



PERMANENT EDUCATION IN HEALTH AND VACCINATION ACTIVITIES: INTEGRATION REVIEW

EDUCAÇÃO PERMANENTE EM SAÚDE E ATIVIDADES DE VACINAÇÃO: REVISÃO INTEGRATIVA EDUCACIÓN PERMANENTE EN SALUD Y ACTIVIDADES DE VACUNACIÓN: REVISIÓN INTEGRADORA

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ABSTRACT

Objective: to identify evidence in the literature on Permanent Health Education (EPS) related to Vaccination and loss of opportunities to vaccinate. **Method:** this is an integrative review to answer the question << What evidence is available in the literature on EPS related to vaccination activities and the loss of opportunities to vaccinate? >> The search was carried out in the LILACS, PubMed/MEDLINE, and Cochrane databases in September and October of 2015. Selected articles published in the national and international literature were selected, which portrayed the subject in the last 5 years. **Results:** Eight studies comprised the sample with levels of evidence two and six. They revealed the need for ongoing/continuing education actions for health professionals to expand the offer of vaccination services. **Conclusion:** the permanent education of health professionals for vaccination activities is necessary, predominantly continuing education activities. **Descriptors:** Vaccination; Health Education; Continuing Education; Health Personnel.

RESUMO

Objetivo: identificar evidências na literatura sobre Educação Permanente em Saúde (EPS) relacionada à Vacinação e às perdas de oportunidades de vacinar. **Método:** revisão integrativa a fim de responder ao questionamento <<Quais as evidências disponíveis na literatura sobre EPS relacionadas às atividades de vacinação e às perdas de oportunidades de vacinar? >>. A busca foi realizada nas bases de dados LILACS, PubMed/MEDLINE e Cochrane em setembro e outubro de 2015. Foram selecionados artigos publicados na literatura nacional e internacional, que retratassem a temática, nos últimos 5 anos. **Resultados:** oito estudos compuseram a amostra com níveis de evidência dois e seis. Revelaram a necessidade de ações de educação permanente/continuada aos profissionais de saúde, para ampliar a oferta dos serviços de vacinação. **Conclusão:** a educação permanente dos profissionais de saúde para atividades de vacinação é necessária, predominando atividades de educação continuada. **Descritores:** Vacinação; Educação em Saúde; Educação Continuada; Pessoal de Saúde.

RESUMEN

Objetivo: identificar evidencias en la literatura sobre Educación Permanente en Salud (EPS) relacionada a la Vacunación y a las pérdidas de oportunidades de vacunar. **Método:** revisión integradora a fin de responder el cuestionamiento << Cuáles son las evidencias disponibles en la literatura sobre EPS relacionada a las actividades de vacunación y a las pérdidas de oportunidades de vacunar? >> La búsqueda fue realizada en las bases de datos LILACS, PubMed/MEDLINE y Cochrane en septiembre y octubre de 2015. Fueron seleccionados artículos publicados en la literatura nacional e internacional, que retratasen la temática, en los últimos 5 años. **Resultados:** ocho estudios fueron parte de la muestra con niveles de evidencia dos y seis. Revelaron la necesidad de acciones de educación permanente/continuada a los profesionales de salud, para ampliar la oferta de los servicios de vacunación. **Conclusión:** la educación permanente de los profesionales de salud para actividades de vacunación es necesaria, predominando actividades de educación continuada. **Descriptors:** Vacunación; Educación para la Salud; Educación Continua; Personal de Salud.

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INTRODUCTION

Mass vaccination has been an acknowledged effective strategy in the prevention of infectious diseases and a constant presence in the proposals of primary health care policies. Although much is being done in this aspect, part of the population goes to the health services in the family health units (USF) daily, and the professionals responsible for their health no longer ensure them the right to remain immunized, characterizing what is called Lost Vaccination Opportunities (OPV).

As actions to be developed by the nurse and the multi-professional team in the area of vaccination in the USF, we take advantage of all the opportunities for vaccination, with the referral of the patients to the vaccine room through strategies to involve human resources in immunization.¹ In this context, the Permanent Health Education (EPS) is proposed as a factor that will influence the transformation of the Unified Health System (SUS) practices, so its professionals can face this reality through a critical, reflexive, propositive, committed and technically competent.²

The participation of all health staff and not only of nursing professionals in the planning, but execution and evaluation of vaccination attitudes also awakens in these care regarding the vaccination situation of the population served since all are part of the health work process and are in permanent contact with the clientele.

