Instrumentalization of community health agents about the vaccine calendar: Experience report

Instrumentalização dos agentes comunitários de saúde acerca do calendário de vacina: Relato de experiência
Instrumentalización de los agentes comunitarios de salud sobre el calendario de vacunación: Reporte de experiencia

RESUMO
Objetivo: Relatar a experiência de uma Educação em Saúde para instrumentalizar e atualizar os Agentes Comunitários de Saúde acerca do calendário de vacina. Metodologia: Trata-se de um estudo descritivo, do tipo relato de experiência, acerca de uma educação em saúde realizada em uma Estratégia de Saúde da Família, conforme a Metodologia da problematização. Resultados: A lacuna de conhecimento dos Agentes Comunitários de Saúde sobre o calendário de vacina desencadeou o desenvolvimento das atividades e abordaram o calendário em todo o ciclo vital. Assim, observou-se interação e interesse durante as ações, além da confecção de materiais para uso na prática destes profissionais no contexto das vacinas. Conclusão: Instrumentalizar e atualizar os Agentes Comunitários de Saúde sobre o calendário de vacina por meio da educação em saúde é capaz de aumentar as oportunidades e garantir o vínculo necessário para que a população tenha adesão e confiança no que é proposto.
DESCRITORES: Educação em Saúde; Enfermagem; Vacinas; Agentes Comunitários de Saúde.

ABSTRACT
Objective: To report the experience of Health Education to equip and update Community Health Agents about the vaccine schedule. Methodology: This is a descriptive study, of the experience report type, about a health education carried out in a Family Health Strategy, according to the Problematization Methodology. Results: The knowledge gap of Community Health Agents on the vaccine calendar triggered the development of activities and addressed the calendar throughout the life cycle. Thus, there was interaction and interest during the actions, in addition to the preparation of materials for use in the practice of these professionals in the context of vaccines. Conclusion: Instrumentalizing and updating Community Health Agents on the vaccine schedule through health education is capable of increasing opportunities and ensuring the necessary bond for the population to have adherence and confidence in what is proposed.
DESCRIPTORS: Health Education; Nursing; Vaccines; Community Health Workers.

RESUMEN
Objetivo: Relatar la experiencia de Educación en Salud para equipar y actualizar a los Agentes Comunitarios de Salud sobre el calendario vacunal. Metodología: Se trata de un estudio descriptivo, del tipo relato de experiencia, sobre una educación en salud realizada en una Estrategia de Salud de la Familia, según la Metodología de Problematización. Resultados: La brecha de conocimiento de los Agentes Comunitarios de Salud sobre el calendario de vacunas disparó el desarrollo de actividades y abordó el calendario a lo largo del ciclo de vida. Así, hubo interacción e interés durante las acciones, además de la preparación de materiales para uso en la práctica de estos profesionales en el contexto de las vacunas. Conclusión: Instrumentalizar y actualizar a los Agentes Comunitarios de Salud sobre el calendario vacunal a través de la educación en salud es capaz de aumentar las oportunidades y asegurar el vínculo necesario para que la población tenga adherencia y confianza en lo propuesto.
DESCRIPTORES: Educación en Salud; Enfermería; Vacunas; Agentes Comunitarios de Salud.

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INTRODUCTION

The supply of vaccines through health systems contributes to the prevention, control, elimination and eradication of vaccine-preventable diseases, as well as to morbidity and mortality caused by diseases related to such diseases. [1] This is possible since vaccination, a highly cost-effective action, is capable of preventing approximately two million deaths per year. [1-2]

However, a worrying fact is that vaccination coverage has been decreasing in Brazil and in other countries, being considered by the World Health Organization (WHO) one of the ten greatest threats to global health. [2] The motivations that trigger this decline are multifactorial and can be caused not only by social, cultural and religious factors, but mainly by the lack of information, ignorance about the purpose of vaccines and questions related to its effectiveness; in addition to false information that is conveyed by the various media. [2]

Given the context presented, it is necessary to think of strategies at the public health level that seek to raise awareness of the population and, consequently, alleviate their refusal and vaccine hesitancy. [2] Such strategies need to be developed and executed, mostly, by professionals who work in Primary Care (PC) services, considering that this level of care is responsible for health promotion and prevention actions.

