

Challenges and opportunities related to health promotion in community pharmacies: Obstacles and professional perspectives

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The community pharmacy is an excellent place to identify those with undiagnosed diseases and refer them to their health professionals for treatment and continuing care. However the process of implementation of campaigns and activities to this end in community pharmacy has been slow and implemented by a pharmaceutical minority. It is crucial understand what are the barriers to participation, in order to design enabling actions to achieve greater adherence of pharmacists in these activities.

In order to identify and analyze the elements that hinder the dissemination, implementation and sustainability of pharmaceutical services aimed at the promotion and prevention, in the Argentine community pharmacies, a participatory diagnosis workshop was designed.

Although pharmacists stressed that the absence of such professional activities entails a deterioration of pharmacists' image recognition in society, they expressed lack of constancy, economic incentive, specific training in the subject, time and physical space as own barriers to implementation thereof. Pharmacists think that these limitations are generally not taken into account when designing or planning campaigns.

The university, must encourage interaction and involvement of different actors (patients, caregivers, family, health professionals) in order to engage them in solving the issues together and that they design activities according to local characteristics, to create actions and benefits that can be sustained in the long term.

Keywords: Community pharmacy services, health promotion, early diagnosis

1. Introduction

Noncommunicable diseases (NCDs) are medical conditions that can be chronic of long duration and slow progression, or could result in rapid death. NCDs account for more than 36 million people death each year and have potentially serious socio-economic consequences hindering social and economic development. Approximately 80% of NCD deaths (29 million) occur in lower-income countries. NCDs include

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cardiovascular diseases, many cancers, asthma, chronic obstructive pulmonary disease, diabetes, chronic kidney disease, osteoporosis, Alzheimer's disease, autoimmune diseases, etc. Four of them account for most of deaths, cardiovascular diseases (17.3 million people), followed by cancers (7.6 million), respiratory diseases (4.2 million), and diabetes (1.3 million). Due to the high prevalence and mortality risk and exorbitant costs of NCD is important early diagnosis and treatment [2].

Community pharmacists are in an ideal position to make an impact on public health because they are accessible, have frequent contact with the public, are widely distributed geographically and people do not usually have to book an appointment to visit them. Furthermore, community pharmacies are places where people look for credible counseling, management of minor illness and where pharmacists are actively involved in the triage of medical problems many of which resemble NCDs mentioned above [6,18].

For these reasons, community pharmacies are ideal location for screening programs which allows early identification of subjects at risk of chronic diseases such as hypertension, diabetes, and dyslipidemia among others; also are useful places of targeting some hard to reach groups such as ethnic minorities and socially deprived communities. It is imperative to note that screening programs are not designed to supplant the important role of the physicians in patient care, these screening programs can result in a large proportion of individuals being referred for in-depth medical examination or treatment [9,10].

Different types of screening programs have been developed in community pharmacies, most of them have been for screening for cardiovascular risk factors (metabolic syndrome), diabetes or diabetes risk factors, diabetic retinopathy, musculoskeletal diseases, including osteoporosis and osteoarthritis, depression, sleep disorders, respiratory diseases, colon cancer, breast cancer, and bowel cancer among others [1].

Studies have been made in community pharmacies and included both, male and female participants, aged from 18 years old whom met inclusion criteria and in some cases provide informed consent [12,18]. Participants were pharmacy customers and their relatives, volunteers, people responding to advertisements, recruited at university campus, at senior care centers, word of mouth, by brochures, prescription bag tags, posters and/or flyers located within the pharmacy and at the entrance to the pharmacy [3,12,18,19]. Screening programs required training staff about screening tools (equipment) and about the disease (question and patient counseling about disease risk factors, prevention, management and drug treatment); Lowres et al. reported that pharmacists were required to demonstrate competency in essential skills and knowledge related to atrial fibrillation diagnosis prior to initiate the screening [1,12].

In some studies [5,18] there were agreement between pharmacies to collaborate with health care providers on the coordination of educational and screening services. Screening programs used several types of instruments in order to continue with other steps of the program; for example, Deo et al. used a questionnaire to examine women's attitudes and health beliefs towards osteoporosis screening in a community pharmacy setting, Tran et al. used validated instruments as screening

tool of a sleep disorder and Rosser et al. used a Patient Health Questionnaire (PHQ-2 y PHQ-9) to identify symptoms of depression in undiagnosed patients and those whose depression symptoms persisted despite the treatment [3,19,21].