Due to the dynamics of the Family Health Strategy (ESF), whose objective is to promote care directed to the expanded concept of health that seeks the quality of life and not only the absence of diseases, but it is also necessary to favor the maintenance of up-to-date and quality-focused teams of the assistance. Therefore, it is necessary that the education of professionals is given permanently to assist them in decision-making, care, and assistance provided to the patient.³

Considering these assumptions, this research was carried out with the purpose of obtaining answers to the following question: "What evidence is available in the literature on Permanent Health Education related to Vaccination activities and loss of opportunities

to vaccinate?" Thus, the objective of this research was to identify evidence available in the literature on Permanent Health Education (EPS) related to Vaccination and loss of opportunities to vaccinate.

METHOD

Integrative review, which provides the synthesis of knowledge and the incorporation of the applicability of results of significant studies in practice, constituting an instrument of Evidence-Based Practice. In this sense, there were 6 stages considered for this review: elaboration of the guiding question, searching or sampling in the literature, data collection, critical analysis of the included studies, discussion of the results, and presentation of the integrative review.⁴

The LILACS (Latin American and Caribbean Literature in Health Sciences) databases, the most important and comprehensive index of scientific and technical literature in Latin America Latin America and the Caribbean; PubMed, a full-text journal repository of the National Library of Medicine, which provides free access to MEDLINE, and the Cochrane Library, which brings together a collection of evidence sources of health care, important tools for locating used publications in this study were used to search for scientific articles, carried out in September and October 2015.

Besides the elaboration of the guiding question, keywords were found, authorized and recognized terminology worldwide structured to facilitate access to information. For this study, the PIO strategy was used, an acronym for P-Patient, I- Intervention, O- Outcomes, which are fundamental elements of the research question and the bibliographical search for evidence,⁵ and defined: P-Health professionals (Health personnel), I-Continuing Education/Health education, O-Vaccination (Missing Vaccination Opportunities).

For this study, DeCS - Terminology in Health, Virtual Health Library (VHL) and MeSH were used, where the following keywords were found: "vaccination", "health personnel", "Health Education", "continuing education", since the term "continuing education" is not recognized by Decs; using the Boolean and to group the keywords (Figure 1).

Keywords	LILACS	Pubmed	Cochrane
“Vaccination” and “continuing education”	1	167	57
“Vaccination” and “health education.”	27	3917	364
“Vaccination” and “health personnel.”	28	4361	418
“Vaccination” and “continuing education” and “health personnel.”	0	72	41
“Vaccination” and “health education” and “health personnel”	0	707	130
Total	56	9224	1010

Figure 1. Systematization of the electronic search in the databases LILACS, PubMed / MEDLINE and Cochrane.

The inclusion criteria defined for the selection of articles were: articles published in the national and international literature, showing the themes related to the actions of Permanent Education (EP)/Continuing Education (EC) related to vaccination activities published in the last 5 years (2011 to 2015). The established exclusion criterion was: publications that were repeated in the different databases.

For the survey in the databases, the keywords were associated as follows: “2011” or “2012” or “2013” or “2013” or “2014” or “2015” and “Vaccination” and “Continuing Education”; and “2011” or “2012” or “2013”

or “2013” or “2014” or “2015” and “Vaccination” and “Health Education”.

Five publications were found in the LILACS database, 796 in PubMed and 34 publications were found in Cochrane. Through careful reading of the title and online summary, there were 73 articles obtained. After reading the publications in full, applying the inclusion criteria and discarding the articles that were repeated, the final sample consisted of 8 scientific articles, of which 1 was found in the LILACS database, 6 in PubMed and 1 In Cochrane. Below, there is the flowchart of the selection process of the articles that composed the sample of this study (Figure 2):

