Journal of Nursing

Revista de Enfermagem

UFPE On Line

ISSN: 1981-8963

ORIGINAL ARTICLE

EVALUATION OF THE IMPLANTATION OF HOSPITAL EPIDEMIOLOGY CENTERS AVALIAÇÃO DA IMPLANTAÇÃO DOS NÚCLEOS HOSPITALARES DE EPIDEMIOLOGIA EVALUACIÓN DE LA IMPLANTACIÓN DE LOS NÚCLEOS HOSPITALARIOS DE EPIDEMIOLOGÍA

Maria do Socorro Oliveira Guimaraes¹, Jesusmar Ximenes Andrade², Telma Maria Evangelista Araújo³, Adélia Dalva da Silva Oliveira⁴, Márcio Dênis Medeiros Mascarenhas⁵

ABSTRACT

Objective: to evaluate the implantation of the Hospital Epidemiology Centers. **Method:** this is a quantitative, descriptive, evaluative, normative study. It was carried out in nine hospital centers of Epidemiology. The data was obtained through a self-administered questionnaire and form. Results were presented in the form of tables. **Results:** the results were grouped in the trial matrix and the sum of the points obtained determined the adequacy of the implantation. Conclusion: It was verified, by the study, that the implantation of the Hospital Epidemiology Centers, did not occur in a satisfactory way. **Descriptors:** Epidemiological Surveillance; Hospital; Health services; Nursing; Epidemiology; Health Services Research.

RESUMO

Objetivo: avaliar a implantação dos Núcleos Hospitalares de Epidemiologia. **Método:** trata-se de estudo quantitativo, descritivo, avaliativo, do tipo normativo. Realizou-se em nove núcleos hospitalares de Epidemiologia. Obtiveram-se os dados por meio de questionário autoaplicável e formulário. Apresentaram-se os resultados em forma de tabelas. **Resultados:** agruparam-se os resultados em matriz de julgamento e o somatório dos pontos obtidos determinou a adequação da implantação. **Conclusão:** constatou-se, pelo estudo, que a implantação dos Núcleos Hospitalares de Epidemiologia, não ocorreu de forma satisfatória. **Descritores:** Vigilância Epidemiológica; Hospital; Serviços de Saúde; Enfermagem; Epidemiologia; Pesquisa Sobre Serviços de Saúde.

RESUMEN

Objetivo: evaluar la implantación de los Núcleos Hospitalarios de Epidemiología. **Método:** se trata de estudio cuantitativo, descriptivo, evaluativo, del tipo normativo. Se realizó en nueve núcleos hospitalarios de Epidemiología. Se obtuvieron los datos por medio de cuestionario autoaplicable y formulario. Se presentaron los resultados en forma de tablas. **Resultados:** se agruparon los resultados en matriz de juicio y la suma de los puntos obtenidos determinó la adecuación de la implantación. **Conclusión:** se constató, por el estudio, que la implantación de los Núcleos Hospitalarios de Epidemiología, no ocurrió de forma satisfactoria. **Descriptores:** Monitoreo Epidemiológico; Hospital; Servicios de Salud; Enfermería; Epidemiología; Investigación em Servicios de Salud.

¹Master, Federal University of Piauí / UFPI. Teresina (PI), Brazil. Email: socorrooliveiragui@hotmail.com ORCID iD: <https://orcid.org/0000-0003-3176-951>; ²PhD, University of São Paulo / USP. Teresina (PI), Brazil. Email: jesusmar.andrade@gmail.com ORCID iD: <https://orcid.org/0000-0001-6107-858X>; ³PhD, Federal University of Rio de Janeiro / UFRJ. Teresina (PI), Brazil. Email: telmaevangelista@gmail.com ORCID iD: <https://orcid.org/0000-0001-5628-9577>; ⁴PhD, Federal University of Piauí / UFPI. Teresina (PI), Brazil. Email: aoliveira@uninovafapi.edu.br ORCID iD: <https://orcid.org/0000-0001-8344-9820>; ⁵Phd, State University of Campinas / UNICAMP. Teresina (PI), Brazil. Email: mdm.mascarenhas@gmail.com ORCID iD: <https://orcid.org/0000-0001-5064-2763>

INTRODUCTION

The decentralization of epidemiological surveillance actions was allowed for the advances in the organizational structure of the Unified Health System (UHS). The Epidemiological Surveillance (ES) in Brazil started with the prevention and control of diseases, and a series of measures were started to confront the country's health situation. The actions of ES were very much advanced, and were officially consolidated in the 1970s.

