

Facilitating aspects and challenges for the implementation of a permanent education model for Health Surveillance

Aspectos facilitadores e desafios para a implementação de um modelo de educação permanente para a Vigilância Sanitária

ABSTRACT

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Introduction: Competencies development occurs through learning involving the acquisition of knowledge, skills and attitudes and the central challenge that emerges for organizations is to provide formal and informal learning opportunities, integrated into training, development and education programs. **Objective:** To identify facilitating aspects and challenges for the implementation of a permanent education model for Health Surveillance. **Method:** The methodology used was based on an evaluation model that includes general characterization of the external and internal context, needs and guiding components of the structuring of training processes and technical analysis of the needs assessment, planning and execution and the effects of the training and development program. **Results:** The facilitating aspects identified were: legal competency to promote studies and research within the scope of the SNVS; norms that emphasize the valorization of professional development; the realization of local, regional and federal forums, which specify strategies, challenges, thematic axes and training areas for the SNVS; and Anvisa's role as a coordinator of the System, promoting educational activities in states and municipalities. The challenges pointed out were: improvement of the articulation and integration of SNVS entities with other health sectors, of Anvisa's performance aimed at other SNVS entities; uniformity in the execution of actions; managers' commitment to risk analysis and innovation of work processes. **Conclusions:** The processes for assessing needs and planning training strategies present great opportunities for improvement, especially when the various aspects considered relevant by the literature in the areas of training, development and education are used as references.

KEYWORDS: Professional Training; Corporate Education; Health Surveillance

RESUMO

Introdução: O desenvolvimento de competências ocorre por meio da aprendizagem e envolve a aquisição de conhecimentos, habilidades e atitudes, e o desafio central que emerge para as organizações é disponibilizar oportunidades formais e informais de aprendizagem, integradas em programas de treinamento, desenvolvimento e educação. **Objetivo:** Identificar aspectos facilitadores e desafios para a implementação de um modelo de educação permanente para a Vigilância Sanitária. **Método:** Baseou-se em modelo de avaliação que contempla caracterização geral do contexto externo e interno, necessidades e dos componentes norteadores da estruturação dos processos formativos e análise técnica da avaliação de necessidades, do planejamento e execução e dos efeitos do programa de treinamento e desenvolvimento. **Resultados:** Os aspectos facilitadores identificados: competência legal de fomento aos estudos e pesquisas no âmbito do Sistema Nacional de Vigilância Sanitária (SNVS); normativos que ressaltam a valorização do desenvolvimento profissional; a realização de fóruns locais, regionais e federais, que especificam estratégias, desafios, eixos temáticos e áreas de formação para o SNVS; e a

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atuação da Agência Nacional de Vigilância Sanitária (Anvisa) como ente coordenador do Sistema, promovendo ações educativas em estados e municípios. Os desafios apontados: aprimoramento da articulação e integração dos entes do SNVS com outros setores da saúde; da atuação da Anvisa voltada para os demais entes do SNVS; da uniformidade na execução das ações; do comprometimento dos gestores com a análise de riscos e inovação dos processos de trabalho. **Conclusões:** Os processos para avaliação de necessidades e planejamento das estratégias de capacitação apresentam grandes oportunidades para aprimoramento, especialmente quando utiliza como referencial os diversos aspectos considerados relevantes pela literatura nas áreas de treinamento, desenvolvimento e educação.

PALAVRAS-CHAVE: Formação Profissional; Educação Permanente; Vigilância Sanitária

INTRODUCTION

Technological advances and the rapid obsolescence of knowledge in a globalized world immersed in constant and vertiginous changes have driven the emergence of new models and multiple educational technologies. It is within this scenario, that Corporate Education (CE) acquires relevance as a strategic model for the acquisition of complex and highly volatile skills necessary for new organizational arrangements and new configurations of human work, whose development requires varied educational actions, curricula, and continuous learning and continuing education programs^{1,2}.

In line with this perspective, Mathias and Santos³ argued that CE portrays a dynamic that integrates the promotion of learning actions intrinsically linked to the organization's strategy, through a diversity of teaching-learning modalities, which expand the possibilities of access to knowledge to all the links in the organization's value chain: governance agents, servers, partners, suppliers, and society.

In line with the national and international scientific literature in the field of human learning at work, as the development of competencies occurs through learning involving the acquisition of knowledge, skills, and attitudes (KSA)^{4,5,6,7,8}, the central challenge that emerges for organizations is to provide formal and informal learning opportunities, integrated into training, development, and education (TD&E) programs^{9,10}.