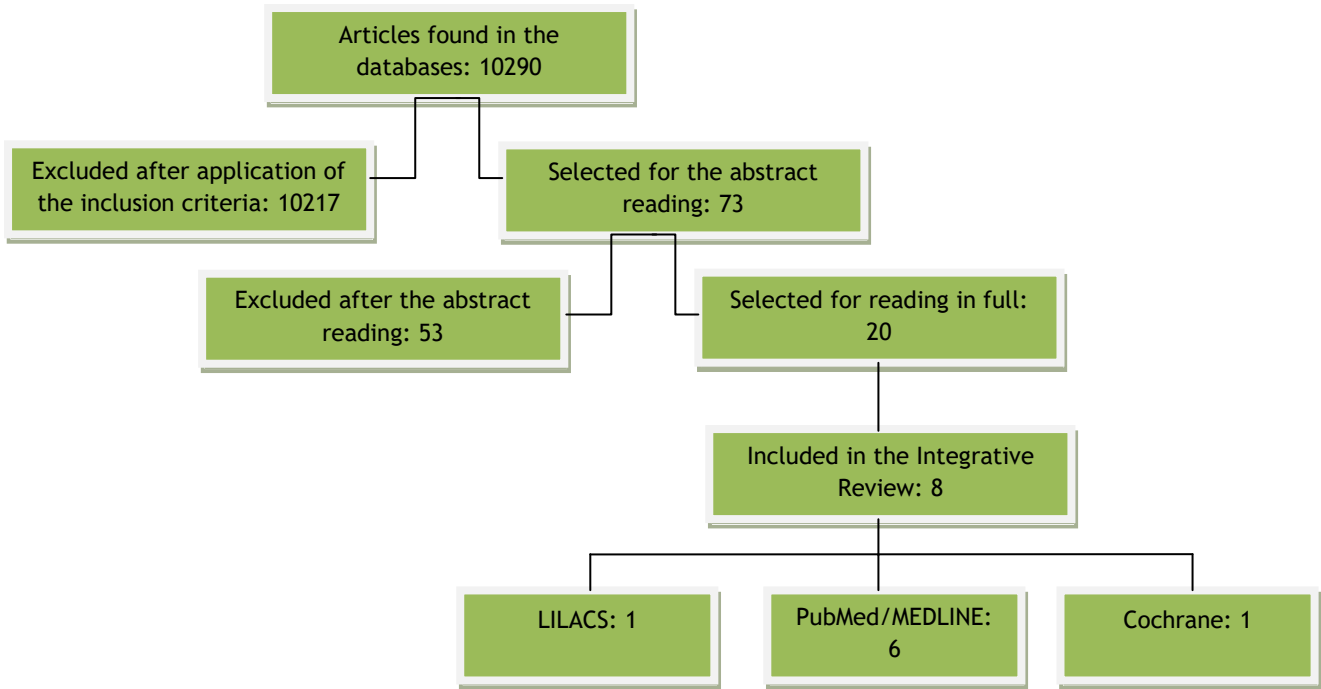


Figure 2. Flowchart of literature selection process found on Permanent/Continuing Education related to vaccination and to lost opportunities to vaccinate, published between 2011 and 2015 in the LILACS, PubMed, and Cochrane databases.

After this process, it was noticed that although the literature addresses the topic vaccination, mainly with technical information, there is still incipient in the literature addressing the theme related to the actions of Permanent Education related to vaccination activities.

It should be noted that, according to the Institute Joanna Briggs, whose mission is to widely disseminate the use of the best evidence in health care, according to the type

of study, the levels of evidence vary from I to IV, as shown below:

Level I: Evidence obtained from a systematic review containing only randomized controlled trials. Level II: Evidence obtained from at least one randomized controlled trial. Level III.1: Evidence obtained from well-delineated controlled clinical trials without randomization. Level III.2: Evidence obtained from well-designed cohort studies or case-control, analytical studies, preferably from more than one research center or group. Level

III.3: Evidence obtained from multiple time series, with or without intervention and dramatic results in uncontrolled experiments. Level IV: Opinion of respected authorities, based on clinical criteria and experience, descriptive studies or reports of expert committees.⁶

When analyzing the research design among the included articles, it was found that 1 (10%) studies have Level of Evidence II, obtained from a randomized controlled clinical trial; and 7 (90%) studies have Level of Evidence IV, evidence of descriptive studies.

A data collection form to direct the reading and extraction of relevant data, which was completed for each article of the final sample was developed. Data were collected on the identification of the article and authors; year and country of publication; the level of evidence; study objectives; methodological characteristics; results and conclusions. The studies analyzed according to the author, methodological design, and sample, level of evidence, purpose of the study and main results, which were grouped into categories are shown in the following table (Figure 3).

RESULTS

Authors	Type of Study and Sample	Level of Evidence	Objectives	Main Results Knowledge and Professional Responsibility on Immunization	EP/EC coping OPV	for
Oyo-Ita Angela, Nwachukwu Chukuemeka E, Oringanje Chioma, Meremikwu Martin M/Several countries, 2015. ⁷	Systematic Review Article of the literature including randomized controlled, uncontrolled and interrupted time series studies.	II	Evaluating the effectiveness of intervention strategies to boost and sustain high immunization coverage in childhood in low- and middle-income countries.	Only one study provided data on intervention targeting health professionals. Coverage for certain vaccines was higher in the intervention group after the intervention. It evaluated the impact of training immunization managers to supervise immunization professionals better. The intervention was of poor quality.		
E Allison Hagood, Stacy Mintzer Herlihy/USA, 2013. ⁸	Review article	IV	Discussing different educational approaches based on the type of parenting concern related to vaccines.	Such concerns require more of an educational strategy that involves more than just pediatricians or basic health care providers.	All health workers should receive safety and efficacy vaccine education so that any contact with an employee and provider becomes an opportunity for the right education and peace of mind of the parents.	
Marissa Wheeler, Alison M Buttenheim/USA, 2013. ⁹	This study used the Theory of Planned Behavior; the logistic regression was performed using data from medical records of a pediatric clinic.	IV	Examining factors associated with parental interest in alternative immunization schedules.	More research is needed to identify the most effective counseling strategies and messages that encourage adherence to the Advisory Committee on Immunization Practices (ACIP) calendar. It		