The Concept of ES was passed through several reformulations, consolidating itself in the Organic Law of Health (OLH), Law no. 8.080, of September 19, 1990, as a set of actions that make it possible to know, detect or prevent any modification in the determining factors and conditions of health, of the individual or of the community, with the purpose of recommending and adopting the measures of prevention and control of the diseases or injuries.²

In this context, through ES, it is possible to provide updated information about the occurrence of diseases and injuries, as well as their conditioning factors, in a geographic area or a certain population, allowing the planning and execution of actions of control and prevention.³

It required the structuring of a network for the notification and investigation of these diseases and diseases. It is reported that, in this perspective, the publication of Administrative Rule no. 2.254, dated August 05, 2010, from the Health Surveillance Secretariat of the Ministry of Health (HSS / MH), instituted, within the National Health Surveillance System (NHSS), Hospital Epidemiological Surveillance (HES) and created a network of 190 hospitals in strategic regions of the country, within which the Hospital Epidemiology Centers (HEN) were implanted.⁴

This action represented a major step forward in improving the quality of the information produced, considering its potential surveillance capacity. It should be emphasized, however, that the implantation of these centers depends on the decision of the state and municipal managers.⁵⁻⁶

The role of the HEN for the notification and investigation of diseases and injuries through active search was outlined in the framework of the aforementioned Decree; consolidation of data; analysis and dissemination of information; promotion of proposed control actions; evaluation of the effectiveness and effectiveness of the measures adopted and

monitoring in a timely manner, thus allowing municipalities to adopt timely control and prevention measures in order to enable the interruption of the chain of transmission of diseases among the population.^{3,5-6}

In this sense, HES is an important source of information for the epidemiological surveillance system in the three spheres of government; however, the contribution of information depends on the quality of the records processing, which is influenced by the accuracy, timeliness and completeness of data.

It is necessary, therefore, for information on diseases and injuries to have consistency and quality, adequate structuring of the HEN to enable the execution of the work processes and the monitoring of the results.

The institutionalization of the health evaluation policy as a management and social control tool to enable the effective implementation of the UHS principles becomes critical considering the investments applied in the various UHS areas. Valuation began to be valued as a component of health management in the face of multiple initiatives aimed at its implementation in the various dimensions of UHS, with the fundamental purpose of supporting decision-making processes.⁷

However, it presents a health evaluation in a context in which the evaluation processes are still incipient, little incorporated into the practices, being of a more prescriptive, bureaucratic and punitive character, that little subsidizes the planning and the decision making.⁸⁻⁹

It is mentioned that the normative evaluation is one of its aspects, being defined as an activity that consists of making a judgment about an intervention, comparing the resources employed and its organization (structure), services or goods produced (process) and the results obtained, with criteria and norms established.¹⁰

HEN are important sources of information about diseases, injuries and public health events of a population, which allows managers to monitor the morbidity and mortality profile and plan the actions of protection and prevention of them, which make them an indispensable service to society.¹¹

It will contribute, through the evaluation of the structure and the process, to the identification of aspects that interfere in the proper functioning of HEN. It becomes, therefore, the relevant study, since it offers subsidies to health professionals and managers, in the sense of seeking solutions in

the processes of change in their work activities. It is also justified by the scarcity of evaluative studies about the activities of the Hospital Epidemiology Centers in the country.

The research was based on the following question: "Are the Hospital Epidemiology Centers in the State of Piauí implanted according to the guidelines established by the Ministry of Health?" The objectives of this study were to evaluate the implantation of the Hospital Epidemiology Centers in the State of Piauí and to verify if the structure and the processes developed in these centers are in conformity with the recommended norms.

OBJECTIVE

- To evaluate the implantation of the Hospital Epidemiology Centers.

