



SPECIAL ARTICLE

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A new definition and refocus of pharmaceutical care: the Barbate Document

Una nueva definición y reenfoque de la atención farmacéutica: el Documento de Barbate

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Abstract

Objective: To propose an updated definition of Pharmaceutical Care based on the Capacity-Motivation-Opportunity (CMO) model and on the key elements and optimal activities for its development that guarantee the highest levels of quality and excellence in this professional activity.

Method: The consensus was developed by a working group composed of members of the Spanish Society of Hospital Pharmacy and other pharmacists from different healthcare fields. A literature review of PubMed was conducted of the available scientific evidence on pharmaceutical healthcare models and activities with the greatest impact and ease of implementation. A working definition was developed and the initiatives chosen as key elements were collected and included in each pillar of the proposed model. After creating an initial list of activities and terms, the working group reviewed it and made corrections or proposed new activities. In addition, the definitions of the three key elements of the CMO model were agreed upon: Capacity-Motivation-Opportunity. In order to incorporate all appropriate suggestions and contributions before finalizing the consensus, the final draft was sent to the different scientific, pharmaceutical, and medical societies as well as patient associations with which the Spanish Society of Hospital Pharmacy has a collaboration agreement.

KEYWORDS

Pharmaceutical Care; Pharmacy; Patient Outcomes Assessment; Healthcare Delivery; Clinical Pharmacy Service; Pharmacist; Hospital Pharmacy Service.

PALABRAS CLAVE

Atención farmacéutica; Farmacia; Valoración de resultados en salud; Prestación de atención sanitaria; Farmacia clínica; Farmacéutico; Farmacia hospitalaria.

Resumen

Objetivo: Proponer una definición actualizada de atención farmacéutica, basada en el modelo capacidad-motivación-oportunidad (CMO), así como los elementos clave y las actividades óptimas para su desarrollo que garanticen los más altos niveles de calidad y excelencia en esta actividad profesional.

Método: Se constituyó un grupo de trabajo compuesto por miembros de la Sociedad Española de Farmacia Hospitalaria y farmacéuticos de diferentes ámbitos asistenciales. Se realizó una revisión bibliográfica en PubMed sobre la evidencia científica disponible acerca de modelos de atención farmacéutica y actividades con mayor impacto y facilidad de implantación. Se elaboró una propuesta de definición y se extrajeron las iniciativas elegidas como elementos clave, distribuyéndolas en cada pilar del modelo propuesto. Tras unificar un primer listado de actividades y términos, el grupo de trabajo revisó y realizó correcciones o propuso nuevas actividades. Se consensaron, adicionalmente, las definiciones de los tres elementos clave del modelo CMO: capacidad-motivación-oportunidad. El borrador final fue enviado a las diferentes sociedades científicas, farmacéuticas y médicas, así como a las asociaciones de pacientes con las que la Sociedad Española de Farmacia Hospitalaria tiene convenio de colaboración, a fin de incorporar nuevas sugerencias y aportaciones antes del consenso final.



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<http://creativecommons.org/licenses/by-nc-sa/4.0/>
La revista Farmacia no cobra tasas por el envío de trabajos,
ni tampoco por la publicación de sus artículos.

Results: The definition of consensual Pharmaceutical Care was “Any professional activity by which the pharmacist is linked to the patient (and/or caregiver) and other healthcare professionals, to attend to the patient according to their needs, setting out strategies to align and achieve the short- and medium-/long-term objectives of pharmacotherapy and incorporating new technologies and the means available to continuously interact with ment was reached on the definitions of the three key elements of the CMO model. Finally, 27 key elements for the development of pharmaceutical activity were identified and included in the three pillars of the model.

Conclusions: A new definition of Pharmaceutical Care has been agreed upon that refocuses this professional activity, allowing us to advance within the multidisciplinary working approach toward a longitudinal and multidimensional approach to the patient.

Introduction

At the beginning of the 1990s, when the concept of Pharmaceutical Care (PhC) laid its foundations and took its first steps, few authors, even the most optimistic ones, thought that in the intervening decades PhC would contribute so much not only to patients, but to the pharmaceutical profession itself. However, in every sense, the context has undergone radical changes worldwide. The pharmacological arsenal is much more complex and specialized, there is a new healthcare and regulatory framework, and even a different social framework. Currently, patients are far more active in their treatment, leading to a softening in paternalistic attitudes on the part of professionals toward them. Furthermore, new technologies today play such a relevant role that it would be a serious error to omit them from PhC activity.