				highlights the important role health care providers play in promoting vaccine recruitment and suggests the need for medical training with sources of information that benefit worried parents.
S. Esposito, N. Principi and G. Cornaglia/Italy, 2014. ¹⁰	Review article.	IV	Discussing the recognized barriers to vaccination of children and adolescents by confronting national health systems, health care providers and parents and the ways in which they can be overcome.	As knowledge of health workers is one of the most critical factors conditioning the acceptance of the vaccine by parents, it is essential to implement educational programs to improve their knowledge or change their attitudes, particularly when new vaccines or guidelines are modified. Most of the problems underlying limited immunization coverage among children are due to lack of understanding by the health care providers and parents, which underlines the need for permanent educational programs specifically targeted at each of these groups. Administering vaccines are other obstacles to meeting immunization requirements promptly.
Adriana Parrella, Annette Braunack-Mayer, Michael Gold, Helen Marshall, Peter Baghurst/Australia, 2013. ¹¹	A qualitative study using semi-structured interviews with 13 emergency department consultants, 10 general practitioners, 2 local Counselors and 4 general practitioner nurses.	IV	Exploring the knowledge, experience, and attitudes of medical and nursing professionals to detect and report post-vaccine adverse events (AEFV).	Qualitative evaluation reveals differences in the experience of VTE in professional groups. Specific strategies for updating knowledge must be implemented through professional accreditation bodies and continuing medical education programs. Future initiatives to improve education, such as further training of health care providers, particularly medical professionals, are necessary and should be included in graduate curricula and ongoing

C. Pulcini, S. Massin, O. Launay, P. Verger/France, 2013. ¹²	A cross-sectional study of the research started in 2010. It has the participation of 329 general practitioners.	IV	Evaluating the knowledge, attitudes, beliefs and practices of general practitioners for measles and measles-mumps-rubella vaccination.	professional development. Evidence-based information on measles and measles-mumps-rubella vaccination is essential to raise the awareness of physicians of this disease and fill any gaps in their knowledge.
Monica Robotin, Yumi Patton, Jacob George/Australia, 2013. ¹³	Descriptive research on a primary care program for the detection and management of Hepatitis B (HB) with local general practitioners.	IV	Evaluating Continuing Medical Education (EMC) Programs on the detection and management of HB in a high-risk population.	Gaps in knowledge management and diagnosis of hepatitis B translate into missed opportunities to vaccinate the sensitive and prevent complications of HB. The results suggest that innovative EMC programs are needed to update general practitioners about CHB infection.
Mercedes Arencibia Jiménez, Juan Francisco Navarro Gracia, José Antonio Delgado de los Reyesa/Spain, 2014. ¹⁴	Retrospective descriptive study. Electronic registry analysis of the epidemiological surveillance system from 2007 to 2011.	IV	Describing the cases of Pneumococcal Disease Infection; Classifying the most common serotypes and evaluating missed vaccination opportunities.	Gaps in knowledge management and diagnosis of hepatitis B translate missed opportunities for screening, vaccination of the sensitive and prevent complications of the disease. There are significant differences between the knowledge of primary and specialized care professionals for the former one. Work should be done to raise awareness, inform, advise and encourage vaccination among health professionals working in the hospital.

Figure 3. Presentation of articles on type, population, level of evidence, objective and results grouped into categories.

One of the eight articles selected (12.5%) was published in 2015, two (25%) were published in 2014, 5 (62.5%) in 2013. The data show an increasing production need for

vaccination education programs in the last 5 years (100%).

As to the origin of the studies, 2 (25.0%) were conducted in the United States, two

(25.0%) in Australia, one (12.5%) study was conducted in Italy, 1 (12.5%) in Spain, 1 (12.5%) in France, and one (12.5%) study was conducted in several countries concomitantly. This finding points to an incipient production in Brazil in carrying out research aimed at the Permanent Education of Health Workers related to vaccination activities recently, despite the fact that this policy was 10 years ago, in force.