METHOD

This is a quantitative, descriptive, evaluative, normative study. It was carried out in the HEN of Piauí. As an inclusion criterion, its implementation was approved until 2014, with publication in Annex XVII of Ministerial Order N. 48, dated January 20, 2015. It is detailed that nine centers participated, of which four are located in the capital and five, in the interior.

Data was collected from June to August 2016 using three different instruments: the first one, a structured questionnaire with open and closed questions about structure and process, to characterize the participants, hospitals and evaluate the existing components in HEN. The questionnaire, already validated, was answered by the coordinator of each HEN, in a previously scheduled day and place, according to the convenience of the study participants.

For the complementation of the data collection, the record was carried out, in a form constructed for this purpose, of the information contained in the medical records of the hospitalized patients during the data collection period, the technical reports, the minutes of the meeting of the center, flows, routines and procedures, hospital chart, as well as a newsletter, with the purpose of subsidizing the classification of the implantation of the same.

For the analysis of the structure and the process, a judgment matrix consisting of two dimensions was elaborated: 1. Structure, composed of fifteen items and 2. Process, with eighteen items, constructed from a model³ and Portaria n 183, January 30, 2014.

A value is assigned for each of the items of the matrix, with 33 being the maximum value,

which corresponds to 100% of the core suitability, and if the actions of the core were partially developed, a proportional value was attributed ranged from 1% to 50% of the value of the item.

The following criteria were established to evaluate the structure: 1. Ambience, where the physical space was verified, adequate furniture, presence of computer equipment, equipment operation, telephone with direct line, internet and integrated laboratory; 2. Human resources, regarding the adequacy of the number of professionals, existence of a multiprofessional team, specialization of the Coordinator in Public Health and/or Epidemiology, weekly workload of 30h, annual training hours; and 3. Regulation, when evaluating the implementation of flows, the internal regiment and the insertion of the center in the organization chart.

Operational practices I and II were established to evaluate the process, verifying: the performance of the active search and its periodicity; electronic processing of data; notification and investigation of Compulsory Notification Disorders (CND); the realization of the passive search; analysis and dissemination of data; investigation of outbreaks by CND in the hospital setting; the investigation of cases of hospitalized deaths already reported; the monitoring of the completion of the Declarations of Death and Live Birth and the epidemiological studies.

The research and teaching activities - epidemiological studies, continuing education activities in HES, HES field of study; and management of the centers - dispatch with management, participation in meetings with direction and frequency were also evaluated.

An adaptation of a study was followed within the limits of the classification of the implantation.¹² The same parameter for the classification of the implantation was used in this study: Adequate (80 to 100%, 12.8 to 16 points); Acceptable (70 to 79%, 11.2 to 12.7 points); Inadequate (50 to 69%, 8 to 11.1 points) and Critical (<50%, <8 points).

The answers obtained from the judgment matrices in tables and graphs were grouped for the analysis of the descriptive statistics. The data was explored by means of a univariate technique, discussing them in the light of the theoretical reference.

The recommendations contained in Resolution 466/12 of the National Council of National Health, which deals with ethical aspects in research involving human beings, 13 have been respected, receiving the opinion

approved by the Ethics and Research Committee under the number 1,576,964.

RESULTS

The presentation of the results was divided into three sections: first, the characterization of the research participants; in the second, the data obtained on the HEN and the

hospitals where they are inserted and, in the third, the data referring to the items that make up the structure, the HEN process in Teresina and in other municipalities.

It was observed in Table 1 the characterization of the coordinators of the Hospital Epidemiology Centers.

Table 1. Characterization of the coordinators of the Hospital Epidemiology Centers in the State of Piauí. Teresina-PI, Brazil, 2016. (n=9).

Variables	n	%	Min-Max
Sex			
Male	2	22.2	
Female	7	77.8	
Age group			25-65
20-29	1	11.1	
30-39	2	22.2	
40-49	3	33.3	
50-59	1	11.1	
>60	2	22.2	
Professional qualification			
Nurse	8	88.9	
Doctor	1	22.2	
Postgraduation			
Infectious diseases	1	11.1	
Work nursing	1	11.1	
Infection Prevention and Control	1	11.11	
Family Health	2	22.2	
Public Health	4	44.5	
Time working there (years)			
<01 year	2	22.2	
01 - 05	2	22.2	
06 - 10	3	33.4	
11 - 15	2	22.2	1-12

Key: Min - Max = minimum - maximum

Table 2 shows the characterization of hospitals and hospital centers of epidemiology.