These authors emphasize that the TD&E processes can generate contributions to improve the performance of individuals and work teams with a view to achieving strategic objectives and the full fulfillment of the organizational mission. In addition to improving professional performance, such processes can favor the expansion of autonomy and responsibility for the individual and collective practice of activities that generate results for the institution^{11,12,13,14}.

More specifically, in the organizational context of the public sector, as mentioned by Bergue¹⁵, it is essential to search for KSA that impact the result of the work performed by agents, through learning processes that involve people, environments, technologies, and social and work dynamics with numerous peculiarities. However, the acquisition of new KSA is part of the challenge, imposing, in addition, the identification of conditions that facilitate the transfer or application of this content in the transformation of work processes and their results, according to parameters defined by the public interest.

In this perspective, according to Borges-Andrade et al.¹⁶, a process of situational diagnosis of TD&E programs should include a systematic examination of information covering two main stages, namely:

Stage 1: general characterization of the external and internal context, as well as the needs and guiding components of the structuring of the training processes;

Step 2: detailed technical analysis of the elements specified in each of the three components of the TD&E system - needs assessment, planning and execution, and effects assessment of the TD&E program.

In addition to these steps, it may also involve an analysis of the characteristics of the target audience and of the context variables that facilitate the transfer and mobilization of new learning at work.

Through the diagnosis, it is possible to establish a frame of reference to start planning the actions necessary to implement improvements and integrate the training and professional development processes within the scope of the National Health Surveillance System (SNVS). In this sense, some indicators adopted are listed to support a comprehensive analysis of TD&E programs, as systematized in Chart 1.

Based on the indicators listed in Chart 1, favorable conditions, and points of vulnerability to the effectiveness of SNVS Professional Training Processes can be mapped, which must be analyzed in detail, so that they can support situational strategic planning for the development of focal and effective actions related to the problems identified.

Thus, through the situational diagnosis, the objective of this article was to identify facilitating aspects and challenges for the implementation of a permanent education model for health surveillance. The aspects and practices used to promote CE in the System will also be discussed.

METHOD

The identification of the facilitating aspects and challenges for the implementation of a permanent education model for health surveillance was carried out considering two stages, based on the evaluation model proposed by Borges-Andrade et al.¹⁶:



Chart 1. Indicators adopted in the analysis of training, development, and education programs.

Dimensions	Categories	Definitions
The general context of training processes	Problems/needs that guide SNVS professional training processes	Linking learning actions to strategic objectives and results; insertion in the strategic plan supported by senior management; and dissemination of actions and results by the institution.
	Context of creation of SNVS professional training processes	Context of the performance of the SNVS training processes: the creation of SNVS, competencies, organizational characteristics, workforce profile, location and geographical dispersion, among others.
	Diagnosis and planning of learning actions	Identification of gaps in current and emerging competencies in target audiences for the purpose of planning and executing training and development actions; conditional on linking learning processes to the development of knowledge, skills, and attitudes to solve performance problems or prepare the organization and society for the future.
	Development of learning actions	Construction of educational solutions in a shared way, from the inputs generated by the diagnosis and the establishment of partnerships with the internal and external teams that hold the KSA objects of learning.
	Evaluation of learning actions in different modalities	Systematic assessment of the effectiveness of educational actions at the level of the organization and the individual, to provide feedback on the stages of planning and development of learning actions and generating information for the dissemination and recognition of investments directed to the continuous learning processes.
	Use of DE in learning actions	Incorporation of a diversity of ICT as a strategy to promote the educational process, at a distance, appropriate to the organizational culture, characteristics of the target audiences, and the objectives of the events offered by the organization, with the objective of boosting the organizational results.

Source: Morais¹⁷, with adaptations.

SNVS: National Health Surveillance System; KSA: knowledge, skills, and attitudes; ICT: information and communication technologies; DE: distance education.

- i) general characterization of the external and internal context, needs, and guiding components of the structuring of the training processes;
- ii) Detailed technical analysis of the needs assessment, planning and execution, and the effects of the TD&E program.

For the collection of information related to each stage of the situational diagnosis component, document analysis techniques were applied.

Document analysis

The first stage of the diagnosis was carried out based on document analysis¹⁸, considering the publications, technical reports, regulations, legislation, and articles provided by the National Health Surveillance Agency (Anvisa) and the additional materials found in virtual databases, presented in Chart 2.

The analysis of the documents included the search for nuclei of meaning and common discourses that would enable the characterization of the SNVS, and the practices used to promote CE in the System^{33,34}.

