]
Placebo [S7]
Podology [I8]
Poor quality [E6]
Poor tolerability [S5]
Posology [E5]
Poverty [N2]
Precautions [S6]
Preparation [E8]
PRESCRIPTION CONDITIONS [E2]
Prescription non-subsidised [E2]
Prescription, active [E2]
Prescription, medical [E2]
Prescription, narcotics [E2]
Prescription, occupational accident [E2]
Prescription, pensioners [E2]
Prescription, private [E2]
Prescription, toxic syndrome [E2]
Preservative [E3]
PREVENTION [I4] [N4]
Prevention tertiary [I4]
Prevention, disease [I4]
Prevention, primary [I4]
Prevention, quaternary [I4]
Prevention, secondary [I4]
Problem of supply [E2]
Professional exhaustion [N2]
Professional secret [S9]
Prognosis [I4]
Protection of patients' privacy [S9]
Provisional assignment [E0] [I0] [N0] [S0]
Psychotherapy [I6]
Public health [I8]
QUALITY [E6]
Quality assurance [E6]
Quarantine [N3]
Radiotherapy [I6]
REASON FOR CONSULTANCY [I1]
Reason for consultancy [I1]
Reduced contribution [E2]
Reduction of morbidity-mortality [E9] [I7]
Regimen [E5]
Regional health services [I8]
Rehabilitation [I6]
Reimbursement [E2]
Reliability of the data [S9]
Request for a complementary test [N8]
Request for health education [I1]
Request for information [I1]
Request for treatment [N8]
Request of a caregiver [N8]
Request of a family member [N8]
Request of a friend [N8]
Resistance to antibiotics [N3]
Resolution [I7]
Restriction of the indications [E1]
RESULT [E9] [I7]
Results, desired [I7]
Results, expected [I7]
Results, found [I7]
RISK [I4]
Risk factor [I4]
Risk marker [I4]
Sachets [E4]
Safety indicators [S9]
Safety of medicinal products [S9]
Safety, clinical [S9]
Safety, patient [S9]
SAFETY, UNSPECIFIED [S0]
Selectivity [E1]
Self-medication [S7]
Sequela [I7]
Service portfolio [I8]
Shampoo [E4]
Shortage [E2]
Signs [N1]
Single dose [E4]
SITUATION [I1]
Social services [I8]
Solution [E4]
Special precautions for disposal [E7]
Special precautions for storage [E7]

Special precautions for transport [E7]
 Special precautions for use [I5]
 Special warnings for use [I5]
 Specificity [E1]
 Spray [E4]
 Stock availability [E2]
 Storage [E7]
 STORAGE [E7]
 Storage conditions [E7]
 Storage instructions [E7]
 Substance abuse, illegal [S4]
 Substance abuse, legal [S4]
 SUBSTANCE, NOT REGULATED [S8]
 Substitution [E2]
 Suicidal thoughts [S1]
 Suicide [S1]
 Suicide attempt [S1]
 Summary of Product Characteristics [I5]
 Suppository [E4]
 Surgery [I6]
 Suspicion [N1]
 Sweeteners [E3]
 Symptomology [N1]
 Syrup [E4]
 SYSTEM, HEALTHCARE [I8]
 SYSTEM, SOCIAL [I8]
 SYSTEM, SOCIO-HEALTHCARE [I8]
 Tablets [E4]
 Technification [S7]
 Teratogenic [S1]
 Therapeutic application [E1]
 Therapeutic cascade [S7]
 Therapeutic equivalent [E3]
 Therapeutic indication [E1]
 Therapeutic levels [E5]
 Therapeutic obstinacy [S7]
 Therapeutic use [E1]
 Therapeutic usefulness [E9]
 Tolerability [S5]
 Tolerance [S4]
 Toxic reaction [S1]
 TOXICITY [S1]
 TREATMENT BASED ON ECONOMICAL ISSUES [N2]
 TREATMENT BASED ON PUBLIC HEALTH ISSUES [N3]
 TREATMENT BASED ON SIGNS [N1]
 TREATMENT BASED ON SOCIAL ISSUES [N2]
 TREATMENT BASED ON SYMPTOMS [N1]
 TREATMENT BASED ON WORK ISSUES [N2]
 Treatment compliance [E8]
 TREATMENT GOAL [E1] [I7]
 Treatment monitoring [N6]
 Treatment, first choice [E1]
 Treatment, second choice [E1]
 Treatment, third choice [E1]
 Trips [N4]
 Uncertain classification [E0] [I0] [N0] [S0]
 Underdosing [E5]
 Unhealthiness [N3]
 Unknown cause [E0] [S0]
 Unspecified [E0] [I0] [N0] [S0]
 Use [E8]
 Use of treatment [E8]
 Vaccines [N4]
 Vaginal ring [E4]
 Veterinary clinic [I8]
 Withdrawal syndrome [S4]
 Yield [E9]

EVALUATION AND FOLLOW-UP

The aim of this project is not only the publication of the Classification of Pharmaco-Therapeutic Referrals but its use by healthcare professionals with a view to improving and updating it.