Among the professionals working in the PA, the role of the Community Health Agent (CHA) stands out, representing a link between the community and the health team. In addition, it develops individual and collective educational actions, thus contributing to the improvement of care and quality of life through integrality, universality and equity. [3-4]

With regard to vaccines, the CHA has functions that include planning, identification of target groups, population engagement and mobilization, service delivery, tracking and monitoring. [5] In addition, by being considered a community leader and contributing to decision-making, the CHA can deconstruct myths, bring knowledge about vaccines and achieve trust through dialogue and communication strategies. [5]

In view of the above, it is evident how many contributions the CHA can provide to the people of the community in which it is inserted and, for that, it is necessary to know the vaccine schedule and be updated on the recent changes that have occurred in it and that were proposed by the National Immunization Policy (PNI - Política Nacional de Imunização). One of the strategies used for this purpose is Health Education, which consists of the production of processes that enable education in the workspace itself. As a result, workers constantly reflect on their practices, are able to evaluate them both individually and collectively, and allow them to expand their knowledge in a given area and qualify their actions to serve their users. [4,6]

Given the above, it is understood that the knowledge of the CHAs about the vaccination schedule assumes an important role and an effective strategy for the community to adhere to the proposed actions. In this way, the following guiding question emerged: What is the importance of Health Education to equip and update the CHAs regarding the vaccine schedule?

Thus, the objective of this study was to report the experience and experience of the actions developed through a Health Education that instrumentalized and updated the CHA on the vaccine calendar. It is hoped that this action can contribute to improve the quality of services provided and promote greater efficiency in the functions of health promotion and disease prevention in the community.

METHODS

This is a descriptive study of the experience report type. This type of study consists of a tool that allows a reflection on an action or a set of actions that address a situation experienced in the professional scope that is of interest to the scientific community. [7]

The experience took place in a Family Health Strategy (FHS) in a municipality in the south of Minas Gerais, which has an agreement with a Federal Institution of Higher Education (IFES - Instituição Federal de Ensino Superior). The place in question offers medical care, nursing, speech therapy and physiotherapy, in addition to vaccination. It has a staff formed by a nurse, three nursing technicians, a doctor, a receptionist, two people for general services and seven CHA. Currently, the aforementioned ESF has 3806 registered families and seven micro-areas.

In the aforementioned ESF, in November 2021, there was a Health Education with the CHAs to update the vaccine calendar according to the recommendations of the National Immunization Program (PNI). The purpose of the activity was due to an evaluative work of the Curricular Internship I, of the 8th semester of the undergraduate Nursing course. The planning and elaboration of Health Education were based on the Problematization Methodology – Arco de Maguerez. [8] To this end, the following steps were taken:

1) Reality observation and problem definition: the Brainstorming technique was used. In this way, the CHAs were encouraged to point out the main problems or demands in relation to their assistance to the community, and the selection of the priority problem was with the help of the GUT Matrix.

The GUT Matrix is a management tool

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used to analyze both the external and the internal environment of the organization and makes it possible to focus on the most serious problems that deserve greater attention, in addition to contributing to the elaboration of a strategic plan to solve them. [9] The mnemonic expression GUT refers to G for Gravity - it represents the impact that the problem can generate; the U stands for Urgency - the time needed to resolve the problem before it gets worse and T for Trend - means the probability of the problem becoming more serious over time. [9] Within the matrix, the causes are listed and each GUT item is evaluated from one to five, and the result will be given by multiplying these scores and the one with the highest value is considered the priority problem for resolution [9];

2) Definition of key points: in this step, the Ishikawa or Fishbone Diagram was used, which comprises a graph with the purpose of organizing the reasoning and discussions about a priority problem by identifying all the causes that can generate a certain effect [9];

3) Definition of key points: in this step, the Ishikawa or Fishbone Diagram was used, which comprises a graph with the purpose of organizing the reasoning and discussions about a priority problem by identifying all the causes that can generate a certain effect [8];

4) Solution hypotheses: at this stage, the actions developed through the 5W3H tool are planned and monitored, which describes what will be done; because it will be done; who will perform; when each task will be performed; place of performance of the actions; how it will be carried out; how much it will cost and how to measure its development; and,

5) Application to reality: application of the proposal in practice.