From the researched bibliography, it was verified that there are several theoretical and empirical studies about CE, however, with a lack of materials that directly assist in the evaluation process. Thus, it was decided to analyze in the literature factors considered relevant to the structuring and functioning of an educational system guided by a more contemporary CE paradigm that effectively contributes to the process of generating value for the organization and for the value chain in which it is inserted.

The factors and concepts presented will serve as a basis for the development of a roadmap that will assist both in the characterization process and the evaluation of training programs. The first part of the proposed model comprises a set of items to be used to characterize the SNVS and the organizations that compose it, as shown in Chart 3.

RESULTS AND DISCUSSION

Next, the results obtained from the document analysis in a dialogical form will be presented, referring to the aspects considered important by the specialized literature.

General characterization of SNVS

The characterization of the SNVS evidenced its complexity and its general aspects and allowed us to understand its operation and to identify its scope of action, either in terms of competencies and attributions or in terms of structural aspects, such as geographic dispersion.

Component organization

As provided for in Law No. 9,782, of January 26, 1999³⁶:

Art. 1 The National Health Surveillance System comprises the set of actions defined by § 1 of art. 6 and by arts. 15 to 18 of Law No. 8,080, of September 19, 1990, executed by institutions of the direct and indirect Public Administration of the Union, the States, the Federal District, and the Municipalities, which exercise activities of regulation, standardization, control, and inspection in the health surveillance area.



Chart 2. List of analyzed documents.

Document	Year
Final report of the 1st National Health Surveillance Conference ¹⁹	2001
Master Plan on Health Surveillance ²⁰	2007
Health surveillance technician: guidelines for training ²¹	2011
Health surveillance education management - Regional proposals ²²	2012/2013
Profile of municipal health surveillance in Brazil ²³	2014
Report of the National Forum of the Health Surveillance Debate Cycle: challenges and trends ²⁴	2015
Specialization Course in Health Surveillance Management ²⁵	2017
National Policy of Permanent Education in Health ^{26,27,28}	2017, 2007, 2006, 2004
List of procedures of the National Health Surveillance System ²⁹	2019
Integrated programming for training and professional development of the National Health Surveillance System - Capacita-Visa ³⁰	2019, 2018, 2017, 2016
National Primary Care Policy ³¹ Primary Care and Health Surveillance Integration Guide ³²	2017, 2018

Source: Elaborated by the authors, 2020.

Chart 3. Factors and items used to characterize the National Health Surveillance System.

Factor	Item
Organization	Component organization Operation area Geographic location and dispersion Workforce (total and by type) Mission/vision/values Current strategic plan
CES	CES in the structure Workforce profile Schools, programs, and actions offered Communication and dissemination strategies Origin of investments CE processes - Needs assessment CE processes - Planning CE processes - Execution strategies CE processes - Evaluation Relationship with organizational processes Relationship with HR processes Audiences served

Source: Borges-Andrade et al.⁹.

CES: Corporate Education System; CE: Corporate Education; HR: human resources.

Thus, SNVS is composed of public organizations in the three spheres of power, from the institutions as listed below:

- Federal: Ministry of Health, National Health Council, Anvisa, Oswaldo Cruz Foundation (Fiocruz), National Institute for Quality Control in Health (INCQS);
- State: State Health Secretariats, State Health Councils, and State Health Surveillance; Central Laboratories of Public Health (LACEN);
- Municipal: Municipal Health Secretariats, Municipal Health Councils, and Municipal Health Surveillance.

The research identified the role of INCQS, which is a Technical Unit of Fiocruz, with operations in the areas of teaching, research, and laboratory technologies, related to the quality

control of inputs, products, environments, and services subject to the action of Health Surveillance.

Operation area

Regarding the operation area, given the complexity and uniqueness of SNVS, it was decided to describe it as transversal to delineate the performance of SNVS more clearly and not that of the organizations that compose it.

According to Laws No. 8,080, of September 19, 1990³⁵, and No. 9,782/1999³⁶, SNVS comprises a set of actions capable of eliminating, reduce, or prevent health risks and intervene in health problems arising from the environment, the production, and circulation of:

- Health goods: medicines, foods, sanitizers, blood, blood products, cosmetics, health products, pesticides, and tobacco products derived from tobacco;
- Health services: hospitals and clinics, outpatient clinics, dental and specialized services (hemodialysis, transplants, oncology), and diagnostic services (radiological clinics, clinical analysis laboratories);
- Services of interest to health: nurseries, clubs, tattoo places, cemeteries, manicurists, etc.