In recent years, several authors have agreed that Hepler and Strand's classic definition of PhC has already “hit a ceiling” and needs transforming rather than changing, marking the way to reenvisioning the definition of this activity such that it is much more in line with the times and the needs of the patients^{2,5}. There is also an obvious need for our participation in improving therapeutic outcomes. Thus, we have to meet several challenges, such as complex treatments for chronic diseases that require active patients trained in self-care outside the protected and controlled environment of the hospital setting. In addition, we have to avoid loss of effectiveness due to poor adherence or persistence and prevent iatrogenic events due to avoidable interactions in polypharmacy regimes. Finally, new issues have to be taken into account, such as aging, immunosenescence, fragility, deprescription, or the high economic impact of certain medications requiring careful management in order to optimize outcomes^{6,7}.

Over this period, the advancement of the pharmaceutical profession, in all its aspects, has meant that some professional environments have adapted to healthcare challenges according to their own capacities. In some cases, the regulations that are in force at any one time and the political environment have led to worrying variations in healthcare. At the very least, this situation has to be considered a weakness of our professional model, which, therefore, does not guarantee our contribution to obtaining the best health outcomes in patients.

Blackburn *et al.*⁸ proposed that the classic definition of PhC should be redefined to refocus on high-priority patients, differentiate between patients, and include other characteristics beyond their pharmacotherapy. Based on this viewpoint, other authors and societies have also advocated redefining their role⁹.

Although it seems obvious that we need to rethink healthcare activity, what is less clear is the strategy to follow to face this challenge and be able to provide suitable responses. However, at the international level, little has been done to address this issue in more depth.

Thus, in Spain in 2014, the Spanish Society of Hospital Pharmacy (SEFH) implemented the MAPEX project (“Strategic map for outpatient care”). This initiative arose in the setting of PhC for patients attending outpatient clinics of hospital pharmacy services. Fundamentally, it was a response to a need to transform PhC activity in the face of an alarming professional and healthcare situation, which was due to increasing numbers of patients needing treatment and that was not matched by increases

Resultados: La definición de atención farmacéutica consensuada fue “La actividad profesional por la cual el farmacéutico se vincula con el paciente (y/o cuidador) y el resto de profesionales sanitarios, para atender a este en función de sus necesidades, planteando las estrategias para alinear y alcanzar los objetivos a corto y medio/largo plazo en relación a la farmacoterapia e incorporando las nuevas tecnologías y medios disponibles para llevar a cabo una interacción continuada con el mismo, con el fin de mejorar los resultados en salud”. Se han identificado 27 elementos clave, distribuidos entre los tres pilares del modelo, para desarrollar esta actividad.

Conclusiones: Se ha consensado una nueva definición de atención farmacéutica que permitirá reenfoque esta actividad profesional y avanzar desde el trabajo multidisciplinar hacia el enfoque longitudinal y multidimensional del paciente.

in structural or professional resources. In the beginning, the MAPEX project had a very clear consensual vision: “that of being the bridge that links the patient to their health outcomes and to the healthcare system with maximum efficiency”. In Spain, with the help and participation of other healthcare professionals, more than 200 hospitals and a large number of pharmacists have already collaborated in creating and developing a range of specific initiatives for patients in oncohematologic, neurodegenerative, immune-mediated, and viral disease settings¹⁰. From the very beginning, it was clear that the actions to be conducted required working at the micro level (local settings), meso level (political bodies or regulatory decisions), and macro level (identifying and acting on health trends that would affect this professional activity in the near future). In addition, the instruments, processes, and outcomes within this new work model are aimed at placing the patient at the centre of our activity. The new work model should include the following key elements: an orientation toward individual and population needs, efficiency, technical quality, involvement, co-responsibility, accessibility, and professional coordination. Thus, within the MAPEX project, the new PhC model was based on three fundamental pillars —Capacity-Motivation-Opportunity— and was thus called the CMO model¹¹.

Finally, in addition to the relevance of multidisciplinary work, there is evidence of the increasingly important need for coordination between different healthcare levels and a multidimensional approach to the relationships with patients^{12,13}.

Based on the three pillars of the CMO model, the objective of this document is to provide an updated definition of PhC and the optimal activities required to fulfil this definition while guaranteeing the highest levels of quality and excellence. In addition, we clearly define and differentiate each of the three pillars on which this updated definition is based.