Regarding the origin of the journal in which the article was published, 7 (87.5%) were published in medical journals and only 1 (12.5%) in a Systematic Reviews database.

Among the selected sample, 4 (50%) article highlights the need for strategies to update knowledge in vaccination for health workers; while another 3 (37.5%) describe the missed opportunities of vaccination and the importance of Continuing Education actions in their approach, while only one (12.5%) article points out the need for Permanent Education strategies related to activities of vaccination for all health workers.

DISCUSSION

With the results obtained, the articles were grouped according to the thematic axes, and two categories emerged: Knowledge and Professional Responsibility on the Immunization of children, which discusses the fundamental role of health professionals as a source of information on vaccination; and Permanent Education as a strategy to cope with the missed opportunities of vaccination, bringing the EPS as a way of coping with the potential barriers that counteract the act of vaccinating.

◆ Knowledge and Professional Responsibility on the Immunization of children:

Health care providers play an important role in promoting vaccination. Since knowledge of health workers is one of the most critical factors conditioning parental acceptance of the vaccine, it is essential to implement educational programs to improve their knowledge or change their attitudes. To this end, future initiatives to improve education are needed, such as further training of health professionals.^{7,8}

Vaccination activities are essential basic care practices, offered mainly by the ESF, which, in turn, aims at the complex integration of individual and collective actions, curative, preventive and health promotion. Families often demonstrate knowledge of the need for post-vaccination care, pointing to the need for technical

support for such care. Thus, health professionals should contribute to the knowledge acquired in their work process.

With the objective of providing the confrontation and resolution of health problems in a defined territory, prioritizing health actions based on local diagnosis, taking care of the family throughout its life cycle, involves the reconstruction of knowledge and practices with new dimensions, the multi-professional team must rethink its activities as a meeting between subjects, implying the sharing of actions and commitments.^{8,22}

Recent research shows that interventions such as health education and home visits aimed at addressing patients, communities, and the health system can increase vaccine coverage. Evidence-based discussion aimed at translating knowledge to community members by health professionals may be more effective than conventional information strategies.⁷

Studies on parents' difficulties in deciding whether or not to vaccinate their children reveal concerns about vaccine-related risks, as well as mistrust in the information provided by health professionals.^{8,9}

All professionals working in health facilities should be prepared to act as educators in immunization, involving more than just contact with nurses or physicians so that any contact with a health care worker becomes an opportunity to address the vaccination situation of the patient.

Although refusal of all vaccines is rare, parents are increasingly choosing to default on or delay the receipt of one or more vaccines by their children. Studies illustrate the heterogeneity of maternal concerns, demonstrating an association between intentional vaccine concerns and alternative immunization schedules, and reveal the important role played by vaccine information sources.⁹

Other studies clearly demonstrate that parents consider health professionals the most important source of information for deciding whether their child should be vaccinated. Dissatisfaction with the information given by physicians is one of the most frequent reasons reported for low rates of vaccine acceptance, while the physician's recommendation is one of the predictors of immunization.¹⁰

Parents who obtained information from books or their professional experience were also more likely to report various concerns related to vaccines. Such sources are more effective in emphasizing the risks rather than the benefits of the recommended vaccines in the child immunization schedule. This finding

illustrates the important role health professionals play in promoting vaccination, and suggests the need to support medical efforts with additional sources of pro-vaccination information that may reach concerned parents.⁹

Since parents receiving information are less likely to have concerns about immunization, health professionals need to know and explore such concerns and fears of families by providing them with specific and appropriate responses regarding vaccination.

Inadequate knowledge of the advantages of vaccination among health workers can have substantial negative effects on vaccination coverage. Primary care providers play a central role in educating patients and parents about the safety and efficacy of vaccines recommended by health authorities and can positively influence immunization rates by answering the parents' question and clarifying common misconceptions.¹⁰

Future initiatives to promote education, as well as increase the training of health professionals, particularly physicians, are necessary and should be included in postgraduate curricula and ongoing professional development. Studies show that nurses were the ones most commonly receiving formal training in vaccine safety and reporting than medical professionals. They also confirm the need to provide adequate education through training of health professionals, both before and during the service, which has been recognized internationally.¹¹

Improving vaccination coverage requires raising awareness among doctors by filling in gaps in their knowledge through evidence-based information on vaccines through participation in continuing medical education courses. The knowledge, attitudes, and practices of these health professionals, as well as the attitudes of all the professionals that work in the health units, influence the choices in vaccination made by the parents.¹²

Knowledge and communication failures of health personnel prevent high immunization rates since effective communication is not always obtained. Health care professionals are recognized as a trusted source of information, but inadequate or vague information can compromise parents' confidence by interfering with vaccine acceptance. The filling of any gaps in their knowledge enables to educate them to communicate effectively with patients in any contact with the health service.