Table 2. Characterization of hospitals and Epidemiology Hospitals in the State of Piauí. Teresina-PI, Brazil, 2016. (n=9)

Variables	n	%	Min - max
Type of Hospital			
Specialized	3	33.3	
General	6	66.7	
Macro-regional hospital location			
Coastal	2	22.2	
Mid North	4	44.5	
Semiarid	1	11.1	
Cerrado bioma	2	22.2	
HEN implantation time (years)			
01-05	1	11.1	
06-10	4	44.4	
11-15			3-12

In the evaluation of the implementation of the component, the best HEN were evaluated by the Natan Portela Institute of Tropical Diseases (NPITD), Dona Evangelina Rosa Maternity Hospital (DERMH) and Manoel de Sousa Regional Hospital (MSRH). Only the NPITD and Getúlio Vargas Hospital (GVH) obtained a maximum score in the evaluation,

and the item that most negatively impacted the evaluation was the absence of telephone with direct line and own physical space.

In terms of human resources, NPITD and DERMH scored the highest score. On the other hand, the HEN had a number of professionals that were below their needs and, in addition,

the coordinators performed several functions in different sectors in their scope of work.

Only the NPITD maximum score was shown in the regulation, and the data show that the regulation presented the worst percentages with respect to the evaluation of the structure, and the main gap in the service is the lack of insertion in the organization chart.

It was verified, in the process component, that the best HEN evaluated were the NPITD, GVH, DERMH and Dirceu Arcoverde State Hospital (DASH); in the criterion of operational practices I, the centers did not carry out the analysis and dissemination of data of the information system; in the Operational Practices II criterion, only the NPITD and the Justino Luz Regional Hospital

(JLRH) did not carry out a death investigation and follow-up of the death certificates and of live births, only JLRH did not include any item of this evaluation.

It is emphasized, in the research activities criterion, that none of the evaluated centers carried out complementary epidemiological studies on the NCD identified in the hospital environment, reaching, therefore, the worst percentages in the process criterion.

The majority of the HEN did not carry out educational activities, as well as not work as a place for an internship in an ES; already in the criterion management activities, no center presented maximum score, and the main difficulties were the planning of activities and the existence of a flow with the pharmacy.

Table 3. Evaluation of the structure and process of the Hospital Epidemiology Centers. Teresina (PI), Brazil, 2016.

Structure	Hospitais								
	NPITD	GVH	LPIH	DERMH	DASH	CRRH	TNRH	MSSRH	JLRH
Ambience	7	7	6	5.5	5	5	5.5	6	6
Human Res.	5	3.5	4	5	4	2	5	4	2
Regulation	3	1	1	1.5	1	0	1	2	0
Subtotal	15	11.5	11	12	10	7	11.5	12	8
Total %	100	76.7	73.3	80	66.7	46.7	76.7	80	53.3
Process									
Operational Pract. I	5	5	5	5	5.5	3	5	5	2.5
Operational Pract II	2	3	3	3	2.5	3	3	3	0
Research	0	0	0	0	0	0	0	0	0
Teaching	1	1	0.5	1.5	1.5	0	1	0	1
Management	4.25	3	3	2.5	4	3.5	2.5	3	2.25
Total of points	12.25	12	11.5	12	13.5	9.5	11.5	11	5.75

Table 4. Implantation of Hospital Epidemiological Surveillance centers according to the total percentage of structure and process reached. Teresina (PI), Brazil, 2016.

HEN	Percent reached %	Classification
NPITD	82.6	Adequate
GVH	71.2	Acceptable
LPIH	68.2	Inadequate
DERMH	75.8	Acceptable
DASH	71.2	Acceptable
CRRH	50.0	Inadequate
TNRH	60.6	Inadequate
MSSRH	69.7	Inadequate
JLRH	41.7	Critical

DISCUSSION

Through this study, in the interviews with the coordinators, by the results, predominance of the nurse professional composing the epidemiological surveillance center and of female professionals integrating the team was ratified.¹⁴

It is noteworthy that, with regard to the post-graduation of professionals who act as coordinator of the center, less than half had specialization in Public Health or

Epidemiology, according to the recommendation of Ministerial Ordinance No. 2,254, dated August 5, 2010, which established epidemiological surveillance in the hospital.

It should be noted that, with the updating of the aforementioned ordinance in 2014, it was established that the said function may be carried out by a professional with proven experience in Epidemiology or training in public, collective and/or epidemiological health, however, for the purpose of

punctuation, professional training was prioritized because it was understood that specialized scientific knowledge allows a more effective analysis of the various situations that occur in the daily life of the center.⁶

In the assessment of the structure dimension, three components are involved: ambience, qualification of human resources and regulation. In the evaluation of the environment, it was examined that the item direct telephone line was the one that presented worse performance, proving to be a difficult one for the development of the epidemiological surveillance actions regarding the communication between the health surveillance organs in the interstate and intermunicipal spheres.

However, not all centers have their own physical space, since they share a room with other services of the institution, and this event poses a risk to the secrecy of information about patients due to the increase in the flow of external persons. It is recommended to guarantee the confidentiality of information as an obligation guaranteed in the Criminal, Civil and Professional Ethics of all categories of health, as well as in the duties of the institution.¹⁵

As regards the composition of the teams, it was verified that several centers have a staff deficit and often only have two members: a coordinator and a nursing technician or administrative assistant, who perform various activities in the sector, which implies reduction in the number of hours dedicated to HEN and work overload. Human resources are one of the major difficulties in the implementation of programs and services, both in terms of insufficient numbers of professionals and in terms of qualification.¹⁶

It was identified, in the evaluation of the regulation, as one of the main impasses, the insertion of the centers in the organization chart. This insertion is considered relevant, since it formally establishes a transparency in the hierarchical relation between the direction and the diverse sectors.

It is provided, through the insertion in the organizational chart, of a subsidy to expedite the referral of cases to those in charge of each sector, and this direction favors a greater capacity for access and support, as well as aid in the promotion of recognition by all technical areas of the hospital.¹⁷

It is emphasized, in the operational practices criterion I, of the process component, that the centers did not carry out the analysis and the dissemination of data of the information system. Disclosure of notified

data as a product subsidized by epidemiological notifications is presented, providing information relevant to the institution and to communities after due analysis.

It can be helped by the organization of newsletters, aimed at managers with decision-making power, in obtaining institutional and material support for the investigation and control of events. In addition to motivating the notifiers, the feedback of the system is encouraged, as well as the collection of subsidies to reformulate standards and actions at their various levels, ensuring the continuity and improvement of the process.³

It is also recommended to investigate deaths since the publication of Decree N. 1271 of June 6, 2014, and this should be done in all institutions, in view of the opportunity to identify events of public interest, in the However, this action presents gaps in the face of this.

It is worth reflecting the fact that it is related to monitoring the completion of DD and DNV, since they are of great importance for the Mortality Information System (MIS) and the Live Birth Information System (SINASC). It is possible to know, through these indicators, specific causes of mortality, place of occurrence and residence of the deceased, proportional mortality, by age group, live births, among others, but for this, information must have quality and be complete.¹⁸

In this perspective, epidemiological research is an instrument for the field activity that is preferably used by the municipal services of ES or health units based on confirmed or suspected cases of NCD and their contacts. It is an action that must be initiated soon after the notification, aims to identify the source of the notification, groups exposed and of greater risk, to identify determining factors and, as final purpose, to guide the control actions, preventing the occurrence of new cases.¹⁹

The data collected in the searches were processed electronically, in the Notification of Injury Information System (SINAN), in all centers and, thus, the information is sent more quickly to the municipal health secretariats and, in the case of the immediate NCDs, it is also up to the centers to make the notification to the surveillance agencies in each sphere of government through the telephone contact, fax or via email.

The data should be analyzed, even if partially, due to the early detection of changes in the profile of each disease or

injury. Attention is drawn to the fact that a little more than half the centers do this analysis, which certainly contributes to the delay in the timely actions of some diseases whose remittance of information, is not immediate.

It is known that the Internal Regulation is a management tool that gathers, in a systematized way, rules, routines and other data essential for the execution of the activities, that is, guiding instrument of the professionals in the performance of their functions, and their fulfillment guarantees processes safe and quality work.

The service manuals should be planned and developed jointly with all staff who will use it. It is also necessary to update them regularly, followed by training in the new content, since it constitutes a tool for knowledge transfer and standardization of executed activities, either as a process of elaboration of a product, an action or even from a service.³

Another point that is part of the scope of this study, which is the qualification of the teams, since these have occurred through short courses, workshops or training symposiums in Health Surveillance that aim to empower professionals of capacity technical-scientific information for surveillance actions at all stages of the epidemiological notification / investigation process; Thus, whenever this need is identified, the members of the centers are summoned for the training, which has been occurring with certain frequency, according to specific demand.

It is added that, in addition to the required post-graduation, the professionals selected for the centers should also have participated in the Basic Epidemiological Surveillance Course (BESC) at the time of HEN implantation, however, when evaluating centers, few coordinators reported having course, which demonstrates a deficiency in the training of these professionals..

The State of Piauí also carried out a training course in Health Surveillance Technician for two and a half years, through the UHS Training School, in partnership with the Ministry of Health, of middle level of the centers of Teresina, technicians, nursing assistants and administrative agents are students effectively enrolled and attending this course.³

It is difficult, due to the inadequate classification in four, of the nine cores evaluated, that the transfer is compatible with the structure of the hospitals. The value of the financial incentive for the costing of

strategic public health surveillance actions and services performed by the HEN to the State, Municipal and Federal District Health Secretariats and the Hospitals under federal management, as set out in annexes I to XXVII of the Ordinance GM/MH No. 48, January 20, 2015.²⁰

However, the federative entity has been totally or partially disqualified from the actions of ES and, therefore, will no longer receive the incentive to which it is entitled when it fails to carry out the strategic public actions and services of established epidemiological surveillance.⁶

The integration of the centers with the Medical and Statistical Archiving Service (MSAS) and other commissions is similarly relevant, since these sectors are an important source of information, guaranteeing the effective notification of all the diseases or NCD, and the activity planning is another point to be listed in the study, because, without the planning, the activities are developed without priorities and in an improvised way causing harm; in addition, it is essential to establish the flow with the pharmacy to receive information from patients using NCD's own medicines.

CONCLUSION

It is pointed out, from the HEN evaluated, that those located in the interior of the State are the ones that had the worst performance with the inadequate and critical implantation. It was obtained, by the implanted ones in the capital, better performance, nevertheless, only one had the implantation classified like adequate. It is within the structure dimension that the components that had the greatest impact for this result were, the centers do not present their own physical space, direct telephone line, adequate amount of professional, insertion in the organization chart and internal regiment.

They are involved, in the process dimension, by the main obstacles, the deficit in the analysis and dissemination of the data, the death investigation, the monitoring of the filling of the DD and DNV, the absence of research and educational activities, the planning of activities and the flow with the pharmacy.

It is concluded that, in general, all of them have advanced in the performance of the active search, data processing and NCD investigation, however, despite the positive result, in terms of increase in the number of notifications, some institutions still have gaps in the and the data, even if consolidated, are

not disclosed so that intervention is allowed in a timely manner.

This study was limited mainly by the lack of minutes of the meetings held with management, reports of teaching activities and lists of students who had interns in the centers, which did not allow an evaluation with more objectivity.

Based on the results obtained in this study, some recommendations were made to improve the Hospital Epidemiological Surveillance:

- To invest in the HEN infrastructure and further improve HES;
- To invest in training of HEN human resources, with emphasis on the contents of Epidemiological Surveillance;
- To prioritize the choice of coordinators for HEN who have training in Public Health / Epidemiology;
- To design and disseminate workflows linking HEN with existing institutional commissions (death, patient safety, CCIH), MSAS and Health Secretariats;
- To draft proposal to modify the institutional organization chart for the inclusion of HEN;
- To encourage the development and regular publication of scientific research on the epidemiological findings of HEN;
- To stimulate the inclusion of centers as an internship field for undergraduate students and the residency of courses in the health area;
- To establish a regular schedule of meetings with the health department where the center is implemented;
- To establish the annual planning of HEN activities in order to guarantee the achievement of the objectives proposed by the Ministry of Health;
- To encourage the involvement of all the professionals of the institutions in which the centers are located, to improve the compulsory notification of diseases and injuries;
- To develop an instrument that establishes the practice of periodic evaluation of the actions of the centers.

REFERENCES

1. Oliveira CM, Cruz MM. Health surveillance system in Brazil: advances and challenges. *Saúde Debate*. 2015 Jan/Mar;39(104):255-67. Doi: <http://dx.doi.org/10.1590/0103-110420151040385>
2. Lei nº 8.080 de 19 de setembro de 1990 (BR). Dispõe sobre as condições para a

promoção, proteção e recuperação da saúde, a organização e o funcionamento dos serviços correspondentes e dá outras providências. *Diário Oficial da União* [Internet]. 1990 Sept 19 [cited 2015 Jan 29]. Available from: <http://www.planalto.gov.br/ccivil/leis/L8080.htm>

3. Costa MAO. Avaliação do grau de implantação dos núcleos de vigilância epidemiológica hospitalar no Estado do Piauí [dissertation] [Internet]. Teresina: Universidade Federal do Piauí; 2010 [cited 2018 June 15]. Available from: <http://repositorio.ufpi.br/xmlui/handle/123456789/913>

4. Ministério da Saúde (BR), Gabinete do Ministro. Portaria nº 2.254, de 05 agosto de 2010. Institui a Vigilância Epidemiológica em Âmbito Hospitalar, define as competências para a União, os Estados, o Distrito Federal, os Municípios, os critérios para a qualificação das unidades hospitalares de referência nacional e define também o escopo das atividades a serem desenvolvidas pelos Núcleos Hospitalares de Epidemiologia [Internet]. Brasília: Ministério da Saúde; 2010 [cited 2018 July 15]. Available from: http://bvsms.saude.gov.br/bvs/saudelegis/gm/2010/prt2254_05_08_2010.html

5. Santos SSBS, Melo CMM. Evaluation of the decentralization of epidemiologic surveillance to the Team of the Family Health Program. *Ciênc Saúde Coletiva*. 2008 Nov/Dec; 13(6):1923-32. Doi: <http://dx.doi.org/10.1590/S1413-81232008000600028>

6. Ministério da Saúde (BR), Gabinete do Ministro. Portaria nº 183 de 30 de janeiro de 2014. Regulamenta o incentivo financeiro de custeio para implantação e manutenção de ações e serviços públicos estratégicos de vigilância em saúde, previsto no art. 18, inciso I, da Portaria nº 1.378/GM/MS, de 9 de julho de 2013, com a definição dos critérios de financiamento, monitoramento e avaliação. [Internet]. Brasília: Ministério da Saúde; 2010 [cited 2018 July 15]. Available from: http://bvsms.saude.gov.br/bvs/saudelegis/gm/2014/prt0183_30_01_2014.html

7. Silva NC. Avaliação normativa do serviço de atendimento móvel de urgência de Teresina [dissertation] [Internet]. Teresina: Universidade Federal do Piauí; 2011 [cited 2018 June 15]. Available from: <http://leg.ufpi.br/subsiteFiles/mestenfermagem/arquivos/files/naldiana.pdf>

8. Ministério da Saúde (BR), Secretaria de Atenção à Saúde, Departamento de Atenção Básica. Avaliação para melhoria da qualidade

da estratégia Saúde da Família [Internet]. Brasília: Ministério da Saúde; 2005 [cited 2018 July 15]. Available from: http://189.28.128.100/dab/docs/publicacoes/geral/doc_tec_amq_portugues.pdf

9. Tanaka OU, Tamaki EM. The role of evaluation in decision-making in the management of health services. *Ciênc Saúde Coletiva*. 2012; 17(4):821-8. Doi: <http://dx.doi.org/10.1590/S1413-81232012000400002>

10. Contandriopoulos AP, Champagne F, Denis JL, Pineault R. A avaliação na área da saúde: conceitos e métodos. In: Hartz ZMA, organizadora. Avaliação em saúde: dos modelos conceituais à prática na análise da implantação de programas [Internet]. Rio de Janeiro: Fiocruz; 2000 [cited 2018 Aug 12]; cap. 2, p. 29-48. Available from: <https://static.scielo.org/scielobooks/3zcf/pd/f/hartz-8585676361.pdf>

11. Dantas DI, Freitas RF, Batista DA, Almeida RB, Guerreiro JV. Contribution of the Center for Epidemiological Surveillance to an Emergency Unit for Compulsory Notification of Diseases. *R Bras Ci Saúde* [Internet]. 2014 [cited 2015 Nov 10]; 18 (Supl 1):21-6. Available from: <http://www.periodicos.ufpb.br/ojs/index.php/rbcs/article/view/21002/11838>

12. Mendes ACG, Silva Junior JB, Medeiros KR, Lyra TM, Melo Filho DA, Sá DA. Evaluation of the hospital information system (SIH/SUS) as a complementary information source for surveillance and monitoring of notifiable diseases. *Inf Epidemiol SUS*. 2000 June; 9(2):67-86. Doi: <http://dx.doi.org/10.5123/S0104-16732000000200002>

13. Ministério da Saúde (BR), Conselho Nacional de Saúde. Resolução N° 466, de 12 de dezembro de 2012 [Internet]. Brasília: Ministério da Saúde; 2012 [cited 2016 Oct 12]. Available from: <http://www.conselho.saude.gov.br/resolucoes/2012/Reso466.pdf>

14. Medeiros ARP, Larocca LM, Chaves MMN, Peres AM. The work process of nurses in hospital epidemiology centers. *Cogitare Enfermagem* [Internet]. 2015 Jan/Mar [cited 2016 June 15];20(1):67-73. Available from: <http://docs.bvsalud.org/biblioref/2016/07/609/36408-151075-1-pb.pdf>

15. Governo do Estado do Amazonas, Secretaria de Saúde do Amazonas, Fundação de Vigilância em Saúde do Amazonas. Manual de vigilância epidemiológica hospitalar. Manaus: FVS; 2010.

16. Binagwaho A, Kyamanywa P, Farmer PE, Nuthulaganti, T, Umubyeyi B, Nyemazi JP, et al. The human resources for health program in Rwanda: a new partnership. *N Engl J Med*. 2013 Nov; 369:2054-59.. Doi: [10.1056/NEJMSr1302176](http://dx.doi.org/10.1056/NEJMSr1302176)

17. Albuquerque MIN, Carvalho EMF, Lima LP. Epidemiological surveillance: concepts and institutionalization. *Rev Bras Saúde Mater Infant*. 2002 Jan/Apr;2(1):7-14. Doi:

18. <http://dx.doi.org/10.1590/S1519-38292002000100002>

19. Rios MA, Anjos KF, Meira SS, Nery AA, Casotti CA. Completeness of the information system for elderly suicide in the state of Bahia. *J Bras Psiquiatr*. 2013 Apr/June;62(2):131-8. Doi:

<http://dx.doi.org/10.1590/S0047-20852013000200006>

20. Barbosa MCL, Costa MCN, Teixeira MG, Mota ELA, Pereira SM. Effects of decentralization of epidemiological surveillance teams for Family Health. *Epidemiol Serv Saúde*; 2010 Dec; 19(4):347-54. Doi: <http://dx.doi.org/10.5123/S1679-49742010000400005>

21. Ministério da Saúde (BR), Gabinete do Ministro. Portaria N° 48, de 20 de janeiro de 2015. Habilita os entes federativos ao recebimento do incentivo financeiro de custeio para implantação e manutenção de ações e serviços públicos estratégicos de Vigilância em Saúde [Internet]. Brasília: Ministério da Saúde; 2015 [cited 2015 Jan 15]. Available from: http://bvsms.saude.gov.br/bvs/saudelegis/gm/2015/prt0048_20_01_2015.html

Submission: 10/10/2018

Accepted: 15/02/2019

Published: 01/04/2019

Correspondence

Adélia Dalva da Silva Oliveira
Condomínio Tropical Park
Rua 6, 2106
Bairro Santa Lia
CEP: 64058-820 – Teresina (PI), Brazil