Geographic location and dispersion

SNVS professionals are located throughout the national territory. In the states, in addition to the Secretariats, there are also LACEN and, at the municipal level, the Municipal Public Health Laboratories and the Municipal Health Secretariats. In addition, some entities representing state and municipal entities maintain close interdependence with SNVS. They are the National, State, and Municipal Health Councils, the National Council of Health Secretaries (CONASS), the National Municipal Health Secretariats Council (CONASEMS), and the Councils of Municipal Health Secretariats (COSEMS).



Workforce

The characterization of the workforce was carried out by sphere of power. For such a survey, in addition to the materials made available, surveys were carried out on websites that presented the institutions' attributions, as well as characterized their respective workforces. In the case of Anvisa, information obtained from the Personnel Statistical Panel was also used, made available and maintained by the Ministry of Economy³⁷ (Chart 4).

At the federal level, there is a wide geographical dispersion of professionals since Anvisa, in addition to its headquarters in Brasilia, has coordination and health surveillance posts spread across all five regions of the country. Figure 1 presents data on the distribution of Anvisa's workforce, by geographic region of the country, which were extracted, in March 2020, from the Personnel Statistical Panel, of the Ministry of Economy³⁷.

Although there is a greater concentration in the Midwest region, especially in the Federal District, where 51.5% (1,414) of the workforce is located, there is a great geographical dispersion in the other regions. A fact that imposes a greater effort for the formulation and implementation of training processes since the systematics of needs assessment, planning, execution, and

assessment of results must contemplate strategies that allow the insertion of geographically dispersed actors and with access to a set of different resources and working and training conditions, in addition to regional and local needs, which vary with the profile of each operation locality.

At the state level, SNVS is basically composed of two types of organizations, with different attributions, as described in Chart 5.

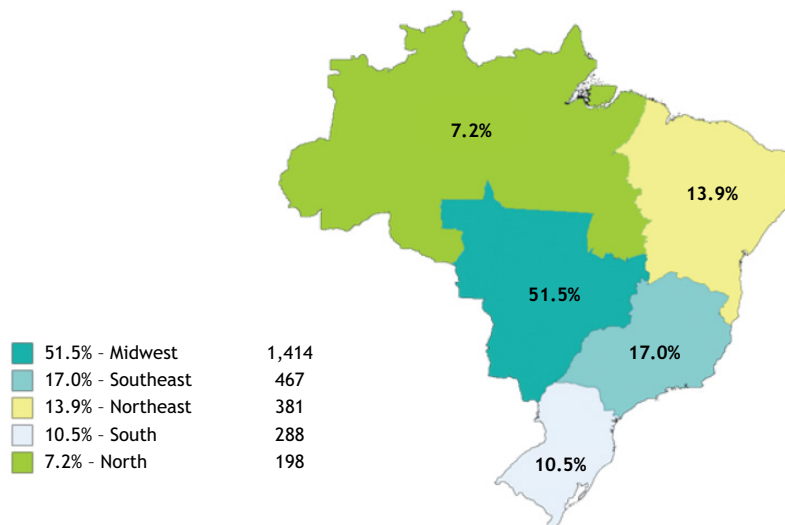
At the state level, the units of the federation are composed of actors with different functions and roles that are little known in SNVS, with their own dynamics of action and performance, which can sometimes compete with the efforts made within the general scope of the system. The profile of Brazilian states and municipalities shows the staff of state health surveillance services with different forms of employment, with 81.1% being statutory, 7.2%, hired workers, 5.4%, without permanent employment, 4.0%, only commissioned, and 2.3%, interns²³.

Finally, with the vision at the municipal level, one realizes the real extent of the challenge of structuring an education system that reaches the entire SNVS. In 2014, of the 5,570 municipalities in the country, 5,448 had a specific health surveillance structure and 111 reported having a person responsible for health

Chart 4. Quantitative of the workforce of professionals working in the National Health Surveillance System, at the Federal level, in 2020.

Scope	Institution	Description of the workforce
Federal	Anvisa	2,748 professionals, 97.0% of whom are publicly hired, 78.0% of whom have at least a college degree
	INCQS	Over 450 professionals, including public servants, contractors, and scholarship holders

Source: Ministry of Economy³⁷, National Institute for Quality Control in Health (INCQS)³⁸.
 Anvisa: Brazilian National Health Surveillance Agency; INCQS: National Institute for Quality Control in Health.



Source: Personnel Statistical Panel, from the Ministry of Economy³⁷.