Several studies [5,9,18,20] reported a positive diagnosis of the disease screening; Pongwecharak and Treeranurat reported that their study was able to identify 36% of the subjects with pre-hypertension and 29% with hypertension defined by the JNC 7. Studies reported proportions of participants referred to other health providers for examination or treatment and also reported changes in life style or behavior of the participants [3,9]. Cerulli and Zeola and Liu et al. reported that patients are willing to pay for community osteoporosis program and 82% indicated the screening was very useful for making health care decisions. In the study conducted by MacLaughlin et al. patients were referred by their physician to a patient care center pharmacy for osteoporosis risk assessment, screening and education; participants perceived usefulness of and satisfaction with the program and were rated extremely well and highly valuable [4,8]. Although another study reported that pharmacists conducting screenings noted that many patients were motivated to participate because the screening was free [12].

The community pharmacy is an excellent place to identify those with undiagnosed diseases and refer them to their health professionals for treatment and continuing care, however the process of implementation of campaigns and activities to this end in community pharmacy has been slow and implemented by a pharmaceutical minority.

The integration of pharmacists in primary care and public health programs should be considered as a valuable option to optimize the health of the population. For this happen, it is crucial understand what are the barriers to participation, in order to design enabling actions to achieve greater adherence of pharmacists in these activities.

The aim of this study was to identify and analyze the elements that hinder the dissemination, implementation and sustainability of pharmaceutical services aimed at the promotion and prevention, in the Argentine community pharmacies.

2. Methods

In the framework of outreach project called "Development and Implementation of the Age-related Macular Degeneration Program's Awareness and Early Detection in Community Pharmacies" a participatory diagnosis workshop was designed involving 58 community pharmacists.

The workshop took place on August 24th, 2013, at the Colegio de Farmacéuticos de la Provincia de Córdoba (pharmacists' college of Córdoba province) which massively invited to all the registered to participate on it. In order to participate, the person had to be a registered pharmacist and an active worker at a pharmacy office, either as owner, as a technical director or as an assistant.

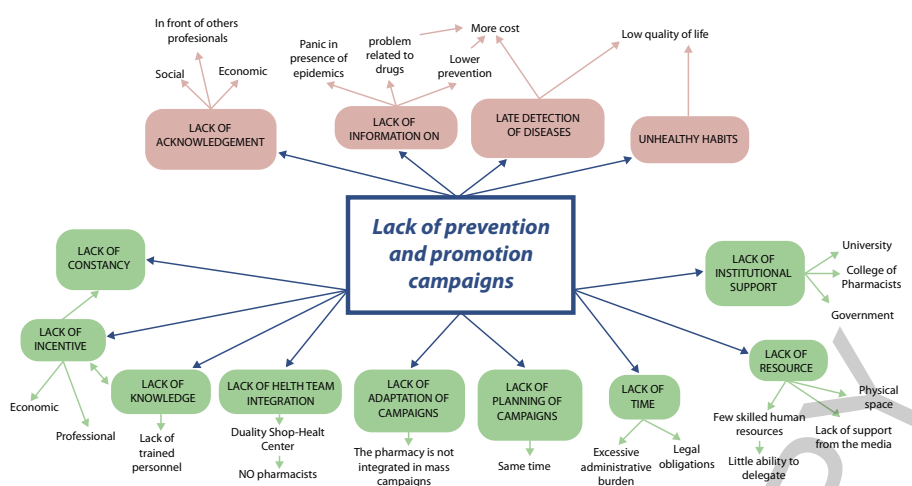


Fig. 1. Problem Tree: causes and consequences of “lack of prevention and promotion campaigns in community pharmacies”. (Colours are visible in the online version of the article; <http://dx.doi.org/10.3233/PPL-140391>)

After selecting the sample, participants were divided into five groups keeping homogeneity between the groups concerning sex, age, position held and location of their workplace variables (provincial capital or interior). In order to develop a “Problem Tree” to represent the causes and consequences of “lack of prevention and promotion campaigns that can be sustained over time”, in each group, two “Brainstorming” were conducted. One Brainstorming approached the causes that determine or influence the problem’s presence, and the other one, the impact they cause to society and/or to the pharmacy. The groups were coordinated by different members of the outreach project working group, belonging to the Faculty of Chemical Sciences to perform this task.