Methods

A working group was formed comprising members of the SEFH and pharmacists from different healthcare fields (specialties, community, and primary care) belonging to various pharmaceutical and medical scientific societies.

A literature search of PubMed was conducted of the available scientific evidence on PhC models as well as PhC activities with the greatest impact and ease of implementation regardless of the level of care where such activity is conducted. The following equivalent Spanish and English keywords were used in combination with each other: Atención Farmacéutica/Pharmaceutical care, Farmacia/Pharmacy, Farmacia Hospitalaria/Hospital Pharmacy, entrevista motivacional/motivational interview, tecnologías para la salud/healthcare technologies, resultados en salud/healthcare outcomes. The search was conducted from January 2010 to April 2019.

Subsequently, a working definition was developed and the initiatives chosen as key elements were collected and included in each pillar of the proposed model.

After creating an initial list of activities, the draft document was reviewed, assessed, and agreed on by all participants. In order to incorporate all appropriate suggestions and contributions, the final draft document was sent

to the different scientific, pharmaceutical, and medical societies as well as patient associations with which the SEFH has a collaboration agreement. Finally, a document was prepared, which included the definition and the selected activities, and approved by the entire working group. The document was presented at the aCadeMiO PhC scientific conference on May 31, 2019¹⁴.

Results

The consensus definition of PhC was as follows: "Any professional activity by which the pharmacist is linked to the patient (and/or caregiver) and other healthcare professionals, to attend to the patient according to their needs, setting out strategies to align and achieve the short- and medium-/long-term objectives of pharmacotherapy and incorporating new technologies and the means available to continuously interact with the patients in order to improve their health outcomes".

Furthermore, "Capacity" was defined as follows: "The provision of PhC to the patient taking into account their individual needs" "Motivation" was defined as follows: "The ability to align the short-term and medium-/long-term objectives for each patient in collaboration with the other professionals who attend them, planning the actions and interventions needed to achieve them". Finally, "Opportunity" was defined as follows: "Being available to the patient when needed and responding to their needs in real time or in a timely way through the use of new technologies".

Tables 1-3 show the activities and key elements for the development of PhC according to each of the three pillars, respectively.

Discussion

The working model that we have followed up to the present has relied heavily on the concept of the primacy of medication while neglecting the

Table 1. Key elements for the development of pharmaceutical care relating to the pillar "capacity"

- All patients should receive PhC as well as PhC-related activities and initiatives according to their pharmacotherapeutic needs and other health-related needs.
- All patients should have a reference pharmacist for PhC according to their needs.
- PhC should always be conducted in the most planned, programmed, and standardized way possible.
- PhC will always be conducted in a longitudinal manner, rather than in an episodic way, and linked to the onset or changes in the dispensed medication.
- PhC will always be conducted within a multidisciplinary perspective and, whenever required, through the different care levels in the healthcare setting.
- All patients must be stratified before the PhC interventions to be conducted for appropriate pharmacotherapeutic follow-up.
- The population should be stratified according to the published models for each type of patient and their main or predominant diseases.
- All other health professionals involved in patient care will know the level of stratification granted to each type of patient receiving PhC, provided that the available information systems meet this requirement.
- The information generated by PhC interventions will be shared in the electronic medical records systems in line with current regulations in force regarding data protection, confidentiality, and ethical standards.
- PhC will be provided in contact with the patient, both in person and remotely. Thus, all available tools will be used to ensure permanent contact with patients.
- PhC will be conducted within a comprehensive and non-partial perspective of patient pharmacotherapy, including a systematic assessment of treatments to obtain the best health outcomes.
- The impact of PhC must be measured in terms of health outcomes and efficiency outcomes related to the health system and society.
- PhC will use the appropriate taxonomy for recording interventions in order to share information on activities conducted with all other professionals according to standardized information.

PhC: Pharmaceutical Care.

