Communication and education in health consultations to children with acute respiratory infections

ABSTRACT
The objective of this study was to identify the recommendations for the care of children with acute respiratory infections (ARI) and to describe the process of communication between professionals and mothers during the consultation. Data collection was performed in Primary Care Units, through interviews and observation of physicians’ and nurses’ consultations to children with ARI. The recommendations ranging between professionals were incomplete and focusing on the disease, mainly on the treatment; communication is focused on the professional, which does not promote an emancipatory education process. The results confirmed the need to include such issues in the initial and ongoing training of professionals.

DESCRIPTORS
Child
Respiratory tract infections
Health communication
Health education
Professional-family relations
Child health

RESUMO
Este estudio objetivou identificar as orientações de cuidado à criança com infecções respiratórias agudas (IRA) e descrever o processo de comunicação entre profissionais e mães na consulta. Os dados foram coletados em Unidades Básicas de Saúde, em entrevistas e observação de consultas de enfermeiras e médicos a crianças com IRA. Os resultados mostram orientações variáveis e incompletas entre os profissionais, predominantemente prescritivas e centradas na doença, principalmente no tratamento medicamentoso. A comunicação é centrada no profissional, o que não favorece um processo educativo emancipatório. Conclui-se a necessidade de incluir esses conteúdos na formação inicial e permanente dos profissionais.

DESCRIPTORES
Criança
Infecções respiratórias
Comunicação em saúde
Educação em saúde
Relações profissional-família
Saúde da criança

RESUMEN
Este estudio objetivó identificar las orientaciones de cuidado al niño con infecciones respiratorias agudas (IRA) y describir el proceso de comunicación entre profesionales y madres en la consulta. Los datos se recogieron en Unidades Básicas de Salud, en entrevistas y observación de consultas de enfermeras y médicos a niños con IRA. Los resultados muestran orientaciones variables e incompletas entre los profesionales y madres, predominantemente prescritivas y enfocadas en la enfermedad, principalmente en el tratamiento medicamentoso; la comunicación se centra en el profesional, lo que no favorece un proceso educativo emancipatorio. Se concluye en la necesidad de incluir tales contenidos en la formación inicial y permanente de los profesionales.

DESCRIPTORES
Niño
Infecciones del sistema respiratorio
Comunicación en salud
Educación en salud
Relaciones profesional-familia
Salud del niño

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INTRODUCTION

Despite improvements obtained in the rates of morbidity and mortality of children, they still suffer from diverse diseases such as diarrhea, malnutrition, parasitic diseases, dehydration and respiratory infections. These diseases mainly occur due to social inequalities characteristic of poor countries.

Among such diseases, acute respiratory infections (ARI) are one of the main causes of infant morbidity and mortality[4]. ARIs are the main reasons for medical consultations in the public network in the city of São Paulo, SP, Brazil, comprising about 40% of pediatric hospitalizations[1] and are the main cause of death among children 1 to 5 years old; pneumonia is the main isolated cause. The fact that pneumonia is one of the main causes of infant mortality and mainly occurs in peripheral areas indicates the poor living conditions for those families and the inefficiency of the health service[5,6] in meeting the needs of this population.

To cope with these rates of infant mortality, the World Health Organization (WHO), the Pan-American Health Organization (PAHO) and the United Nations Children’s Fund (UNICEF) devised a strategy called Integrated Management of Childhood Illnesses (IMCI). Such a strategy promotes a systemized and integral view of children, including components of care and control of the most prevalent diseases during childhood. Its inclusion in the primary health care routine provided to children has been recommended by these institutions since the mid-1990s[4].

Both PAHO and WHO classified deaths due to pneumonia into three basic types in order to establish a sequence in which actions to control it would be implemented[4]: deaths due to health professionals or health services’ malpractice, whether in the identification or treatment stages; deaths from not seeking out health services or delaying seeking help due to a delayed realization of severity; deaths that occur at home in which no health services or professionals are consulted due to a failure to realize the condition’s severity.

According to PAHO, the strategies to control ARI that offer immediate benefits to children in developing countries are[4]: a) appropriate treatment of cases: early classification of the severity of infection on the part of families and workers in primary care; use of antimicrobial therapy and other appropriate support measures; definition of referral criteria and appropriate treatment in referral units; b) improvement of childcare knowledge, conduct and practices on the part of mothers and families through their direct participation in educational interventions.

Some studies identify a close relationship between morbidity and mortality due to ARI and the poor knowledge of families concerning the disease and quality of care provided at home[5-7], which demand health educational actions appropriate to the characteristics of caregivers, promoting home care needed by children, the early recognition of signs and symptoms of the disease and seeking out health services in time.

Another study concerning maternal knowledge related to home care provided to children with diarrhea or ARI revealed that only a small share of mothers identified ‘increasing supply of fluids’ or ‘nourishment’ an important aspect for the care of children with ARI, despite these being acknowledged as essential care actions in the recovery of children with this type of disease[7].

Given the importance of the communication process in health education, the characterization and analysis of this process during consultations can contribute to the evaluation of educational actions in childcare.

OBJECTIVES

Given the importance of the communication process in health education, the characterization and analysis of this process during consultations can contribute to the evaluation of educational actions in childcare.

This study’s objectives included: identifying instructions provided during care delivered to children with ARI in medical and nursing consultations and describing the communication process established by health professionals during consultations with children with ARI.

METHOD

This exploratory and descriptive study was carried out both in Primary Care Units (PHU) and Family Health Units (FHU) in the region of Butantã, São Paulo, SP, Brazil in two phases. The first phase was composed of semi-structured and individual interviews with physicians and nurses. The second phase included observation of consultations provided by these professionals to children with ARI. Both phases were carried out with proper forms developed for these purposes based on the protocols for evaluating units providing training concerning ARI[8], based on the stages of communication process[9] and IMCI recommendations[10].

In relation to ethical concerns, the Research Ethics Committee at the City Health Department approved the project (process 379/2004CEPSMS Registration number 259/2004 CEPSMS). Additionally, all the participants and the legal guardians of the children cared for in the observed consultations signed free and informed consent forms.

The IMCI recommendations concerning childcare were considered in the analysis, in addition to specific recommendations for care provided at home to children with ARI since they encompass care priorities. Such recommendations include establishing appropriate communication with mothers and providing guidance concerning the following: continuing feeding, offering additional fluids to
Children during the disease, identifying danger signs that require immediate return to the health service, and scheduling a return visit. The strategy highlights the importance of providing guidance according to specific needs, which depends on the identification of care practices usually used by the family and other family characteristics.

RESULTS

A total of seven workers from the PHU (two nurses and five pediatric physicians) and 12 workers from the FHU (eight nurses and four physicians) were interviewed, totaling 19 interviews. Additionally, 21 consultations provided by 11 of these professionals were observed (six nurses from the FHU, two physicians from the FHU and two physicians from the PHU); 15 consultations took place with those within the FHU (11 with nurses and five with physicians) and five consultations were provided by pediatric physicians.

No nurses from the PHU were observed because they do not usually give consultations. Six of the interviewed professionals were not found for the observations either because they had left the service, were transferred to a unit not participating in the study, or were on maternity leave.

Most participants completed college in public universities in the Southeast region of Brazil, especially in the state of São Paulo, and had at least one specialization in the following fields: collective health, public health, or pediatrics.

Most participants reported they acquired knowledge concerning IMCI strategy in congresses and by reading; only one nurse from the PHU reported specific training, which reveals that the implementation of this strategy was not completely accomplished in the city of São Paulo, even in the FHU units. Nonetheless, two nurses and two physicians from the FHU and one physician from the PHU reported partially using it in their practice.

Nurses from the FHU reported they provide a larger amount of information than the remaining professionals with the following results: nurses from the PHU reported they provide an average of 19.5 instructions, physicians of the FHU reported they an average of 19.75 instructions, physicians from the PHU reported an average of 21 instructions; nurses from the FHU reported 24.1 instructions. However, these results were not confirmed by observations; physicians from the FHU actually provided 17.73 guidelines by consultation and nurses from the FHU provided 13.25 guidelines by consultation.

The professionals reported few practices that favor adherence to their instructions but the most frequent were: schedule a home visit; verify whether the mother understood the information; check whether there were any additional doubts (Figure 1). This information was proven in the observations. Many reported that no additional measures were used nor did they provide any additional information stating that mothers are not capable of complying or have no means to comply with it.

![Figure 1 - Practices adopted by professionals to increase mothers’ adherence to their recommendations, according to profession and type of health unit - São Paulo - 2006](image)

According to the general aspects of communication, professionals were cordial and respectful in most part of consultations: their tone of voice was considered pleasing; they looked at the mothers while talking, listened to them attentively without interrupting, and instructed them in a friendly manner. In most of the consultations, though, the professionals did not introduce themselves or call the mother and child by their names (Figure 2).

In most of the consultations, they asked whether the mother had any doubt and informed them of the diagnosis or diagnostic hypothesis. The only explanation concerning the diagnosis was provided by a nurse from the FHU who said: *the lungs are too full of mucus, which hinders respiration*. In 30% of the consultations provided by nurses of the FHU, the professionals did not inform the parents of the diagnosis, though these cases were immediately referred to medical evaluation.
Antipyretic medication was prescribed in 90% of the observed consultations; physicians explained how much (dose) and when the mother should administer it in most of the cases. No professional explained to mothers the purpose of the medication and which measures to take if the child refused it or vomited. Antibiotic medication was prescribed in 80% of the medical consultations (Table 1). Professionals explained for how many days the mothers should administer the medication in all the consultations; how many times a day and times the medication should be administered were explained in most cases.

Table 1 - Medical instructions concerning the administration of antibiotics to children with ARI at home according to type of health unit - São Paulo - 2006

<table>
<thead>
<tr>
<th>Instructions concerning the use of antibiotics</th>
<th>PHU’s physicians (N=4)</th>
<th>FHU’s physicians (N=4)</th>
<th>Total (N=8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Importance of maintaining regular schedule of administration</td>
<td>1 (25.0)</td>
<td>2 (50.0)</td>
<td>3 (37.5)</td>
</tr>
<tr>
<td>Importance of administering all the doses</td>
<td>2 (50.0)</td>
<td>1 (25.0)</td>
<td>3 (37.5)</td>
</tr>
<tr>
<td>How to prepare it</td>
<td>-</td>
<td>3 (75.0)</td>
<td>3 (37.5)</td>
</tr>
<tr>
<td>For how many days</td>
<td>4 (100.0)</td>
<td>4 (100.0)</td>
<td>8 (100.0)</td>
</tr>
<tr>
<td>How many times a day/time</td>
<td>4 (100.0)</td>
<td>1 (25.0)</td>
<td>5 (62.5)</td>
</tr>
</tbody>
</table>

Concerning feeding, professionals asked in 45% of the consultations (60% of the nurses of the FHU, 50% of the physicians from the FHU and 16.7% of physicians from the PHU) whether the children were having problems eating. In 60% of the cases, they instructed the mother to feed the child in the following ways: breaking their daily diets into smaller portions, keeping a habitual diet, or offering the diet recommended for the child’s age. None of the professionals advised the caregivers what to do if the children refused food. Although in one consultation a nurse from the FHU did tell the caregivers how to proceed if the child vomited.

In most of the consultations (70% of nurses of the FHU, 100% of the physicians from the FHU and 83% of the physicians from PCU) the professionals communicated the need to increase the ingestion of fluids. In one quarter of the consultations (none of those provided by FHU’s physicians), the professional recommended fluids should preferably be water, tea and natural juices. Only one nurse from the FHU explained in one consultation what to do if the child refused food or vomited and provided information on the signs of dehydration. In the only consultation provided by a nurse from the FHU to children younger than six months of age, the professional recommended increased breastfeeding frequency; another consultation provided by a physician from the FHU to a child this same age was also observed but he did not made this recommendation.

In order to facilitate the removal of nasal secretion, the professionals recommended irrigating nasal passages with saline solution to clean the child’s nostrils in most of the consultations. More than a quarter of workers recommended nasal inhalation or spray. Only one nurse from the FHU recommended the mother blow the child’s nose with a tissue or toilet paper to remove secretion.

The professionals advised mothers to look for danger signs in 80% of the cases. The signs most highlighted in a little more than half the consultations were: rapid breathing, difficult breathing, onset of fever or worsening fever, and worsening general state; in about a third of the consultations, mothers were also informed of suprasternal and intercostal retractions (Figure 3). Others danger signs such as cyanosis, lethargy and difficulty drinking were communicated by professionals in 15% of the consultations, at most.
Mothers were advised to return immediately in the event of any sign of severity in 70% of the consultations (50% of nurses from the FHU, 100% of physicians from the PHU and 70% of physicians from the FHU). Only in two consultations (one physician from the FHU and another from the PHU) did the professionals explain why these signs should be observed. In relation to reevaluation, in 50% of the consultations provided by nurses from the FHU (1/4 of the total), the professional referred the child for immediate medical evaluation and it was the responsibility of the physician to schedule the return visit. Return visits were scheduled in 33% of the total (two consultations provided by nurses from the FHU, one consultation by the FHU's physician and two physicians from the PHU).

**DISCUSSION**

According to the results obtained during observations, the nurses from the FHU provided the smallest number of instructions per consultation, very different from what was reported in the interviews in which they provided more information than other professionals. A possible explanation is that in 50% of their consultations they concluded the children needed a medical evaluation and immediately referred the child to a physician. Hence, the FHU nurses may have held the view that the physician should provide any instruction because he would conclude the clinical evaluation and establish the appropriate conduct to be followed; they did provide a larger number of guidelines when consultations did not require medical evaluation.

The recommendation of the IMCI (11) strategy concerning evaluation, treatment and guidance related to care to be provided to children at home indicates that, when the mothers seek the health service, professionals should take the opportunity with the children to evaluate other aspects besides those related to the complaint *per se*, that is, beyond respiratory problems as is the case of this study. Hence, every child brought to the health service with cough or difficulty breathing should also be evaluated in relation to diarrhea, fever, anemia or malnutrition in addition to feeding habits and immunization. Therefore, these aspects should be observed and related guidance provided at the time of consultations. Even though most professionals reported some knowledge concerning the IMCI strategy, none of them completely assessed the children.

One of the aspects not clearly proposed in the IMCI and that was investigated in this study is instructions provided in relation to the disease, disclosure and clarification concerning the diagnosis. Providing information is the first step to promote the population's autonomy, aiming to ensure the conditions necessary for people to make autonomous choices, minimizing the circumstances that hinder or impede them in the exercise of autonomy (12). There is no autonomy without knowledge.

Most of the studied professionals informed the mothers about the diagnosis though only one nurse explained what it meant. However, the professional was not clear and used words in the diminutive, which in addition to acting in a patronizing manner toward the mother, does not facilitate understanding of the disease, its importance and impact on the child's life. The use of words in the diminutive by health professionals is a frequent occurrence in matters related to children and even though some report its use because it sounds affectionate, there is a possibility its use may actually seem an attempt to "belittle" the other person. Other studies have shown a tendency on the part of professionals not to disclose the diagnosis to the patient or not to clearly explain it nor verify its comprehension (12-13). They should, in addition to recommending a treatment, explain the reasons such a treatment was adopted.

In most of the cases, instruction provided was specific for respiratory diseases with a greater emphasis on medication. The content of such guidance is much more focused on what to do (when to administer the medication and how much) than on the reasons a given treatment was prescribed or how to ensure the child will receive the medication. It is important to talk about what to do if children vomit and how to administer the medication in the event of refusal, taking into consideration that adminis-
tering medication to children may be a challenge even for the family, who frequently use inappropriate strategies.

According to the IMCI strategy\(^{(11,14)}\), when prescribing a medication, the professional should explain to the mother or the companion the reason it is being prescribed, communicate how many times it should be administered, observe the administration of the first dose, and verify whether the mother understood the entire procedure before she leaves the services. These steps enable one to effectively identify the difficulties faced by the population and help to solve them.

Also contrary to what is recommended by the IMCI strategy, the professionals did not perform a complete assessment of the children concerning their habitual feeding, which would enable the identification of inappropriate or correct practices, and also individualizing guidance to the needs of mothers and the families’ economic situation. This in addition to reinforcing correct practices, would reduce potential fears and increase the mothers’ self-confidence in relation to the care they provide to their children\(^{(7)}\).

Most of the professionals did not inform the mothers about how to encourage children to eat during their disease, which is essential since loss of appetite is common in this situation. Inappropriate feeding contributes to the deterioration of one’s nutritional state, one of the main risk for infections, leading to a vicious cycle that if it does not ultimately compromise the patients’ lives, does negatively influence the child’s growth and development\(^{(13-16)}\). Hence, recommendations concerning eating and continuity of breastfeeding are key elements in care provided at home to children with ARI because they reduce the impact of the disease on the child’s growth and development\(^{(15-14)}\).

Also, the child may refuse an appropriate quantity of fluids given poor appetite and compromise their hydration and the fluidization of respiratory secretions, which favors the elimination of agents causing the disease from the body. Fluids prevent dehydration that may arise as a result of tachypnea, vomiting, anorexia, diarrhea or fever and decrease respiratory distress caused by the increased secretion in airways\(^{(10,15)}\).

Hence, one of the main care actions provided to sick children is to increase the ingestion of fluids, which is an instruction provided in most of the consultations. However, few professionals told the mothers how it should be implemented, considering that the increase of fluids should be through offering fruit juices, soups or vegetable broth, water and natural gelatin or by increasing the frequency of breastfeeding for children younger than six months of age\(^{(10,16)}\). For such purposes, oral hydration is more efficient than the use of any medication or other type of intervention, such as inhalation. Hence, all professionals are expected to make such recommendations.

In regard to the removal of mucus and nasal cleansing, irrigation with saline solution and removal of the mucus are important measures because if mucus is not removed, it may obstruct the nostrils, causing respiratory distress in addition to favoring the onset of secondary infections\(^{(10,15)}\). Most of the professionals recommended nasal irrigation in their consultations, though only one nurse from the FHU instructed the mother to blow the child’s nose to remove mucus. This measure may have been seldom recommended by the professionals because it may be seen a matter of hygiene obvious to mothers. However it is necessary to reinforce such procedures mainly due to the young age of most of the affected children. Infants tend not to present much coughing and are not able to remove the mucus by themselves, while nasal obstructions may hinder eating and sleeping, causing sickness. Sometimes, it is necessary to induce nasal drainage to promote comfort\(^{(10,15)}\).

Professionals instructed mothers in most of the consultations to monitor for signs that indicate the disease is worsening and immediately return to the service if these were observed. The main signs related to ARI such as rapid breathing, difficulty breathing, onset or worsening of fever, worsening of general state, were stressed in 60% of the consultations. Only one professional instructed the mother to observe whether the child had difficulty drinking; and whether the mother had difficulty in feeding a child younger than two months of age was recommended in the only consultation it was appropriate to do so.

These signs indicate the disease is worsening and it is expected that professionals instruct mothers in all the consultations to monitor danger signs and return immediately to the health service if they appear\(^{(15)}\). However, none of the professionals instructed mothers regarding all the signs in their consultations and in some consultations they did not reinforce the need to immediately return to the service. Even though it seems obvious that mothers should return to the health service if they observe any of these signs, studies addressing the mortality of children with ARI indicate that caregivers are often slow to return to the service, possibly due to inappropriate guidance concerning the identification of these signs and actions to be taken in the event they are identified\(^{(16)}\).

The IMCI strategy also recommends that if symptoms do not improve, regardless of the disease, the child should be reassessed by the health professional in pre-defined intervals. In cases of pneumonia, the child should be reassessed in two days, regardless of whether the symptoms improved or not\(^{(14)}\). Only one child cared for by a nurse from the FHU was suspected to have pneumonia and was immediately referred for a medical evaluation. In another four consultations by FHU nurses, the children were also referred to the physician and it was his responsibility to schedule a return visit. Few professionals scheduled return visits in the remaining consultations.

In relation to communication with mothers, even though professionals demonstrated great concern for treatment adherence, the measures adopted to ensure
such adherence were restricted to prescriptions and repetitions of the therapeutic plan. The implementation of more participative pedagogical measures to promote greater understanding of the health-disease continuum in children in order to facilitate treatment adherence was not observed.

Hence, guidance followed the traditional educational model that considers individuals to be “empty boxes” who need technical knowledge for their survival\textsuperscript{17-18}. Instructions were directive, that is, the professionals transferred scientific knowledge to the mothers in an asymmetric relationship in which maternal knowledge and the meanings they attribute to the health-disease continuum were ignored. The professionals did not ask about such knowledge and meanings nor did they let the mothers spontaneously talk about them; only the professionals’ opinions were confirmed and mothers were excluded from decision-making concerning care provided to their children.

Such a method of health education focused on professional knowledge, which devalues interpersonal relationships and disregards meanings of care held by families, generates a gap between the professionals’ thinking/practice and mothers’ actions, hindering their learning in relation to prescriptions and required care\textsuperscript{17}.

Overcoming this traditional model of health education requires health professionals to understand knowledge as a process of collective construction and valorization of the population’s knowledge. Hence, professionals need to leave their role of keepers of knowledge and start to establish a relationship of exchange with the population in which all are considered actors in the health-disease continuum. Therefore, communication, which in the traditional model of health education is directive, becomes participative and based on dialogue and interaction among people\textsuperscript{18}.

**CONCLUSION**

The study achieved the proposed objectives. It allowed determining that instructions provided to mothers concerning care delivered at home to children with ARI does not follow a standard, hence, guidance is variable and incomplete; the communication process is focused on the professional, which does not favor an emancipatory educational process.

Therefore, the professionals’ concepts related to educational practice should be reviewed in order to establish participative communication between professionals and caregivers, sharing knowledge in an emancipatory approach to promote the control of families concerning the health-disease continuum. The educational process of health professionals should include opportunities to learn competencies and skills for health education considering communication as a care action so as to promote exchange that supports projects toward a better quality of life.

Additionally, considering this study’s findings and given the central role that health promotion and education play in primary health care and also that such actions do not occur separately from a dialogical communicative process, it is essential to include this issue and the IMCI strategy in the permanent educational processes of professionals in the primary health care system.

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Carvalho APA, Veríssimo MDLOR