♦ Permanent Education as a strategy to cope with the missed opportunities of vaccination

All health professionals in their daily practice should reflect on the actions related to vaccination, their safety, and effectiveness so that any contact of the population with one of these professionals becomes an opportunity to get vaccinated. Related to the attitude of health personnel towards vaccination, missed opportunities indicate the need to promote continuing education actions for health professionals, contributing to the improvement of the quality of service provided to the population.

The focus for ESF vaccination coverage is for children under 2 years old, and it is possible that for older children, the evaluation of the vaccination situation by the staff is not routinely performed. Teens are also a particularly important group as they meet professionals who are often not interested in the issue of immunization, and they can easily escape from parental control.^{10,17}

One of the strategies to expand vaccination coverage is to take advantage of opportunities to vaccinate during visits to a health service. According to the National Immunization Program regulations, the EPS actions for the teams are necessary to sensitize all health professionals to engage in vaccination activities through health surveillance measures to reduce The OPVs.

Therefore, education strategies in vaccination should be incorporated into all possible places for parental education, such as prenatal care, maternities, as well as prenatal education courses. This creates more chance to deal with fears and correct misinformation. This multimodal approach requires that all individuals interacting with parents should receive information about scientific evidence related to the safety and efficacy of established vaccines.⁸

Recognized barriers to the immunization of children and adolescents confronting the health system, primary health care providers, and parents are routinely due to a lack of knowledge on the subject, leading to missed opportunities for vaccine administration, which underlines the need for educational programs specifically addressed to each of these groups.¹⁰

Another study suggests that knowledge gaps in disease management and diagnosis, such as hepatitis B, translate into missed opportunities for capturing, vaccinating, and preventing complications. The results suggest

that a range of innovative continuing education programs are needed to upgrade clinicians, although not based on very intensive interventions, studies have shown that educational programs appear to be effective.¹³

There are significant differences between the knowledge of primary care professionals and tertiary care for the former. An important study was that fewer than one-third of hospital professionals stated that they recommend the vaccination of their patients, and it is essential to work to raise awareness, inform, recommend and encourage vaccination among hospital health professionals.¹⁴

In this way, knowledge enhancement and changing attitudes are essential, particularly when new vaccines are introduced or guidelines are modified. Although several possibilities of improving vaccination coverage are identified, reaching the levels necessary to obtain them is a difficult goal that will only be achieved by the combined efforts of all the professionals working in the health units.

As previously discussed, it is necessary to involve all professionals working in health units to increase childhood vaccination activities. Monitoring the health of the child and the family and, above all, knowing health conditions, lifestyles and the reasons why families do not attend health services are essential to expand health activities and promote health for families and their community.¹⁵

Getting the maximum information about the assisted patient, especially about the vaccination record, because if the record is not up to date, the professional is responsible for intervening in this issue, ensuring a plan of care consistent with the current situation of the individual to minimize the risks of limitations and disabilities. In this way, the multi-professional team can verify the evolution or involution of the health of this patient, making sure if there is need for other interventions.

The development of the Immunization Program in the country aims at the broad extension of vaccination coverage to reach an adequate degree of immunization. However, there are unnecessary contraindications, based on outdated theories or concepts, leading to the loss of the opportunity for immunization and consequent impairment of vaccination coverage. Such a reality can be hampered by the involvement and accountability of all since non-vaccination is more related to health services than to the population.¹⁶

Studies show that among the causes for non-vaccination, the attitudes of the population are highlighted, followed by the attitudes of health personnel. They reveal that the negligence of professionals in analyzing the record and refer them susceptible to vaccination is an important cause of IPO and has contributed to lower vaccination coverage as well as the orientation of false contraindications by health personnel.¹⁷

They should know the reality of the operation of their work unit, especially the activities performed in the vaccine room, to possible detect the existing problems and the adoption of measures to eliminate possible interferences that could damage the quality of the services performed and vaccination coverage.¹⁸

When referring to the multi-professional team of an ESF, it must be proactive and know the reality of the population for which it is responsible, seeking to identify the problems encountered and execute the planned activities according to the assignment of each professional, aiming to solve health problems of Primary Care. Therefore, any professional of the team, whether involved in the immunization activity or not, should be based on a rich and up-to-date knowledge, sensitizing to the provision of a humanized care, clarifying doubts, guiding the advantages of vaccination.^{18,19}

In this respect, another approach increasingly used in the studies of missed vaccination opportunities is adequate: the evaluation of the effectiveness of health services from research on the contribution of professionals to prevention and health promotion, not only in preventable diseases but also in other preventive interventions.²⁰

From the selected studies, it is well known that the issue of vaccination suggests the updating of knowledge and acquisition of new information, referring to the process of continuing education. However, in the perspective of transforming the practice, it must develop in the health professional a critical awareness, potentialized by the acquisition of new knowledge, achieved through the changes of attitudes resulting from the lived experiences, and their personal, professional and social transformation, translated into permanent education.