Figure 1. Distribution of the workforce of the Brazilian National Health Surveillance Agency (Anvisa), by region of Brazil, in 2020.



Chart 5. Characteristics of the workforce of professionals working in the National Health Surveillance System, at the State level, in 2014.

Scope	Institution	Description of the workforce
State	Surveillance bodies of state departments LACEN	Each secretariat and LACEN has their respective teams, presenting, in 2014, 3,684 professionals working in health surveillance activities, with 67.3% having completed higher education and 29.6% having completed high school.

Source: IBGE²³.
LACEN: Central Laboratories of Public Health.

Chart 6. Characteristics of the workforce of professionals working in the National Health Surveillance System, at the municipal level, in 2014.

Municipal	Municipal Offices	35,661 professionals, of which 63.4% were statutory; 15.0%, without permanent link; 11.8%, hired workers; 8.5%, only commissioned; and 1.1%, interns
	Municipal Councils	Linked to Municipal Offices, to entities representing state and municipal entities, that is, councils composed of representatives of the Government, service providers, health professionals, and users

Source: IBGE²³.

surveillance actions, totaling 5,559 municipalities with professionals responsible for health surveillance actions, regardless of the existence of a specific structure. The staff was composed of 35,661 professionals²³. Chart 6 presents, in summary, an approximate view of the public to be reached.

At the municipal level, in addition to the geographic issue, there is a disparity between sizes and the great difference in training needs, in addition to the degree of qualification of the professionals who work in each location and the employment relationship. In this context, there is also the participation of municipal councils, also composed of professionals not linked to the public sphere and users of SNVS, which requires language and content adequacy treatment, given the asymmetries of training and the capacity for engagement.

The data collected indicates a system with a large workforce, distributed in the country, composed of a set of different professional profiles, in addition to those that are not linked to any sphere of public power but act as representatives. Such diversity of profiles forms an important set of issues to be considered in structuring health surveillance training processes.

Mission, vision, and values

Laws No. 8.080/1990³⁵ and 9.782/1999³⁶ establish the mission and values that guide SNVS, in addition to defining the attributions, competencies, and principles. Law No. 9.782/1999³⁵ provides a description of the competencies within the scope of the three spheres of government, outlining their respective fields of activity. And law No. 8.080/1990³⁵ establishes common principles such as: universal access to services; community participation, among others.

Such instruments ensure a basic set of assumptions that enable alignment and a view of what is essential for the development of the workforce involved in SNVS, providing conditions to identify technical and behavioral needs for mapping skills and structuring training programs.

Current strategic plan

In 2007, the Master Plan on Health Surveillance (PDVISA) was prepared, which includes the guidelines for the consolidation and strengthening of the SNVS, with actions proposed to achieve its purpose²⁰. This document can be seen as analogous to an organization’s strategic planning.

Its great advantage is the fact that it was built in a participatory manner, involving the collection of perceptions in the scope of all spheres of activity (municipal, state, and federal). The plan also contemplates challenges related to professional education, providing subsidies for the formulation of more appropriate strategies for structuring SNVS Training Processes.

The National Policy on Popular Education in Health (PNEPS) and the Health Surveillance Education Management Guidelines are also guiding instruments that define guidelines for the training and development of workers and their implementation^{22,26,27,28}.

The analysis of the reports of the Debate Cycle carried out in 2015 and entitled “Challenges and Trends in the field of health surveillance of products and services: what health surveillance does society need?” allowed to identify important training strategies for SNVS that can support the professional skills to be developed²⁴.

Considerations about the documents analyzed

The information identified in the document research allowed to verify that there are elements that favor the structuring of a more dynamic, modern, and professionalized CE System that meets the entire SNVS. Chart 7 presents, in a consolidated form, relevant aspects identified in the characterization.

From the characterization, it was possible to analyze the possible articulations between the offer of courses in the training processes, the legal competences of SNVS, the norms in the Health area, such as the PNEPS of 2004 and 2007^{26,28}, Ordinance



Chart 7. Facilitating aspects and vulnerabilities identified in the characterization of the National Health Surveillance System.