Seven CHA participated in the study, all female, working in an FHS in a municipality in the South of Minas Gerais, the professor responsible for supervising the internship and the Nursing student at the IFES.

To analyze the quantitative data obtained as a result of the intervention, basic descriptive statistics were used, such as percentage and average with the help of Microsoft Excel 2016.

It is worth mentioning that the report does not present testimonies from interviews or any third-party approaches, but only what was experienced by the authors. Thus, there are no implications for the appreciation of the Ethics Committee in Research involving human beings.

RESULTS

By observing the reality of the practice scenario in an FHS, the nursing student found out what potential problems could be addressed in Health Education. In view of this, several issues were raised, such as: lack of identification in the carriers of infectious and common waste; lack of registration of the hypertensive population with diabetes; and, inadequate organization in the control of hospital medical supplies.

Concomitant to this and in a complementary way, the Brainstorming technique was performed to guide the most recurrent theme among the professionals present at the time. With this, it was also noticeable the concern of the seven CHA, all female, from the FHS to update their knowledge about the vaccine schedule so that they can meet the demand for information of their enrolled population. Thus, in view of all the problems raised, the process of prioritizing them began with the help of the GUT Matrix (Chart 1).

The CHA being out of date regarding the vaccine schedule was evidenced as a priority problem and, thus, the planning of Health Education began. Therefore, the first step adopted was to elaborate the GUT Matrix and, then, the process of defining the key points began, through the identification of the main causes of the problem through the Ishikawa Diagram (FIGURE 1).

The main causes found in the diagram in relation to the identified problem were: lack of updating and access to the PNI calendar; unavailability of computers to access the PNI; population that demands updating of the vaccine calendar; lack of skilled labor to address vaccine logistics. Thus, to meet the demand presented by the CHA and at the same time provide the resolution of some key points identified, we sought to structure Health Education.

In order not to interfere with the workflow of the CHA, two days were scheduled, each one in a week. In the first moment, the vaccination schedule for children and adolescents was addressed and, on the second day, the vaccine schedule for adults, pregnant women and the elderly.

With regard to the methodology of Health Education, a questionnaire was prepared to assess the knowledge and attributions of CHA in relation to vaccines; a calendar with information on vaccines that are administered to children and adolescents (Appendix A); a calendar contai-

Table 1: GUT matrix of the main problems evidenced in the FHS of a municipality in the south of Minas Gerais, 2021.

Evidenced problems	G	U	T	GxUxT
CHA outdated regarding the vaccine schedule	4	5	4	80
Lack of registration of the hypertensive and diabetic population	4	3	2	24
Inadequate organization in the control of hospital medical supplies	3	2	3	18
Garbage with white bag and without identification	3	3	2	18

Source: The authors, 2021.

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ning vaccines for the adult, pregnant and elderly life cycles (Appendix B). In addition, the pre-assembled childhood vaccine calendar was made on cardboard with clippings of the vaccine names so that they could be reallocated to the corresponding age groups, as illustrated in Figure 2. It should be noted that both calendars were based on the PNI proposals [10] and schematized to be used as permanent material by the CHA and other FHS professionals. Thus, at the end of each moment, they were made available on the wall of the FHS professionals' meeting room.

The first moment of Health Education took place on a Thursday in November 2021 in the afternoon, as the flow of care was lower. It was carried out in a multi-professional activities room, which was prepared with tables and chairs arranged in a circle to facilitate communication between the mediator (student) and the CHA.