In this context, it is important to emphasize that the process of permanent education should be used, aiming mainly at the critical reflection of the professional before the activities that involve vaccination.

They must attend to immunization issues, adequate follow-up of vaccination coverage, an active search of the offenders and concrete adoption of action strategies, with the involvement of the entire multi-professional team to transform vaccination practices to reduce OPV.

CONCLUSION

Because they are the main and most reliable source of information for the population, empowerment strategies are not enough when it comes to vaccination. It is necessary that the professionals working in the health units exercise critical reflection on this theme in their work process since this action directly interferes with the assistance provided to the population of their services.

The occurrence of Lost Vaccination Opportunities points to the need to raise awareness among all professionals in the health team so they become involved in the vaccination activity, contributing to the increase of vaccination coverage, as well as ensuring the protection and promotion of the population's health, not only in immune-preventable diseases but also in other preventive interventions.

This study revealed that although there is a vast literature on vaccination, mainly with technical information, there is still an incipient literature that addresses the theme related to the actions of Permanent Education related to vaccination activities, which has been essential, regarding the critical reflection of the professional before such activities.

The practice of vaccination can expand professional attitudes seeking to understand the different situations and unfolding new possibilities to reducing missed opportunities in immunization. However, permanent health education should be adopted, aiming mainly at the professional critical reflection on issues related to immunization, adequate follow-up of vaccine coverage, active search of the defaulters and other action strategies counting on the involvement of the entire multi-professional team.

REFERENCES

1. Tavares RE, Tocantins FR. Nursing and control of vaccine-preventable diseases in primary care: an integrative review. J Nurs UFPE on line [Internet]. 2013 [cited 2015 Feb 20];7(12):6857-65. Available from: http://www.revista.ufpe.br/revistaenfermagem/index.php/revista/article/view/5587/pdf_4140
2. Ceccim, RB. Permanent Education in Health: decentralization and dissemination of pedagogical capacity in health. Cienc saúde coletiva [Internet]. 2005 [cited 2015 Mar 01]; 10(4):975-86. Available from: http://www.scielo.br/scielo.php?pid=S1413-81232005000400020&script=sci_arttext
3. Salles RS, Corvino MPF, Gouvêa MV. Permanent education in health in a specialized public institution: a descriptive study. Online Braz JNurs [Internet]. 2013 [cited 2014 Sept 15];12(1):704-6. Available from: <http://www.objnursing.uff.br/index.php/Nursing/article/view/4525>
4. Souza MT, Silva MD, Carvalho R. Revisão Integrativa: O que é e como fazer. Einstein 2010; 8:102-6.
5. Santos CMC, Pimenta CAM, Nobre MRC. A estratégia PICO para a construção da pergunta de pesquisa e busca de evidências. Rev Latino-am Enferm [Internet]. 2007 [cited 2015 Sept 15];15(3):[about 5 screens]. Available from: http://www.scielo.br/pdf/rlae/v15n3/pt_v15n3a23.pdf
6. Karino ME, Felli VEA. Enfermagem Baseada Em Evidências: Avanços E Inovações Em Revisões Sistemáticas. Cienc Cuid Saude [Internet]. 2012 [cited 2015 Sept 07]; 11(suplem):11-5. Available from: https://grupos.moodle.ufsc.br/pluginfile.php/178269/mod_resource/content/1
7. Oyo-Ita A, Nwachukwu Chukwuemeka E, Oringanje C, Meremikwu Martin M. Interventions for improving coverage of child immunization in low- and middle-income countries. Cochrane Database of Systematic Reviews. In: The Cochrane Library [Internet]. 2015 [cited 2015 Oct 22]; Issue 9, Art. No. CD008145. DOI: 10.1002/14651858.CD008145.pub7. Available in: <http://cochrane.bvsalud.org/cochrane/show.php?db=reviews&mfn=5044&id=CD008145&lang=pt&dblang=&lib=COC&print=yes>.
8. Hagood EA, Herlihy SM. Addressing heterogeneous parental concerns about vaccination with a multiple-source model: A parent and educator perspective. Human Vac Immuno [Internet]. 2013 [cited 2015 Sept 04];9(8):1790-94. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/23732902>.
9. Wheeler M, Buttenheim AM. Parental vaccine concerns, information source, and choice of alternative immunization schedules. Human VacImmuno [Internet]. 2013 [cited 2015 Sept 04]; 9(8):1782-89. Available from:

<http://www.ncbi.nlm.nih.gov/pubmed/23900266>.