The information obtained in each brainstorming was analysed and discussed by each group individually; developing Problem Trees that pooled together with the other groups were used in a single group problems tree’s construction.

3. Results and discussion

From the joint contribution with the information provided by the different groups, a Problem Tree was built (Fig. 1), in which roots the Problem causes are reflected, and in the top the possible consequences related to it are represented.

From the global analysis performed it was observed that although the vast majority of workshop participants acknowledged their lack of consistent commitment to this type of activities, to improve the people’s quality of life and reduce cost, the

implementation importance was highlighted. They believe that a good health education involves a healthy improvement in the population's habits, a less compulsive behaviour of OTC drug consumption and an increase in the diseases' early stage detection with a corresponding therapeutic benefit for the patient.

The LACK OF ECONOMIC INCENTIVE among the reasons related to the problem of "lack of prevention and promotion campaigns that can be sustained over time in community pharmacies", was highlighted in the 100% of the groups. In Argentina, most pharmacists do not charge pharmaceutical benefits fees that do not involve dispensing/sale of a pharmaceutical product, so, these activities are not remunerative. This situation is exacerbated by the financial pressure context that pharmacists live, who must give up part of their professional fee to provide social security services, which in turn require compliance with administrative tasks for the long-term recovery of those benefits. The pharmacies' weak economic and financial situation cause professionals responsible of its management and operation to be more concerned about incorporating profitable services and products, than those which may pose a real health service.

Participant pharmacists stressed that, in their opinion, the absence of such professional activities entails a deterioration of pharmacists and other health professionals' image recognition in society. They believe that the positive image of health professionals that are connected to society is something that should be taken care of and maintained in order to continue exercising the real role that the pharmacist has in society.

Another very important reason highlighted by the 100% of the groups was the LACK OF TIME, which was attributed to the excessive administrative burden and having the need to invoice large sums of money, which involves meeting a significant amount of patients in order to make a profitable pharmacy. This lack of time is included in the claim about the LACK OF TRAINED PERSONNEL to whom these activities can be derived to, and the LACK OF PHYSICAL SPACE according to the needs they consider necessary for a campaign implementation.

Pharmacists also think that these limitations are generally not taken into account when designing or planning campaigns which are taking place or proposed, and that are created in their majority without prior consultation to an institution such as the College of Pharmacists or the University. The failure to consider the particular situation of pharmacies in Argentina/Cordoba was highlighted as another major cause of failure and lack of continuity of these activities. Allowing taking place to the criticism of erstwhile campaigns that they had remembered, they expressed that the methodologies were too complex and inflexible, and a great effort was necessary for its realization. This lack of functionality in the proposed methodology is added to the criticism of the lack of these same institutions' persistency to insisting every year on the repetition and improvement thereof.

Despite this, participant pharmacists consider they have little knowledge in both, the topics to be addressed by the campaigns (NO CLINICAL TOOLS) and in the specific methodologies to be taken into account when designing them. Due to this,

they consider essential the ongoing participation of these actors (University and Professional's College) in delivering courses and coordinating the campaigns creation, but they ask for more dialogue and consensus in the design phase and the restructuring.

Last, but not least, pharmacists emphasize that in parallel to the activities that are intended for the pharmaceutical microenvironment, activities are developed by other health professionals and by the Ministry of health, in which the pharmacist does not interact or is not taken into account. Pharmacists believe that it is important that other health actors participate in campaigns to be made, and also that the pharmacist must be integrated and must participate in the different activities proposed by other professionals or by the ministry.

The information provided by this experience can be complemented by means of studies in other countries. In studies conducted in Quebec, Canada, [13] and Malaysia [22] there were coincidences such as the lack of time, lack of coordination with other health professionals, lack of staff, lack of financial incentives, lack of clinical resources and lack of space which were found as the main barriers hindering pharmacist participation in such activities.