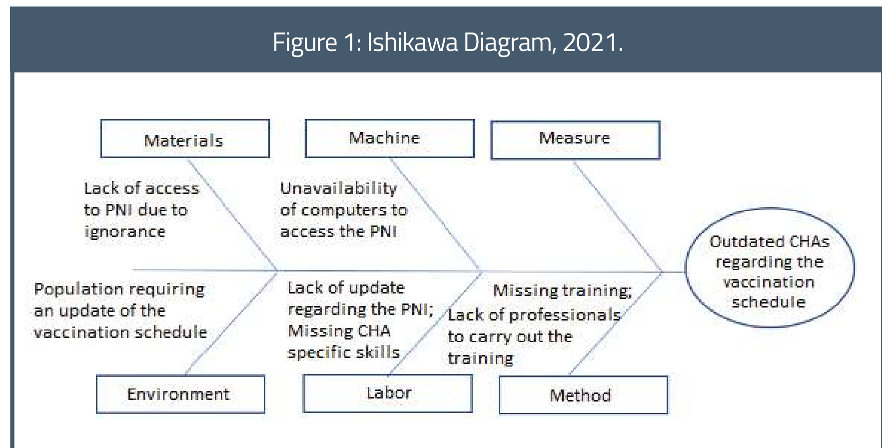
The activity began with the delivery and resolution of the questionnaire that evaluated the prior knowledge and attributions of the CHA in relation to vaccines. At the end, the following triggering question was also discussed: "Can CHA identify delays in the vaccine booklet within the community?", in order to instigate the role, importance and direct action of CHA in the population regarding the theme. Then, the prepared child and adolescent vaccine calendar was made available for viewing and interpretation about the period of vaccine administration.

The duration of Health Education was one and a half hours and, at the end, as an integral part of the evaluation of the activity, the pre-assembled cardboard was placed on a table with all the clippings with the name of the vaccines spread around it. The dynamic proposal was for the CHA to complete the calendar with the vaccines in the respective periods for their administration, without using the calendar that was previously made available and without researching other means.

Regarding the second moment of Health Education, it took place on Wednesday of the following week in the morning, lasting half an hour. It had the participation of the FHS nurse, who contributed to emphasize the role of the CHA in the guidelines on vaccines. Similar to the previous meeting, the vaccine calendar of the adult, pregnant and elderly life cycles, prepared in advance to be used as a reference, was made available. After carrying out the explanation, a discussion was opened about the personal experiences of the CHAs regarding the vaccine schedule for adults. At this moment, they were encouraged to comment on which vaccines were in their booklets, which were still missing and the reasons that prevented them from vaccinating; allied to this, the CHA reflected on their role as a community leader. The Health Education action plan based on the 5W3H tool is presented below (Table 2).

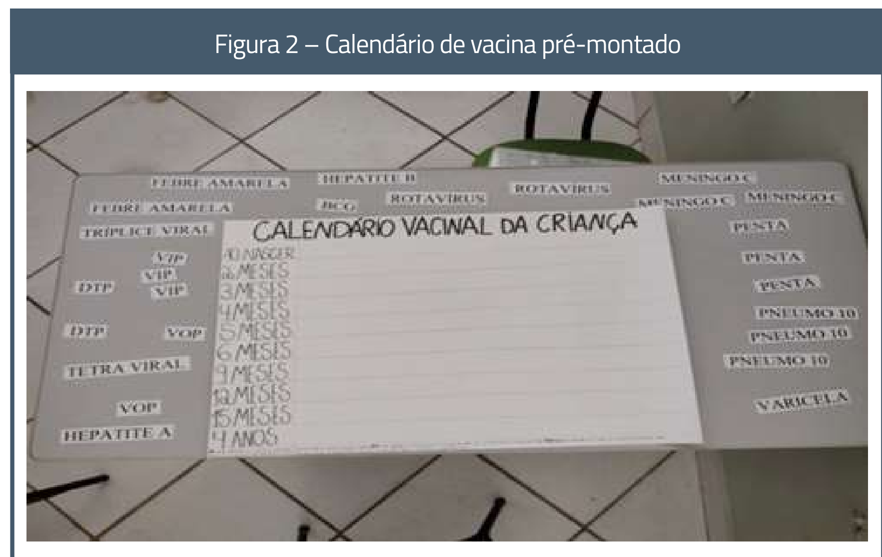
With the two moments of Health Education, it was possible to observe that there were both quantitative and qualitative results. At the beginning of the action, it was possible to observe from the answer to the questionnaire applied about the CHA having difficulty interpreting the vaccine schedule, it was found that 75% incorrectly answered at least one of the questions, with an average error of 1.5 questions for each participant. However, at the end of the first meeting, when the CHAs went to set up the children's ca-

Figure 1: Ishikawa Diagram, 2021.



Source: The authors, 2021.