The CPR may be used by anyone. Although it has copyright, the authors have decided to allow the scientific community to have unrestricted use. However, when applicable it should be cited.

Developing this classification has been a long and arduous task and is based on inter-professional consensus. We would like to invite readers to use the CPR and apply it in their daily practice and in research studies. We would also like readers to share their comments with us and the rest of the healthcare profession with the aim of perfecting this Classification.

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ACRONYMS

ADR: Adverse drug reaction.

ATC: Anatomical, Therapeutic, Chemical classification system.

CPh: Community pharmacists (or pharmacist working in a pharmacy).

CPR: Classification of Pharmaco-Therapeutic Referrals.

DNO: Drug-related negative outcome.

DOT: Directly observed treatment.

DRAE: Spanish Dictionary of the Royal Academy.

DRP: Drug-related problems.

FD: Family doctor.

HE: Healthcare education (or health education).

ICD-10: International Classification of Diseases, tenth edition.

ICPC-2: International Classification of Primary Care, second edition.

PC: Primary care.

PhC: Pharmaceutical care.

PTF: Pharmaco-therapeutics follow-up.

SEMERGEN: Spanish Society of Primary Care Doctors.

WHO: World Health Organisation.

WONCA: World Organisation of General Practitioners/Family Doctors.

GLOSSARY

For the key words used in this document the authors agreed on the following definitions:

Accessibility: efficient provision of healthcare services unrestricted by organisational economical, cultural and emotional barriers.

Action: exercising the ability to do something.

Adverse drug reaction (ADR): a reaction which is noxious and unwanted and which occurs at doses normally used for the diagnosis or therapy of a disease or for the modification of a physiological function.

Clinical information: information that provides and enhances knowledge on the state of health or disease of a certain person. It includes healthcare and therapeutic information (LRAP).

Complex medicinal product (CMP): a medicinal product that requires the learning of an administration technique, a preparation technique or both.

Comprehensiveness: capacity to resolve the majority of health problems (biological, psychological and social) of the population under care.

Consumer (healthcare consumer): someone who uses, is affected by, or could be assumed to use a certain healthcare service.

Continuity: follow-up of a patient's specific problem by the same doctor.

Coordination: sum of the actions and efforts of the primary care services.

Cost-benefit analysis: an economical analysis that converts effects into the same monetary terms as the costs and compares them.

Cost-effectiveness analysis: an economical analysis that converts effects into health terms and describes the costs for some additional health gain (e.g. cost per additional cardiovascular accident prevented).

Cost-utility analysis: an economical analysis that converts effects into personal preferences (or utilities) and describes how much it costs for some additional quality gain (e.g. cost per additional quality-adjusted life-year).

Datum: an item of factual information in a format that enables it to be processed.

Diagnosis: that part of medicine the aim of which is to identify a disease from its signs and symptoms.

Dispensing: professional activity by which the pharmacist, on request for a medication, systematically verifies that the patient or caregiver has sufficient information for its effective and safe use and who, with the available information, assesses if the medication is suitable for such person. The pharmacist then supplies the patient with the medication according to regulation currently in effect.

Drug-related negative outcome (DNO): negative clinical outcome that does not meet the objective of the pharmacotherapy. It is actually or potentially related to the use of medicinal products. (FORO 2008).

Drug-related problems (DRP): an event or circumstance that actually or potentially causes a drug related negative outcome (DNO). DRPs are elements of the process that puts the user at a greater risk of suffering DNOs. (FORO 2008).

Effectiveness: capacity to achieve the desired or anticipated effect in real life circumstances. Degree to which an intervention improves the result in a patient in everyday medical practice.

Efficiency: the capacity to achieve the programmed objectives and goals with the minimum use of resources and time. It is the rational use of available resources to meet a predetermined objective.

Episode (or disease episode): the time elapsed between the onset of the signs and symptoms of a health problem to its resolution.