A factor not mentioned in our study but in the literature, was the population's lack of awareness about the importance of these activities; it probably leads to defensive acts that hinder the activities. Lack of coordination with other professionals and/or the inability to access the complete patient's medical history were some of the reasons mentioned in the literature that did not arise in the workshop, but can also be considered a limitation in our environment [7,16,17]. Such barriers denote not only those actions in the pharmaceutical community require changes, but also joint activities among the population and the health system are required, item highlighted throughout the workshop developed.

A very important factor to consider mentioned in several studies, is the pharmacists' attitudinal issue who are convinced they have to participate more in prevention and promotion as well as other cognitive activities such as pharmaceutical care, but nevertheless such claim is not translated into actual practice. This is reflected directly in the study published by Laliberté et al. [13] where most pharmacists believe that must be really involved in the detection of hypertension (81.8%), diabetes (76.0%) and Dyslipidemia (56.9%), but, however, only a minority turns out to be very involved (44.5%, 34.8% and 6.5%, respectively). This lack of participation is seen as well in the poor participation obtained from the invitation to do this type of tasks, for instance: a program designed to facilitate the smoking cessation in Northern Ireland had 19% participation [23] and 20–25% in hypertensive-detection programs conducted in different Spanish communities [11,14].

The above phenomena is reflected by the explicit phrases revealed in a study published by Gastelurrutia et al. [15] whom analyzed the barriers for the implementation of cognitive systems in Spanish pharmacies,

"We are just few ... who have fallen in love with an idea (cognitive services) and that we practice it, right? Cause one thing is to fall in love and the other, to

practice it . . . I think that many have fallen in love with the idea, but not enough to change the attitude, to change the mindset, to practice it and to offer it to the people. . . ”

ECONOMIC IMPACT

“(The pharmaceuticals) are afraid that in the structure, as the pharmacy is now economically operating, there is a change that could be an economic impact” (FC-05).

“... With this remuneration system cannot be done (cognitive services)” (FC- 04) . . . I will have to charge for what I do, right? . . . Because, why do I have to charge for one thing and make a follow-up without charging for it?

LACK OF SPECIFIC TRAINING IN THE SUBJECT

“The Faculty knows they have a problem . . . our educators do not have clinical experience. . . ” (ES-13 C1).

Young people keep being deeply illustrated in knowledge but poorly trained in the health care and clinical issues. . . Because they have not been educated accordingly in their undergraduate phase. . . ” (ES-13 C1).

4. Conclusion

As a result of the detected barriers, the campaigns designed to early detection of diseases and health promotion in Latin America are few and usually based on individual sporadic efforts in the short-term, which is not consistent with the concept that health education must be carried out on a continuous basis by all health professionals.

The Public University and the dependent research labs must address outreach spaces where the basic and applied knowledge created can be used to improve the patient's quality of life with particular emphasis on prevention and awareness. The University, must, by means of these meeting areas encourage interaction and involvement of different actors (patients, caregivers, family, health professionals) in order to draw their attention to health issues addressed (social awareness), engage them in solving the issues together and that they design activities according to local characteristics, to create actions and benefits that can be sustained in the long term.

Finally, prevention campaigns revalue the health role of the pharmaceutical repositioning the pharmacy as a community health centre.

References

- [1] A.A. Ayorinde, T. Porteous and P. Sharma, Screening for major diseases in community pharmacies: A systematic review, *International Journal of Pharmacy Practice* **21**(6) (2013), 349–361.