Figura 2 – Calendário de vacina pré-montado



Source: The authors, 2021.

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Table 2: 5W3H tool, 2021.

What will be done?	Why should it be done?	Who will do it?	When should it be done?	Where should it be done?	How will it be done?	How much will it cost?	How to evaluate?
Update the knowledge of the CHA about the vaccine schedule according to the PNI.	This action is important due to the leadership role that the CHA has in its community. Through knowledge of the calendar, this professional can and should make an active search, in addition to guiding the population..	Nursing student	Two meetings, the first on 11/18/2021 starting at 2:00 pm and ending at 3:00 pm; and the second on 11/25/2021 starting at 8:00 am and ending at 8:30 am.	Health Unit activities and meeting room.	First meeting: the childhood vaccine schedule was discussed. For this, a specific calendar was prepared with specifications of vaccines and age groups, to be a monitoring instrument at the time of explanation and definitive material for use in the work of the CHA. In addition, a questionnaire was prepared with five questions about some vaccines to be answered at the beginning of the update. At the end, a card with a pre-assembled childhood vaccine calendar was delivered to the CHA so that they could indicate the vaccines to be administered and the respective age groups, which is a permanent material in the Health Unit. Second meeting: a vaccine schedule for adults, pregnant women and the elderly was prepared to be delivered to the CHA. A conversation circle was conducted, guided by the experiences and knowledge of the CHAs about vaccines administered in these life cycles.	No printing costs. Cardboard - BRL 4.00	First meeting: held through responses to the questionnaire. At the end, together with the analysis of the questionnaire responses, the assembly of the card with the vaccines and the respective age groups of administration was observed, in order to assess whether the doubts were resolved and whether the content was understood. Second meeting: triggering questions were asked about the individual handbook of each CHA, then they were encouraged to share their experiences.

Source: The authors, 2021

lendar, it was evident that they agreed on the vaccines that need to be administered and the respective age groups, thus solving their difficulties.

In addition, in both meetings it was possible to observe the interaction and interest of the CHAs in relation to the vaccine calendar, who were attentive to the assembly of the vaccine calendar on the cardboard, participated in the discussions and mentioned their doubts and personal and professional experiences in the context of vaccines.

DISCUSSION

The proposal to develop Health Education in the internship field enabled the student to be able to identify and solve problems. This fact was possible since, with the implementation of this initiative, the person involved assumes a decision-making and proactive role in identifying the needs of the population and the team, with the aim of guaranteeing the promotion and prevention of the health of the individual, family and community, mainly within the scope of public health.[11] The proposal to develop Health Education in the internship field enabled the student to be able to identify and solve problems. This fact was possible since, with the implementation of this initiative, the person involved assumes a decision-making and proactive role in identifying the needs of the population and the team, with the aim of guaranteeing the promotion and prevention of the health of the individual, family and community, mainly within the scope of public health.[12]

In relation to the proposal to work with the CHA, it was of great relevance, since it is one of the professionals who work in the FHS and who play a key role in promoting bonds and strengthening communication between the PHC service and the community. [5] Allied to this, it has as specific attributions, the development of activities to promote health, prevention of diseases and injuries and health surveillance, through home visits and individual and collective educational actions in households and communities, as well as being in permanent contact with families. [3]

Regarding the vaccine theme, it is known that it is a topic that must be reflected in the daily practice of professionals working in the health area, so that any contact of the population with these professionals becomes an opportunity to get vaccinated. [6] Thus, it is essential that the CHAs have knowledge on this topic, in particular, of the vaccination schedule that covers the entire life cycle, from birth to old age, as it contributes to the re-signification of their role and guarantees the expansion of access to the vaccine as a right to health for the entire population enrolled in the FHS.

As Health Education is a teaching process, the content administered to CHA that based their importance in the context of the vaccine as well as their attributions and responsibilities were obtained from the best evidence available in

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the scientific literature. Allied to this, all the activities developed were in the form of active methodologies providing the subject who learns to be an active, autonomous agent and manager of his education. [12] Thus, the qualification of the CHA was through the teaching-learning process that sought to highlight the importance of dialogue and their constant search for problems experienced in their routine. In addition, to carry out Health Education, an action plan was prepared based on the 5W3H tool considered fundamental, as it allows for basing perceptions and the way of acting in the identification, analysis and solution of the problems encountered [6] in addition to managing everyday situations that occur in the work process.

Still, in the context of PC, Health Education stands out imperatively, since its guidelines are based on the construction of relationships between professionals and users, in addition to the recognition of the realities and contexts involved. [12] And, considering that the nursing professional is the one who has a fundamental role in front of their team, it is essential that they develop strategies that promote teaching-service integration and that these are incorporated from their training process. [12] Therefore, as a future professional nurse, the student needs to experience initiatives that promote education, as well as the training of professionals. Thus, including these demands in the undergraduate curriculum aims to broaden the student's vision in favor of quality, safe and effective care.

In addition to the above, the experiences provided during the training make it possible to identify the positive and negative points of the experience that was lived, contributing to the improvement of the process. Thinking about it, and considering that the vaccine theme involves a lot of information and content, it was noticed that if there had been more time available, other knowledge on the subject could have been provided to the CHA.

CONCLUSION

The professional nurse often needs to manage the health service, identify and prioritize problems as well as their causes and, with that, plan strategies that are capable of solving them, thus subsidizing quality care. In view of this, the experience with Health Education in the FHS provided the trainee with the experience of all these actions. At the same time, it made it possible to highlight the importance of equipping and updating community agents on the vaccine schedule, since its role and performance in this context is capable of increasing opportunities and guaranteeing the necessary bond so that the population has adhesion and confidence in what is proposed.

Thus, the nursing professional who plays the role of coordinator in the FHS must always be attentive to the needs of other professionals who work in the team in order to favor constant professional improvement. One of the possible ways is through Health Education, which requires knowledge and effort to put learning into practice and, thus, must be a continuous strategy and an integral part of the care routine in a health service.

Appendix A - Childhood Vaccination Schedule

Age/ Vaccine	BCG	Hepatitis B	VIP1	VOP2	Rotavirus	Penta 3	Pneumococcal 10	Meningococcal C	Yellow fever	Triple viral 4	Tetra viral 5	Hepatitis A	DTP6	Varicella
At birth	-	-												
2 months			-		-	-	-							
3 months								-						
4 months			-		-	-	-							
5 months								-						
6 months			-			-								
9 months									-					
12 months							R	R		-				
15 months				R							-	-	R	
4 years old				R					R				R	-

Caption:
1 Poliomyelitis 1, 2, 3
2 Poliomyelitis 1 and 3
3 Diphtheria, Tetanus, Pertussis, Haemophilus influenzae B and Hepatitis B
4 Measles, Mumps and Rubella
5 Measles, Mumps, Rubella and Chickenpox
6 Diphtheria, Tetanus and Pertussis

Applied dose
Dose applied as a booster for another vaccine
Reinforcement

Other vaccines:
dT (Diphtheria and Tetanus): will be applied to children from 7 years of age with a complete vaccination schedule, that is, with three doses for diphtheria and tetanus, one dose must be given every 10 years;
HPV (Human Papilloma Virus): two doses will be applied, with an interval of six months between doses, in girls from 9 to 14 years of age and to boys from 11 to 14 years of age;
Influenza (Influenza): will be applied to children from 6 months to under 6 years of age annually.

Source: National Immunization Program (PNI), 2021

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Appendix B - Vaccination schedule for adults, elderly and pregnant women

Age/Vaccine	Hepatitis B	Yellow Fever	Triple viral	Adult Double (dT)	dTpa
Adult / 20 to 59 years	3 doses depending on the schedule, if necessary topping up	1 dose (persons aged 5 to 59 years unvaccinated, administer one dose and consider vaccinated	Up to 29 years: 2 doses. Between 30 to 59 years: 1 dose. Healthcare professionals should take 2 doses.	3 doses and booster every 10 years	Health Professional: 1 dose + boosters every 10 years (additional dose in the dT schedule)
Elderly / 60 years or older	3 doses depending on the schedule, if necessary topping up			3 doses and booster every 10 years	
Pregnant	3 doses depending on the schedule, if necessary topping up			2 doses depending on the schedule, if necessary topping up	1 dose each pregnancy

Source: National Immunization Program (PNI), 2021

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