Episode of care: one or more encounters and their relationship with the passage of time (transition). These encounters are defined as: reasons for visit, health / diagnostic issues and processes or care / interventions and procedures.

Health (or healthcare) education: activities directed towards increasing the capacity of individuals and the community to participate in and be responsible for promoting healthcare and for maintaining and recovering their health.

Health centre: a physical structure in which family doctors/general practitioners and community nurses provide healthcare for patients. A building in which primary care professionals perform clinical, teaching, research and management functions through prevention, diagnostic treatment and/or rehabilitation activities, in the health-disease processes.

Health problem: all that which requires, or could require, action by a healthcare provider.

Healthcare information: information which enables the patient to make the clinical decision that best suits his/her interests: the patient needs to know the nature of his/her illness and the diagnostic options. (LRAP) – (Spanish Law 4/2002 on the regulation of patient autonomy).

Healthcare professional: qualified personnel who provide services in the healthcare sector. It includes doctors, pharmacists, dentists, nurses, physiologists, physiotherapists and others.

Information: knowledge of events or situations communicated to a person or a group. Information can be created, maintained, stored and transmitted. The organisation of all work processes are based on information.

Longitudinality: the same doctor provides ongoing care for a patient's health problems.

Medicalisation: the process by which non-medical problems are treated as medical issues, usually in terms of disease or disorder.

Medication error: any preventable event that may cause or lead to inappropriate use of medication or patient harm while the medication is in the control of the health care professional, patient, or consumer. These events may be related with professional practice, with procedures or systems, including errors in prescription, communication, labelling, packaging, denomination, preparation, dispensation, distribution, administration, education, follow up and use.

Motive or reason for consultancy: that which, according to the patient, has led him/her to seek healthcare. That which the patient explains before the healthcare provider judges its validity.

Need: situation in which a person requires assistance or help. In PhC, a health problem related to the lack of necessary medication or the use of unnecessary medication is understood as being a situation of need.

Outcome: that which is achieved after a professional action in collaboration with the patient. The change in a state of health attributable to the healthcare intervention: it may be positive or it may be negative due to excess of care or deficiency in provision of care.

Patient: a person that consults a professional healthcare provider.

Personal data: any information relating to an identified or identifiable natural person.

Pharmaceutical care: a professional practice in which the pharmacist takes responsibility for the patients pharmaco-therapy through the detection, prevention and resolution of drug related problems (DRP), in a continuous, systemised and documented manner in collaboration with the patient and with other healthcare professionals in order to achieve definite outcomes which improve the patient's quality of life.

Pharmaco-therapeutic follow-up (PTF): healthcare service for patients receiving any kind of pharmacological treatment. The responsibility is shared by all healthcare professionals involved in such treatment.

Pharmaco-therapeutic indication: the service provided by the pharmacist at the request of a patient or user who does not know which medication he/she needs for a specific health problem.

Pharmaco-therapy: includes any type of therapy, but priority is given to drugs.

Pharmacy: healthcare establishments that dispense medicinal products to patients - providing advice and information on their use -, prepare magistral and officinal formulae, and collaborate with the patients and public administrations in the rational use of medicine and in different health care services of general interest.

Process: that which the healthcare professional performs or instructs to be performed. The relationship between professionals and the population, and between the professionals themselves.

Quaternary prevention: intervention that prevents or attenuates the consequences of unnecessary or excessive healthcare activity. Prevention attempts to avoid the very common adverse effects of healthcare activity.

Risk factor: aspects of a person's condition, lifestyle or environment that is modifiable and increases the probability of occurrence of a disease. For example, cigarette smoking is a risk factor for lung cancer.

Risk marker: an intrinsic characteristic of a person that cannot be modified, and that increases the likelihood of a disease (for example, age, sex, race).

Safety: this aims to minimise the risk and conditioning factors associated with the use of diagnostic and therapeutic methods or patient information. Quality or condition that frees the patient of the risks and hazards inherent in clinical activity.

Situation: event, at a certain time and place, that affects the patient's use of medicinal products.

Structure: healthcare system resources (human, material and financial resources)

Therapeutic equivalent: a drug that differs in composition and chemical entity from the original, but its pharmacological and therapeutic activities are similar.

Therapeutic information: in addition to knowledge of the disease it implies knowledge of the different treatment possibilities, evolution and prognosis. (LRAP)

Treatment: a therapeutic approach proposed by a doctor to resolve a patient's health problem. This may be by medicines, exercise or rest, changes in diet, hygiene or life style.