- [2] A. Alwan, Global Status Report on Noncommunicable Diseases 2010. Geneva: World Health Organization (2011).
- [3] A. Tran et al., The development of a sleep disorder screening program in Australian community pharmacies, *Pharm World Sci* **31** (2009), 473–480.
- [4] E.J. MacLaughlin, Osteoporosis screening and education in community pharmacies using a team approach, *Pharmacotherapy* **25** (2005), 379–386.
- [5] F.J. Jiménez-Ramírez and R. Pérez, Diabetic retinopathy education and screening at the community pharmacy in Puerto Rico, *PRHSJ* **30** (2011), 139–144.
- [6] G. Pradeep et al., The evolving role of the community pharmacist in chronic disease management – a literature review, *Ann Acad Med Singapore* **39** (2010), 861–867.
- [7] J. Krska and C.W. Morecroft, Views of the general public on the role of pharmacy in public health, *J Pharm Health Serv Res* **1** (2010), 33–38.
- [8] J. Cerulli and M.M. Zeolla, Impact and feasibility of a community pharmacy bone mineral density screening and education program, *J Am Pharm Assoc* **44** (2004), 161–167.
- [9] J. George, K.P. Mc Namara and K. Stewart, The roles of community pharmacists in cardiovascular disease prevention and management, *Australasian Medical Journal AMJ* **4,5** (2011), 266–272.
- [10] J. Pongwecharak and T. Treeranurat, Screening for pre-hypertension and elevated cardiovascular risk factors in a Thai community pharmacy, *Pharm World Sci* **32** (2010), 329–333.
- [11] L. Carrión Valero, J.A. Carbayo Herencia, J.A. Divisón Garrote, J. Massó Orozco, L.M. Artigao Rodenas, C. Sanchis Domenech y F. Álvarez-Luna. La oficina de farmacia puede mejorar el grado de conocimiento de la hipertensión arterial. *Hipertensión* **19** (2002), 299–304.
- [12] L. Fuller et al., Pharmacist-managed chronic obstructive pulmonary disease screening in a community setting, *J Am Pharm Assoc* **52** (2012), e59–e66.
- [13] M. Laliberté et al. Ideal and actual involvement of community pharmacists in health promotion and prevention: A cross-sectional study in Quebec, Canada, *BMC Public Health* **12** (2012), 192.
- [14] M.A. Gastelurrutia, B. Larañaga, B. Ortega and A. Garai, Educación sanitaria y detección de hipertensos ocultos en las oficinas de farmacia de Gipuzkoa, *Pharm Care Esp* **1**(1999), 244–250.
- [15] M.A. Gastelurrutia, F. Fernández-Llimos, S.I. Benrimoj, C.C. Castrillon and M.J. Faus, Barriers for the implementation of cognitive services in Spanish community pharmacies, *Aten Primaria* **39** (2007), 465–470.
- [16] M.R. Amsler, M.D. Murray, W.M. Tierney, N. Brewer, L.E. Harris, D.G. Marrero and M. Weinberger, Pharmaceutical care in chain pharmacies: Beliefs and attitudes of pharmacists and patients, *J Am Pharm Assoc* **41** (2001), 850–855.
- [17] N. René-Henri, Y. Khamla, N. Nadair, C. Ouellet, L. Blais, L. Lalonde, J. Collin and M.F. Beauchesne, Community pharmacists' interventions in asthma care: a descriptive study, *Ann Pharmacother* **43** (2009), 104–111.
- [18] N. Lowres et al., Screening education and recognition in community pharmacies of atrial fibrillation to prevent stroke in an ambulant population aged ≥ 65 years (SEARCH-AF stroke prevention study): A cross-sectional study protocol, *BMJ Open* **2** (2012), e001355. doi:10.1136/bmjopen-2012-001355.
- [19] P. Deo, R. Nayak and J. Rajpura, Women's attitudes and health beliefs toward osteoporosis screening in a community pharmacy, *Journal of Osteoporosis* (2013), <http://dx.doi.org/10.1155/2013/650136>.
- [20] P. Sookaneknuna, Economic analysis of the diabetes and hypertension screening collaboration between community pharmacies and a Thai government primary care unit, *Primary Care Diabetes* **4** (2010), 155–164.
- [21] S. Rosser et al., Development, implementation, and evaluation of a pharmacist-conducted screening program for depression, *J Am Pharm Assoc* **53** (2013), 22–29.
- [22] S.A. Beshir and M.A. Hanipah, Knowledge, perception, practice and barriers of breast cancer health promotion activities among community pharmacists in two Districts of Selangor state, Malaysia, *Asian Pac J Cancer Prev* **13** (2012), 4427–4430.
- [23] T.A. Maguire, J.C. McElroy and A. Drummond, A randomized controlled trial of a smoking cessation intervention based in community pharmacies, *Addiction* **96** (2001), 325–331.