10. Esposito S, Principi N, Cornaglia G. Barriers to the vaccination of children and adolescents and possible solutions. CMI [Internet]. 2014 [cited 2015 Sept 04];20(5):25-31. Available from:

<http://www.ncbi.nlm.nih.gov/pubmed/24354949>.

11. Parrella A, Braunack-Mayer A, Gold M, Marshall H, Baghurst P. Healthcare providers' knowledge, experience and challenges of reporting adverse events following immunization: a qualitative study. BMC Health Service Research [Internet]. 2013 [cited 2014 June 30];13(313):12. Available from: <http://www.biomedcentral.com/1472-6963/13/313>.

12. Pulcini C, Massin S, Launay O, Verger P. Knowledge, attitudes, beliefs and practices of general practitioners towards measles and MMR vaccination in southeastern France in 2012. CMI [Internet]. 2013 [cited 2015 Sept 04];20:38-43. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/23517454>.

13. Robotin M, Patton Y, George J. Getting it right: the impact of a continuing medical education program on hepatitis B knowledge of Australian primary care providers. International J of General Medicine [Internet]. 2013 [cited 2015 Sept 04];6:115-22. Available from:

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3647376/>.

14. Jiménez MA, Gracia JFN, Reyesa JAD. Missed opportunities in antipneumococcal vaccination. Can something more be done for prevention? Arch Bronconeumol [Internet]. 2014 [cited 2015 Sept 20];50(3):93-8. Available from:

<http://www.ncbi.nlm.nih.gov/pubmed/24315186>.

15. Pugliesi MV, Tura LFR, Andreazzi MFS. Mães e vacinação das crianças: Representações Sociais em serviços públicos de saúde. Rev Bras Saude Mater Infant [Internet]. 2010 [cited 2014 June 17];10(01):75-84. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1519-38292010000100008.

16. Figueiredo GLA, Pina JC, Tonete VLP, Lima RAG, Mello DF. Experiências de famílias na imunização de crianças brasileiras menores de dois anos. Rev Latino-Am Enfermagem [Internet]. 2011 [cited 2015 Sept 11];19(3):[08telas]. Available from: http://www.scielo.br/pdf/rlae/v19n3/pt_20.pdf.

17. Santos PCF, Bohland AK, Paixão AC. Oportunidades Perdidas de Vacinação em hospital de referência pediátrica, em Aracaju (SE), Brasil. Rev APS [Internet]. 2009 [cited 2014 June 17];12(1):29-38. Available from: <http://www.seer.ufjf.br/index.php/aps/article/view/95/185>.

18. Neves NB, Guedes HM, Barbosa SP, Arêdes VTO. A atuação da equipe de enfermagem na vacina do idoso Institucionalizado: o caso de um município da região do vale do aço. Rev Min Enferm [Internet]. 2009 [cited 2015 Sept 04];13(3):416-22. Available from:

<http://www.reme.org.br/artigo/detalhes/207>

19. Ministério da Saúde (Brasil) [Internet]. Secretaria de Vigilância em Saúde. Departamento de Vigilância das Doenças Transmissíveis. Manual de Normas e Procedimentos para Vacinação [cited 2015 Sept 04]. Brasília: Ministério da Saúde, 2014. Available from:

<http://www.funasa.gov.br/publicações>.

20. Mattos LMBB, Caiaffa WT, Bastos RR, Tonelli E. Oportunidades perdidas de imunização antitetânica de gestantes de Juiz de Fora, Minas Gerais, Brasil. Rev Panam Salud Publica [Internet]. 2003 [cited 2015 Sept 14];14(5):350-4. Available from: <http://www.scielo.org/pdf/rpsp/v14n5/18874.pdf>.

21. Paschoal AS, Mantovani MF, Méier MJ. Percepção da educação permanente, continuada e em serviço para enfermeiros de um hospital de ensino. Rev Esc Enferm USP [Internet]. 2007 [cited 2015 Sept 27];41(3):478-84. Available from:

<http://www.ee.usp.br/reeusp/v41n3/19.pdf>.

22. Carvalho AMC, Araújo TME. Fatores associados à cobertura vacinal em adolescentes. Acta Paul Enferm [Internet]. 2010 [cited 2015 Sept 04];23(6):796-802. Available from:

<http://www.scielo.br/pdf/apv/v23n6/13.pdf>.

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