Table 2. Key elements for the development of pharmaceutical care relating to the pillar "motivation"

- PhC will be focused on the patient and their pharmacotherapy-related objectives, which will be those that determine the actions and activities to be conducted to ensure the expected health outcomes for each type of patient.
- Pharmacists must have the ability to align the short-term and medium-/long-term pharmacotherapeutic objectives of the patients they serve, always within a clinical perspective while prioritizing the efficient use of resources.
- The motivational interview should be incorporated as a fundamental tool to provide patients with PhC.
- PhC should identify the level of patient involvement in their pharmacotherapeutic needs, always ensuring that they try to achieve the highest levels of such involvement.
- PhC will ensure that the different types of patient adherence (primary and secondary) are always those appropriate and needed to achieve their pharmacotherapy-related objectives.
- Whenever needed, PhC should incorporate quality-of-life metrics and patient-reported outcomes as essential elements to determine health benefits and their impact on patients.

PhC: Pharmaceutical Care.

Table 3. Key elements for the development of pharmaceutical care relating to the pillar "opportunity"

- In order to maintain real-time contact with their pharmacist, all patients should be provided with technological tools according to their level of digital competence in information, communication, learning, and knowledge technologies.
- Pharmacists who attend patients who need PhC across healthcare levels will ensure that it is conducted in a coordinated and joint manner.
- Pharmacists will actively promote patient health education and patient empowerment.
- PhC should always focus on improving the patient's experience of the healthcare system.
- PhC will always be conducted within a strategy that incorporates, targets, and empowers humane healthcare.
- In order to improve their activity, pharmacists will ensure their own continuous education and the incorporation of proven advances and innovations in their practice according to scientific evidence.
- PhC and its methodological advances should be disseminated both in educational settings and during postgraduate studies and other specialist training.
- Pharmacists will continuously conduct research and, whenever possible, this will be conducted by joint, multicentre, multilevel, multidisciplinary, and multidimensional teams to achieve the outcomes needed to demonstrate the individual and collective benefits of PhC.

PhC: Pharmaceutical Care.

uniqueness of each patient. This perspective implicitly centred our focus on the search for individual and transversally focused interventions. Currently, we cannot ignore the fact that patients are individuals and have different needs (this aspect is first pillar of the CMO model) and that there are other factors (educational, cognitive-functional state, demographic, health resource use, etc.) that must be taken into account to provide more value to those patients who have more requirements.

Thus, the need has arisen to stratify or segment our population such that we can organize and prioritize resources. In this way, we are moving from a medication-centered model to a patient-centered model. This concept is understood in this document as "Capacity". Stratification models based on this approach are available along with their specifically defined scores and interventions for chronic, HIV, HCV, pediatric, oncohematologic, and immune-mediated disease patients^{15,17}.

The outcomes of working under this new perspective will be seen in coming years when it is fully incorporated into standard professional pharmaceutical practice. In fact, some authors have already published the results of working within the CMO model^{18,19}. In this line, the clinical practice model of the American Society of Health-System Pharmacists promoted the use of a pharmacotherapeutic complexity index when selecting patients for more intensive PhC²⁰. Tools such as the "Medication Regimen Complexity Index" are essential in any stratification model and facilitate the changeover from a more traditional approach to polypharmacy to a more qualitative and targeted one. Such an approach capable of including pharmacotherapeutic complexity is still little known to other members of multidisciplinary teams in general²¹.

In contrast to the traditional model, another differentiating aspect is that the working approach is no longer considered as transversally focused intervention, but as longitudinal intervention. Thus, it urges us to relinquish the medication-centered approach and move to a patient-centered perspective and its pharmacotherapy-related objectives. Based on this new perspective and the available evidence, the clinical interview, which is commonly used in more traditional models, should give way to the motivational interview. This working tool will allow us to intervene not only on those patients who do not reach their pharmacotherapeutic objectives, but also on those who do so in order to preserve the internal strengths identified during the interviews and ensure they will last over time. In the future, our activity must include the development of communication and interpersonal skills and competencies to help patients achieve short- and medium-long term pharmacotherapeutic objectives, thereby improving therapeutic adherence over time^{19,22}. Moreover, even such a traditional aspect as adherence must be redefined to include new concepts such as primary and secondary adherence. We should go even further: by establishing the level of patient involvement in their pharmacotherapeutic needs, we could identify those patients who make best use of all healthcare resources rather than those who are simply adherent to medication^{23,24}.

Pharmaceutical care is not only performed face-to-face, but is also conducted outside the healthcare settings (i.e. in the patient's environment). We have to move away from the idea that PhC is only conducted when the patient is physically present, and in the healthcare centre. We should provide PhC from the healthcare centre in an "ongoing" manner rather than in an "episodic" manner, and not just according to our needs, but above all according to the patient's needs. The possibility of making decisions in "real time" or in a "timely manner" will undoubtedly allow us to be much more efficient and influential. In the near future, the scope of action with the greatest potential is probably the development of projects that improve the so-called concept of "opportunity". To this end, it is essential to use resources that empower and improve self-care among patients, particularly those included in the baseline levels of the stratification models, and that include information, communication, and learning technologies, knowledge, and key tools, such as telepharmacy²⁵.