Visit or encounter: the interchange of information on health problems between a patient (or his/her representative, such as the mother of a baby) and one or more healthcare professionals. When the encounter with the patient takes place at the health professional's surgery or place of work, it is called a consultation, which could be:

- direct (face to face),
- indirect (by telephone, internet, or through a third party).

When the encounter takes place at the patient's home it is called a home visit.

WEB SITES

Agency for Healthcare Research and Quality: www.ahrq.gov

Anatomical Therapeutic Chemical (ATC) classification: www.whocc.no/atcddd/

Australian Adverse Drug Reactions Bulletin: www.tga.gov.au/adr/aadrb.htm

Banque de Données Automatisée sur les Médicaments: www.biam2.org

Canadian Institute for Health Information (CIHI): <http://secure.cihi.ca/cihiweb/>

Centers for Disease Control and Prevention (CDC): www.cdc.gov

DrugDex Evaluation. Micromedex: www.micromedex.com

Drug interactions: www.ratiopharm.es/servicios/inter.htm

Esteve Pharmaceutical company: www.esteve.com

European Medicines Agency (EMA): www.emea.europa.eu

Food and Drug Administration (FDA). MedWatch: www.fda.gov/medwatch/

General Counsel of Pharmacists Data Base: www.portalfarma.com/home.nsf

ICD-9: www.icd9data.com

ICD-9-CM: www.cdc.gov/nchs/icd9.htm

ICD-10: www.who.int/classifications/icd/en/index.html

ICPC-2: http://en.wikipedia.org/wiki/International_Classification_of_Primary_Care

Institute for Safe Medication Practices: www.ismp.org

Joint Commission International Centre for Patient Safety: www.jcpatientsafety.org/

List of Medical Classification Systems: http://en.wikipedia.org/wiki/Medical_classification

Medline Plus: www.nlm.nih.gov/medlineplus/medlineplus.html

Ministry of Health and Consumer Affairs: www.msc.es

National Coordinating Council for Medication Error Reporting and Prevention (NCCMERP):
www.nccmerp.org

National Council on Patient Information and Education: www.talkaboutrx.org

National Health System Therapeutic Information:

www.msc.es/biblioPublic/publicaciones/recursos_propios/infMedic/home.htm

National Patient Safety Agency: www.npsa.nhs.uk

National Patient Safety Foundation: www.npsf.org

Patient Safety: www.seguridaddelpatient.es

Pharmaceutical Care Foundation of Spain: www.pharmaceutical-care.org

Regional Drug and Therapeutics Centre: www.nyrdtc.nhs.uk

Research Centre for clinical safety. Avedis Donabedian Foundation: www.fadq.org

Safety Improvement for Patients In Europe (SIMPATIE project): www.simpatie.org/Main

Spanish Medicines Agency: www.agemed.es

Spanish Society of Primary Care Doctors: www.semergen.es

Summary of Product Characteristics texts:

<https://sinaem4.agemed.es/consaem/fichasTecnicas.do?metodo=detalleForm>

Therapeutic Prescription guide: www.imedicinas.com/GPTage/

United States Pharmacopoeia: www.usp.org

Vademecum: www.vademecum.es

World Health Organisation: www.who.int/patientsafety/en/

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APPENDICES

Appendix 1. MEDAFAR suggestions form

Proposed change to the Classification of Pharmaco-Therapeutic Referrals.

Proposed by	Name:
	Address:
	Telephone No.:
	E-mail address:
Proposed change	
Location	Section:
	Page/s:
Rationale	
Reference	

Correspondence to:

- Fundación Pharmaceutical Care España
Rosellón, 331-333, entresuelo 2ª; 08037 Barcelona
E-mail: secretaria@pharmaceutical-care.org
- Sociedad Española de Médicos de Atención Primaria (SEMERGEN)
Narvéez, 15, 1º Izquierda; 28009 Madrid
E-mail: secretaria@semergen.es

Appendix 2. Model of an inter-professional referral form

PHARMACY:

Postal address:

Telephone..... Fax No:

E-mail address: Date:

For the attention of Dr:

The patient Mr./Ms.:

visited my pharmacy for the following reason:

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Having evaluated the situation I consider this patient should be referred to you for your evaluation:

.....

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.....

.....

With kind regards:

Signed.:

Pharmaceutical Association Member Number:

RESPONSE (if necessary):

.....

.....

.....

.....

Date: Signature: