

# Official monitoring of the Brazilian Norm for Commercialization of food for nursling and children of first infancy, rubber nipples, pacifiers, and nursing bottles — NBCAL\*

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This work aimed to evaluate advertisement of baby food, rubber nipples, pacifiers and nursing bottles through newspapers as well as on TV, radio, and the internet, in order to check whether the 'Brazilian Norm for Commercialization of Food for Nursling and Children of First Infancy, Rubber Nipples, Pacifiers and Nursing Bottles' (Norma Brasileira de Comercialização de Alimentos para Lactentes e Crianças de Primeira Infância, Bicos, Chupetas e Mamadeiras – NBCAL) has been complied. Samples of all the items above were acquired at discount and department stores to check whether labeling was in compliance with the NBCAL. The development of this research as well as the analyses of commercial promotion were carried out in Juiz de Fora – state of Minas Gerais, from May to July 2006, using convenient, non-representative sampling composed of 680 pieces of advertisement. The results obtained through descriptive statistics showed that 564 of the 680 samples analyzed, or 83.0%, did not meet the NBCAL. Irregularities were detected in 100% of the samples advertised on the media and found in hospitals and drugstores; in 70.1% of the samples purchased at supermarkets, in 37% of those from medical clinics and in 86.6% of those found on the internet. The evidences showed that monitoring must be carried out continuously and educational campaigns on the importance of breast-feeding for the full development of children must be addressed to mothers, the food industry and commercial establishments.

**Uniterms:** Publicity/baby food/evaluation. Advertisement/baby food/evaluation. Childish ware/evaluation of labeling.

O presente trabalho teve como objetivo avaliar propagandas e publicidades impressas de alimentos infantis, bicos, chupetas e mamadeiras, além das veiculadas em rádio, TV e *internet*, para verificar o cumprimento da Norma Brasileira de Comercialização de Alimentos para Lactentes e Crianças de Primeira Infância (NBCAL). Também foi realizada a aquisição de bicos, mamadeiras e chupetas em "lojas de 1,99" e de departamento, para a verificação de rotulagem de acordo com a NBCAL. O desenvolvimento da pesquisa foi realizado no período de maio a julho de 2006, no município de Juiz de Fora, MG, mediante amostragem não representativa, de conveniência. A amostra constituiu-se de 680 peças publicitárias. Os resultados foram analisados pela estatística descritiva. Das 680 peças publicitárias analisadas, 564 (83,0%) não cumpriram a NBCAL. Foram encontradas irregularidades em 100% das amostras captadas em rádio, TV, jornais, revistas, hospitais e farmácias; em 70,1% das amostras captadas em supermercados; em 37% das amostras captadas em clínicas médicas e em 86,6% das captadas na *internet*. Concluiu-se que há necessidade de intensificar o monitoramento em caráter contínuo e que as ações educativas relativas à importância do aleitamento materno devem ser direcionadas para as mães, indústrias produtoras e empresas que comercializam alimentos infantis.

**Unitermos:** Publicidade/de alimentos infantis/avaliação. Propaganda/de alimentos infantis/avaliação. Utensílios infantis/avaliação de rotulagem.

### INTRODUCTION

According to 'The United Nations Children's Fund' (UNICEF) and the 'World Health Organization' (WHO), mother's milk contains all the necessary nutrients and in the correct quantity for the infant growth and development, specifically during the first six months of life, and it should be used up to the age of two years or older (Araújo *et al.*, 2006). However, by influence of external factors or by characteristics of the woman herself, many mothers have introduced new products for their babies, before the recommended time (Rede Internacional em Defesa do Direito de Amamentar<sup>1</sup> - IBFAN, 2003).

Many foods are presented as potential substitutes of mother's milk, such as infant formulas, diverse milks substituting the human one, products based on wheat and other industrialized foods. It is convenient to emphasize that these products do not present two fundamental benefits, which are only supplied by mother's milk: the immunological and the emotional ones (Longo *et al.*, 2005).

Jellifea and Jellife (1978) have created the expression "bottle fed babies" e "commerciogenic malnutrition", explaining the influence of advertising on children nourishment, mainly in the developing countries. The early weaning is influenced mainly by a complex interaction of socio-cultural factors, such as the industrialization process, the appearance and divulgence of industrialized milks, the adhesion of health professionals to prescription of artificial feeding, and the insertion of woman in the labor market (Araújo *et al.*, 2006).

The Brazilian legislation has as legal instruments for protection of public health concerning the promotion of breast-feeding, the Brazilian Norm for Commercialization of Food for Nursling and Children of First Infancy, Rubber Nipples, Pacifiers, and Nursing Bottles (NBCAL), which regulates the commercial promotion of pasteurized and sterilized powdered milks and pacifiers (Brasil, 2002), and the Federal Law # 11265, which reinforces the complying of NBCAL (Brasil, 2006; Monteiro, 2006).

The NBCAL is constituted by three documents: the Ordinance 2051 (Brasil, 2002) and two Resolutions from the Collegiate Directory (*Resolução da Diretoria Colegiada* - RDC) of the National Agency of Health Surveillance (*Agência Nacional de VIgilância SAnitária* - ANVISA), the RDC # 221 (Brasil, 2002), which is about the commercial promotion of rubber nipples, pacifiers, and nursing bottles, and the RDC # 222 (Brasil, 2002), which is about the commercial promotion of Food for Nursling and Children of First Infancy. The ANVISA has the responsibility of supervise and penalize the breaches to this Norm, therefore, it has signed covenants with national

universities, between them the Federal University of Juiz de Fora (*Universidade Federal de Juiz de Fora* - UFJF). The Federal Law # 11265 reinforces the resolutions RDC # 221 and # 222. In this way, the non-accomplishment of some of these resolutions characterizes also the non-accomplishment of this Law.

This present work has the purpose of evaluate printed advertisement and publicity of baby food, rubber nipples, pacifiers and nursing bottles, besides promotional pieces of these same articles that are divulged by means of radio, TV and *internet*; and this evaluation was done to verify the accomplishment of Federal Law # 11265, dated January 4<sup>th</sup>, 2006, of protection to breast-feeding. Additionally, it was done the acquisition of rubber nipples, nursing bottles and pacifiers in pharmacies, drugstores, "\$1.99 stores" and department stores for verification of packages labeling accordance with NBCAL.

#### MATERIAL AND METHODS

The collection, acquisition and analyses of commercial promotions of foods included by NBCAL, and labeling of rubber nipples, pacifiers and nursing bottles were developed in the period of eight weeks between May and July of 2006, in the city of Juiz de Fora, through non-representative sampling, of convenience. The results were analyzed by descriptive statistics.

### **Developed Activities**

- 1. Selection of a multidisciplinary team, constituted by adviser teachers from the Faculty of Pharmaceutics & Biochemistry of the Federal University of Juiz de Fora (*Faculdade de Farmácia e Bioquímica/Universidade Federal de Juiz de Fora* FFB/UFJF) and students from the courses of Law, Social Communication, and Pharmaceutics, for the catchment and analysis of promotional pieces face to RDC # 222 and RDC # 221, dated August 5th, 2002 and Federal Law # 11265, dated January 4th, 2006.
- 2. Selection of places and media to be monitored, according to pre-defined choice by the Management of Control and Supervision of Advertisement, Publicity, and Information of Products Subject to Health Surveillance (Gerência de Controle e Fiscalização de PROpaganda, Publicidade e Informação de Produtos Sujeitos à Vigilância Sanitária GPROP/ANVISA). The monitored TV networks, internet *sites* and magazines were pre-defined by ANVISA using as a criterion their respective distribution between convened universities, considering the embracing zone of regional media. The orientation of GPROP/ANVISA was to monitor also the local radio stations, pediatric

and nutritional clinics, hospitals/maternity hospitals, pharmacies/drugstores, supermarkets, "\$1.99 stores" and stores of infant products at discretion of FFB/UFJF. The criterion adopted by FFB was to monitor all local AM and FM radio stations, pediatric clinics, hospitals and maternity hospitals, and stores commercializing rubber nipples, pacifiers, and nursing bottles in the city of Juiz de Fora (Table I).

- **3.** Catchment of promotional pieces in selected places and media for analysis regarding the accomplishment or not of legislation.
- **4.** Acquisition by means of purchase of rubber nipples, pacifiers, and nursing bottles in the commerce at pharmacies, drugstores, "\$1.99 stores", and department stores for analysis of products package labeling according the criteria of evaluation of irregularities in agreement with RDC # 221. All found trademarks were acquired: five samples of rubber nipples for nursing bottle, being one of each trademark; three samples of nursing bottles, being one of each trademark, and eight samples of pacifier, being one of each trademark.

# Criteria for evaluation of accordance of advertisement and labeling of monitored products package

The RDC # 222 dated August 5<sup>th</sup>, 2002, comprises the following products:

A. Infant formulas for nursling and follow-up infant formulas for nursling;

- B. Follow-up infant formulas for children of first infancy; C. Fluid milks, modified powdered milks, milks from diverse animal species and plant origin products of the same purpose;
- D. Transition foods and foods based on cereal indicated for nursling and/or children of first infancy, as well as other foods or beverages based on milk or not, when commercialized or otherwise presented as appropriate for the feeding of nursling and children of first infancy;
- E. Nourishing formulas presented and/or indicated for high-risk newborns;

### Criteria for configuration of irregularity

According RDC # 222, for items A and E, it is debarred the commercial promotion by any communication means. The commercial promotion of infant foods described in B and C should include, under mandatory character and emphasized, the following visual and/or auditory warning, according the divulgence mean: "The Ministry of Health advertises: Breast-feeding avoids infections and allergies,

and is recommended up to two years of age or older". For the infant products presented at item D, the warning phrase is: "The Ministry of Health advertises: After the age of six months, continue to breast-feed your child and offer new food as well" (Brasil, 2002).

The RDC # 221, on the other hand, regulates the commercial promotion and labeling of rubber nipples, nursing bottles and pacifiers. It is debarred any type of commercial promotion of these products, at any means of communication. The labels of these products package comprised by RDC # 221 should contain: name of manufacturer or importer, lot identification, manufacturing date and the necessary and sufficient guidelines for the correct, safe, and indicated use of the product, besides the following warning phrases (Brasil, 2002):

"The Ministry of Health advertises":

- "The breast-fed child does not require nursing bottle, rubber nipple, or pacifier".
- "The use of nursing bottle, rubber nipple, or pacifier harms the breast-feeding and its prolonged use causes damage on the child teething and speaking".

The Federal Law # 11265 reinforces the resolutions RDC # 221 and # 222. So, the non-accomplishment of some of these resolutions characterizes the non-accomplishment of Law, as well.

### Selection of monitored places and media

The selection of monitored places and media is represented at Table I.

### **RESULTS AND DISCUSSION**

The results of analysis respecting advertisement of infant formulas for nursling and follow-up infant formulas for nursling (A), concerning legislation RDC # 222, according to collection place are presented at Table II.

All promotional pieces of infant formulas for nursling and follow-up infant formulas for nursling (A) captured in pediatric clinic, internet, hospital/maternity hospital, pharmacy, and nutrition clinic presented irregularities concerning legislation (Table II).

Irregularities were not found in the monitoring of advertisement of B class products (follow-up infant formulas for children of first infancy) and E class products (nutrient formulas presented and/or indicated for high risk newborns).

The results of advertisement analysis of fluid milks, modified powdered milks, milks from diverse animal species and plant origin products of the same purpose (C), concerning legislation RDC # 222, according to collection

**TABLE I -** Presentation of media and places to be monitored, according orientation from GPROP or through a choice by FFB/UFJF, with indication of monitoring frequency

Media and places	Orientation	Frequency	Total
AM and FM radio station	FFB/UFJF	2 radio stations/week (1 AM e 1 FM) 2 hours daily in a given program	16 radio stations (8 AM and 8 FM)
Television	GPROP	1 local broadcasting station with monitoring in the period between 10 am-midday and one additional hour, in diverse period according the availability of students	1 TV broadcasting station
Newspapers	FFB/UFJF	2 local newspapers/day	2 local newspapers
Magazine	GPROP	1 for specific public (milk)/month	1 bimonthly magazine
Pediatric clinic	FFB/UFJF	1 clinic/week	8 pediatric clinics
Hospitals or Maternity Hospitals	FFB/UFJF	1 private and 1 public/week	16 visits to hospitals or maternity hospitals (8 visits in the private network and 8 in the public one)
Pharmacies/Drugstores	FFB/UFJF	2 (1 from a network and 1 individual)	32 (16 from a network and 16 individual)
Nutritional clinic	FFB/UFJF	1/week	8 nutritional clinics
Supermarkets	FFB/UFJF	2 (1 from a network and 1 individual)/week	16 (8 from a network and 8 individual)
"\$1.99 stores"	FFB/UFJF	1/week	8 "\$1.99 stores"
Stores of Infant Products	FFB/UFJF	1/ week	8 stores of infant products
Internet	FFB/UFJF	1 website analyzed/week	1 website

**TABLE II** - Analysis respecting advertisement of infant formulas for nursling and follow-up infant formulas for nursling (A), concerning legislation, according to collection place

Collection place	Total catchment of	Regular pieces		Irregular pieces		Most from anti-most legities
	pieces	n	%	n	%	Most frequent irregularities
Pediatric clinic	6	0	0	6	100	Letter size reduced in the warning phrase of MH
Internet	9	0	0	9	100	Commercial promotion
Hospital/Maternity Hospital	4	0	0	4	100	Letter size reduced in the warning phrase of MH
Pharmacy	2	0	0	2	100	Special placement with price exposed
Nutrition clinic	3	0	0	3	100	Letter size reduced in the warning phrase of MH

MH = Ministry of Health

place are presented at Table III.

The most frequent irregularities were the absence or illegibility of warning phrase of MH and absence of auditory warning phrase of MH in case of radio advertisements.

The results of advertisement analysis of transition food and cereal based food indicated for nursling and/or

children of first infancy, as well as other foods or beverages milk based or not, when commercialized or otherwise presented as appropriate for nursling and children of first infancy feeding (D), regarding legislation RDC # 222, and according the collection place are presented at Table IV.

The most frequent irregularities were the absence or lack of emphasizing of the warning phrase of Ministry of Health and the occurrence of commercial promotion.

**TABLE III -** Analysis of fluid milks, modified powdered milk, milks from varied animal species, and products of plant origin with the same purpose (C), respecting the legislation, according to collection place

Collection place	Total of captured	Regular Pieces		Irregula	ar Pieces	M (F (I 12)
	pieces	n	%	n	%	Most Frequent Irregularities
TV	8	0	0	8	100	Illegibility of warning phrase of MH
Internet	74	33	44.6	41	55.4	Absence of warning phrase of MH
Supermarket	72	51	70.8	21	29.2	Absence of warning phrase of MH
Pharmacy	3	3	100	0	0	-
FM Radio Station	2	0	0	2	100	Absence of auditory warning phrase of MH
Newspaper	1	0	0	1	100	Absence of warning phrase of MH
Addressed Magazine	e 5	0	0	5	100	Absence of warning phrase of MH

MH Ministry of Health

**TABLE IV** - Advertisement analysis of transition food and cereal based food indicated for nursling and/or children of first infancy, as well as other foods or beverages milk based or not, when commercialized or otherwise presented as appropriate for nursling and children of first infancy feeding (D), regarding legislation RDC # 222, and according the collection place

Collection place	Total of captured	Regular Pieces		Irregular Pieces		Most Frequent Irregularities
	pieces	n	%	n	%	
Internet	270	0	0	270	100	Lack of emphasizing in the warning phrase of MH
Supermarket	36	18	50	18	50	Absence of warning phrase of MH
FM Radio Station	2	0	0	2	100	Absence of auditory warning phrase of MH
AM Radio Station	1	0	0	1	100	Absence of auditory warning phrase of MH
Pharmacy	6	0	0	6	100	Commercial promotion

MH Ministry of Health

### **Commercial Promotion of Infant Foods of Diverse Categories**

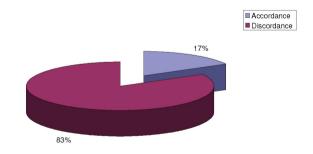
680 advertisement pieces of infant foods of diverse categories have been analyzed. Out of these advertisement pieces, 17.0% (n=116) were regular and 83.0% (n=564) irregular respecting legislation RDC # 222 (Figure 1).

The most frequent irregularities were the absence or the lack of emphasizing of the warning phrase of Ministry of Health and the occurrence of commercial promotion.

### Analysis of irregular advertisement pieces of infant food concerning RDC 222/2002

The distribution of irregular advertisement of infant food of diverse categories (A, C, D) (n=564) by different types of media and collection places is presented at Table V.

In radio stations, as in AM tuning as in FM tuning, breaches were verified in the format of product divulgen-



**FIGURE 1 -** Percentage of regular (accordance) and irregular (discordance) advertisement pieces of infant food concerning RDC # 222.

ce. Four irregular pieces were obtained at AM tuning and one at FM tuning. At FM tuning, the breaches occurred in advertisements of fluid and powdered milk and corn based food. Respecting the corn flour based food advertisement; it was presented as ideal food for nursling and children of first infancy, alleging to be a source of all required minerals and substances for children growth. This advertisement was addressed to classes C and D, local radio listeners,

**TABLE V** - Percent of irregular advertisement of infant foods of diverse categories (A, C, D) concerning NBCAL, in different types of media and collection places

Media and places	Percentage of Irregular Advertisement		
AM and FM Radio Stations	100.0		
Television	100.0		
Newspapers	50.0		
Magazine	100.0		
Pediatric clinic	63.0		
Hospitals/maternity hospitals, nutritional clinic	100.0		
Pharmacies/Drugstores	100.0		
Supermarkets	71.0		
Internet	86.6		

who are those presenting the higher indexes of early weaning and higher health risk respecting the preparation of these industrialized food, due to occurrence of possible microbiologic contaminations.

In the selected TV broadcasting station, eight irregular pieces were captured. In the month of June it was announced the product "A +" from a multinational food industry. In this advertisement, appeared the mandatory phrase from Ministry of Health: "The Ministry of Health warns: Breast-feeding avoids infections and allergies and is recommended up to two years of age or older", however, it appeared in reduced size, complicating the reading and configuring an irregularity.

Two local newspapers were selected to be submitted to monitoring. In the first one, it was not observed any irregularity; while in the second one, only an irregular advertisement of milky beverage was verified.

The magazine selected by GPROP, of bimonthly

edition, is characterized by a technical-scientific profile in the area of dairy. On it, five irregular advertisements of fluid and powdered milks were verified.

The percentage of captured and analyzed promotional pieces per collection place and most frequent irregularities concerning RDC # 222 is presented at Table VI.

Respecting pediatric clinics, 24 promotional pieces were analyzed, being nine (37.5%) of them presented in regular format and 15 (62.5%) irregular at all, due to reduced size of the Ministry of Health warning phrase (Table VI). In hospitals, maternity hospitals and nutritional clinics all technical-scientific materials presented irregularities, as in the informative text the recommendations from the Ministry of Health were not presented in a legible format, being them presented in the opposite side of last page, in small letters, complicating reading. It is worthy emphasize that, in monitored pediatric and nutritional clinics, hospitals and maternity hospitals, it was not observed the contact of customers with these divulgence materials, confirming so their technical-scientific character.

Respecting pharmacies and drugstores, it was observed a considerable number of food products addressed to nursling and children of first infancy placed in store windows, and announced as promotion. As a total, 11 promotional pieces were analyzed. Out of these, three units were captured in network pharmacies and eight in individual pharmacies.

In supermarkets, all irregularities were observed in regional network establishments. The pieces, in their majority, were presented as insets showing the advertisements grouped into product categories. Out of these, the single one that was regular face to NBCAL was that from an international network, in which the mandatory warning phrases from the Ministry of Health appeared in legible letters. In the remaining supermarkets, the promotional pieces simply did not present the recommended phrases. In

**TABLE VI -** Percentage of captured and analyzed promotional pieces per collection place and most frequent irregularities concerning RDC # 222

Place	Analyzed	Regular Pieces		Irregular Pieces		Most Engagement Image clarities
	pieces(n)	n	%	n	%	Most Frequent Irregularities
Pediatric clinic	24	9	37.5	15	62.5	Reduced size of warning phrase of MH
Hospitals, maternity hospitals and nutritional clinics	7	0	0	7	100	Illegibility and inadequate placement of warning phrase of MH
Pharmacies and drugstores	11	0	0	11	100	Commercial promotion
Supermarket	108	39	36.1	69	63.9	Illegibility of warning phrase of MH
Internet	492	66	13.4	426	86.6	Commercial promotion e Lack of emphasizing in the warning phrase of MH

these last supermarkets, the larger part of announced products was composed by fluid milks, powdered milks, and cereal based food. Advertisement of infant formulas for nursling and children of first infancy were not observed.

In the establishments known as "\$1.99 stores" and infant items, promotions of infant products were not observed during the catchment period.

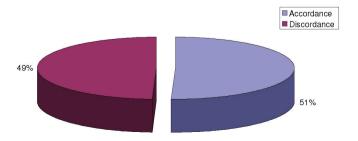
The *internet* was the media that presented the larger number of advertisement pieces for commercial promotion of food addressed to nursling and children of first infancy. In the *site* of a multinational industry, previously selected by GPROP, the transition foods as well as the fluid and powdered milks presented the mandatory warning phrases from Ministry of Health, however, they were not emphasized from the original text, being it considered as infraction face to NBCAL. This *site* did not present advertisement of infant formulas for nursling and follow-up infant formulas for nursling. Out of the 492 products analyzed in this media, 66 (13.4%) were regular, and 426 (86.58%) were irregular.

### Commercial Promotion of Rubber Nipples, Nursing Bottles, and Pacifiers

The research of commercial promotion for these products, within monitored pharmacies and drugstores, was developed by means of observation about the disposition format or style adopted for these products: in shelves close to infant products or in a special manner, in privileged places within these establishments or in store windows.

The internet has shown to be an important divulgence vehicle for these products. Several analyzed *sites* presented irregularities concerning RDC # 221. A frequent infraction was the utilization of commercial promotion, in which the older price was compared with a new reduced price.

The results respecting the analysis of abidance to commercialization conditions for rubber nipples, nursing bottles and pacifiers concerning RDC 221/2002 is presented at Figure 2.



**FIGURE 2 -** Percentage of promotional pieces of rubber nipples, pacifiers, and nursing bottles in accordance or discordance with NBCAL.

## Acquisition of Rubber Nipples, Nursing Bottles and Pacifiers for Verification of Products Package Labeling

The acquisition of these products has occurred in pharmacies, drugstores, "\$1.99 stores" and department stores. The products acquired in these establishments presented simple packages and their labeling was incomplete, breaking so the RDC # 221 and the NBCAL.

The more frequent infractions were: term of validity expired, the non-presentation of mandatory warning phrases from the Ministry of Health and/or the presence of false information such as: product with "anti-colic systems".

It was noted a difference in the quality of products addressed to social classes A and B respecting to products addressed to social classes C and D. The majority of products addressed to social classes A and B, acquired in department stores, pharmacies and drugstores, presented a certificate from the National Institute of Metrology, Normalization and Industrial Quality (*Instituto Nacional de Metrologia, Normalização e Qualidade Industrial* – INMETRO) with the purpose to prove their quality, and in their labels, the mandatory warning phrases from the Ministry of Health appeared regularly; while in the products addressed to social classes C and D, that is, those acquired at "\$1.99 stores", the INMETRO certificate did not appear, being also common to find unlabelled products.

#### CONCLUSIONS

The industry and commercial establishments make use of the most varied promotional strategies to increase their sales of products comprised by NBCAL. Many of them allege ignorance about the existing Legal Norm. Other ones know it, but make use of strategies to cheat it, do not emphasizing or simply omitting the mandatory warning phrases.

In supermarkets and drugstores, the main commercial establishments offering products comprised by NBCAL, these merchandises were regularly exposed in a special form or by means of commercial promotion, breaking so the NBCAL and the Federal Law # 11265.

The *internet* was the main media vehicle for commercial promotions of NBCAL comprised products, allowing to consumer the acquisition of any type of these products.

Respecting labeling of rubber nipples, pacifiers and nursing bottles it was observed negligence from the governmental organs, responsible for supervising the commercialization of these products, as they were being commercialized without the due labeling and with validity terms expired.

It is suggested a sequence of procedures to assure the accomplishment of NBCAL, such as: to transform the monitoring project of NBCAL as a proposal for continuous research, utilizing the monitoring team as opinion multipliers respecting the breast-feeding benefits; to establish a partnership between the academic environment and the Health Surveillances (VIgilâncias SAnitárias – VISAs) to decrease the monitoring costs and the inclusion the inclusion of this subject in the curriculum of health professionals; a larger interaction between the University and the VISAs, including the people responsible for the development of educative programs addressed to general society; to assure continued educational actions to general society, through medias such as radio and TV, showing the enormous advantages of breast-feeding face to infant formulas, and create more rigid control mechanisms for the internet, because it was in this type of media that the most severe infractions face to NBCAL were observed.

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