This new consensus and approach to PhC will allow us to advance within the multidisciplinary working approach toward the multidimensional setting of the patient. It is understood that this definition is completely applicable to any healthcare environment and country in the world and will be a way to deal with some of the most important future challenges, such as shared decision making between professionals and patients²⁶.

What clearly emerges from this document is that the establishment of a planned, integrated, and shared service that functions through the different healthcare levels will lead to exponential improvements in desired health outcomes and benefits²⁷. Going deeper, this model has even improved the measurement of new patient-centered concepts, such as the pharmacotherapeutic experience and improvements to the healthcare experience²⁸.

Like any disruptive innovation, we are conscious that it will not be easy to disseminate this new way of working. In strategic terms, education must begin at all levels, but especially during degree studies and specialist training. One of the first concepts to be taught would be the approach to classifying the pharmaceutical interventions conducted in each patient, because this would represent a key step in interpreting and explaining them in an unambiguous way²⁹.

Given the new professional challenges to be faced, this new way of working with patients will clearly give us the ability to provide the optimal response and to encourage our patients and ourselves to be more motivated, efficient, and timely during pharmacotherapeutic interventions³⁰.

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Bibliography

1. Hepler CD, Strand LM. Opportunities and responsibilities in pharmaceutical care. *Am J Hosp Pharm.* 1990;47(3):533-43.
2. Wilson S, Tordoff A, Beckett G. Pharmacy professionalism: a systematic analysis of contemporary literature (1998-2009). *Pharm Educ.* 2010;10:27-31.
3. Ahmadi K, Ahmad Hassali MA. Professionalism in pharmacy: a continual societal and intellectual challenge. *Am J Pharm Educ.* 2012;76(4):72. DOI: 10.5688/ajpe76472
4. Dubaii H, Adelstein BA, Taylor S, Shulruf B. Definition of professionalism and tools for assessing professionalism in pharmacy practice: a systemic review. *J Educ Eval Health Prof.* 2019;16:22. DOI: 10.3352/jeehp.2019.16.22
5. Moltó-Puigmartí C, Vonk R, van Ommeren G, Hegger I. A logic model for pharmaceutical care. *J Health Serv Res Policy.* 2018;23(3):148-57.
6. Ten threats to global health in 2019 [web page]. Ginebra, Swiss; 12/01/2007 [consultation date 01/14/2020]. Available at: <https://www.who.int/emergencies/ten-threats-to-global-health-in-2019>
7. Frenk J, Moon S. Governance challenges in global health. *N Engl J Med.* 2013;368:936-42. DOI: 10.1056/NEJMa1109339
8. Blackburn DF, Yakivchuk EM, Jorgenson D, Mansell KD. Proposing a redefinition of pharmaceutical care. *Ann Pharmacother.* 2012;46:447-9.
9. Allemann SS, van Mil JW, Botermann L, Berger K, Griese N, Hersberger KE. Pharmaceutical care: the PCNE definition 2013. *Int J Clin Pharm.* 2014;36(3):544-55. DOI: 10.1007/s11096-014-9933-x
10. Spanish strategic map for outpatient care of the Spanish Society of Hospital Pharmacist [web page]. Madrid, Spain; 01/01/2015 [consultation date 01/11/2020]. Available at: <https://www.sefh.es/mapex/index.php>
11. Calleja Hernández MA, Morillo Verdugo R. El modelo CMO en consultas externas de Farmacia Hospitalaria. Barcelona: Euromedici; 2016.
12. Modelo de mejora continua de la integración del farmacéutico especialista en el equipo asistencial [web page]. Madrid, Spain; 01/01/2015 [consultation date 01/11/2020]. Available at: <https://www.sefh.es/mapex/index.php/documentacion>
13. American Pharmacists Association Foundation and American Pharmacists Association. Consortium recommendations for advancing pharmacists' patient care services and collaborative practice agreements. *J Am Pharm Assoc.* 2013;53:e132-41.
14. aCadeMiO [web page]. Madrid, Spain; 01/01/2015 [consultation date 01/11/2020]. Available at: <https://www.sefh.es/eventos/jornada/academiobarbate>
15. Morillo-Verdugo R, Martínez-Sesmero JM, Lázaro-López A, Sánchez-Rubio J, Navarro-Aznárez H, De Miguel-Cascón M. Development of a risk stratification model for pharmaceutical care in HIV patients. *Farm Hosp.* 2017;41(3):346-56. DOI: 10.7399/fh.2017.41.3.10655
16. Modelo de estratificación y atención farmacéutica para pacientes con enfermedades inmunomediadas [web page]. Madrid, Spain; 01/01/2015 [consultation date 01/11/2020]. Available at: <https://www.sefh.es/mapex/index.php/documentacion>
17. Modelo de estratificación y atención farmacéutica para pacientes con enfermedades oncohematológicas [web page]. Madrid, Spain; 01/01/2015 [consultation date 01/11/2020]. Available at: <https://www.sefh.es/mapex/index.php/documentacion>
18. Morillo-Verdugo R, Robustillo-Cortés MLA, Martín-Conde MT, Callejón-Callejón G, Cid-Silva P, Moriel-Sánchez C, et al. Effect of a structured pharmaceutical care intervention versus usual care on cardiovascular risk in HI patients on antiretroviral therapy. The INFAMERICA Study. *Ann Pharmacother.* 2018;52(11):1098-108. DOI: 10.1177/1060028018778045
19. Morillo-Verdugo R, Robustillo-Cortés MA, Manzano García M, Almeida-González CV. Influence of pharmacist intervention, based on CMO model, to improve activation in HIV patients. *Rev Esp Quimioter.* 2019;32(1):40-9.
20. The consensus of the Pharmacy Practice Model Summit. *Am J Health Syst Pharm.* 2011;68(12):1148-52. DOI: 10.2146/ajhp110060
21. Wimmer BC, Bell JS, Fastbom J, Wiese MD, Johnell K. Medication regimen complexity and polypharmacy as factors associated with all-cause mortality in older people: a population-based cohort study. *Ann Pharmacother.* 2016;50:89-95. DOI: 10.1177/1060028015621071
22. Miller W, Rollnick S. Motivational interviewing: preparing people for change. 2° ed. New York: Guilford Press; 2002.
23. Hibbard JH, Stockard J, Mahoney ER, Tusler M. Development of the patient activation measure (PAM): conceptualizing and measuring activation in patients and consumers. *Health Serv Res.* 2004;39:1005-26.
24. Moriates C, Shah N, Arora V. Primary nonadherence with prescribed medication. *Ann Intern Med.* 2014;161(9):678. DOI: 10.7326/L14-5021
25. ASHP Statement on Telepharmacy. *Am J Health-Syst Pharm.* 2017;74:e236-41.
26. Open Communication and Shared Decision-Making in Pharmacy [web page]. New York: Mayo Clinic; 10/17/2017 [consultation date 01/09/2020]. Available at: <https://shareddecisions.mayoclinic.org/2017/10/10/open-communication-and-shared-decision-making-in-pharmacy/>
27. Margusino-Framiñán L, Cid-Silva P, Martínez-Roca C, García-Queiruga M, Fernández-Gabriel E, Mateos-Salvador M, et al. Implantación de Consultas Externas Monográficas de Atención Farmacéutica en un Servicio de Farmacia Hospitalaria. *Farm Hosp.* 2017;41(6):660-6. DOI: 10.7399/fh.10771
28. Cantillana-Suárez MG, Manzano-García M, Robustillo-Cortés MLA, Morillo-Verdugo R. Evaluation of HIV+ patients experience with pharmaceutical care based on AMO-methodology. *Farm Hosp.* 2018;42(5):200-3. DOI: 10.7399/fh.10947
29. Morillo Verdugo R, Villarreal Arévalo AL, Álvarez De Sotomayor M, Robustillo Cortés MA. Development of a taxonomy for pharmaceutical interventions in HIV+ patients based on the CMO model. *Farm Hosp.* 2016;40:544-68. DOI: 10.7399/fh.2016.40.6.10567
30. Morillo Verdugo R, Calleja Hernández MA, Robustillo Cortés MA. A new pharmaceutical care concept: More capable, motivated and timely. *Hospital Pharmacy.* 2019;54(6):348-50. DOI: 10.1177/0018578719867657