Facilitating aspects	Points of vulnerability
<ul style="list-style-type: none"> • Legal competence to promote studies and research within the scope of SNVS • National Policy for Permanent Education in Health (2004) which has as important functions the valuation of professional development in SUS, in an integrated way and collegiate management • Local, regional, and federal forums, which specify strategies, challenges, thematic axes, and training areas for the SNVS (2001, 2007, 2015) • Diversity of professional profiles working in the SNVS • Norms that make explicit that continuous learning is relevant for a performance of excellence within SNVS's scope • Anvisa's role as coordinator of the System, promoting educational activities in states and municipalities 	<ul style="list-style-type: none"> • Little articulation between SNVS entities • Difficulty of integration and articulation with health sectors, markedly the areas of Health Surveillance and Primary Care, which favors a competitive and non-collaborative stance between such actors • Anvisa's role as a central body and, in a way, distanced from the real needs of other SNVS entities • SNVS fragmentation, which is reflected in low levels of integration and uniformity in the execution of actions • Poorly defined roles • Low levels of managers' commitment to risk analysis and work process innovation • Distinctions in size, conditions, and levels of qualification in each region and municipalities

Source: Elaborated by the authors, 2020.

SNVS: National Health Surveillance System; SUS: Unified Health System; Anvisa: Brazilian National Health Surveillance Agency.

No. 3,194, of November 28, 2017²⁷, and all other documents analyzed, which will be exposed below.

The Health Surveillance Education Management Guidelines provide guidelines for educational action in health surveillance with the potential to subsidize the construction of plans, programs, and projects aimed at professional training in health surveillance. These guidelines are organized by axes that specify the model of organization of educational actions, the approximation with work management policies, and the basic principles of educational processes, such as fostering the development of competences concerning the social functions of health surveillance, prioritizing active teaching-learning methodologies, and the use of tools expand the access of professionals in the educational initiatives offered²².

More specifically, The Debate Cycle²⁴ translates important training strategies for SNVS, such as the development of educational activities that reach elementary and high school, with the expansion Educanvisa and the Health in School Program (PSE); integration with the areas of the health secretariats responsible for education programs, in order to disseminate knowledge on health surveillance and exchange knowledge between different areas; and elaboration of a permanent program of systematic education and technical qualification for health surveillance professionals, with training plans for civil servants and accountability of the three SNVS entities.

PNEPS identifies important points for the professional training of health surveillance workers, such as the creation of a collegiate body for the management of health education. The Policy has as one of its main functions the identification of training and development needs in health, in a cooperative way, articulating and encouraging the transformation of health practices.

With regard to the Local, Regional, and Federal Forums, more specifically, the PDVISA carried out in 2006/2007 and the Debate Cycle, in 2015, some signal elements for the training and development in health surveillance can be highlighted:

- Professional qualification with an emphasis on technical skills;
- Holding events that favor the integration of health surveillance professionals with other professionals in the health field and members of civil society;
- Identification of training needs and definition of content jointly with states and municipalities;
- Training managers in health surveillance, with an emphasis on planning and financing;
- Use of distance education technologies and in-service training;
- Qualification of health surveillance professionals to promote educational actions for society;
- Training aimed at health counselors.

It is also necessary to consider other important elements, such as the demands for strategic government themes, emerging themes related to technological innovations, and growing demands in the international sphere that may have an impact on the design and learning offers at SNVS.

Given the above, it was possible to point out the preliminary categories of guiding components of the formulation and planning of an improvement program, shown in Figure 2.

In this perspective, it is possible to observe the integration of several factors influencing the structuring of the training processes, which act on supply, demands, and strategic themes of government, needs, and gaps of competences of the states and municipalities, in addition to technological innovations.

SNVS Training

Anvisa acts directly in the management of education, within the scope of the SNVS, and has among its regimental



competencies the coordination of the management of education in this system, including actions to promote health in health surveillance. Such competencies are carried out through two important programs: Training and Professional Improvement in Health Surveillance (Capacita-Visa) and Education for Health Promotion (Educanvisa).

One of the actions of the Capacita-Visa program is to publish and support the holding of training events for SNVS (intra-sectoral and interinstitutional), with the encouragement of the adoption of active learning strategies. Still within the program, Anvisa establishes partnerships with education agencies and articulates the educational instances in the state and municipal health secretariats²⁸.

In the education axis for health promotion, the target audience is made up of teachers and students in early childhood education, elementary, high school, and youth and adult education; professionals from education departments, and the local community. Among the main actions, the Educanvisa program, made up of face-to-face and distance modules and health information, education, and communication meetings, stands out.

The activities developed by Anvisa represent an important dimension of the health surveillance education system. Its actions expand the perspective of continuous learning beyond the organizational environment of the Agency, since it coordinates the training processes in health surveillance of several entities of SNVS and civil society, articulating partnerships to optimize the development of skills.

To analyze the degree of articulation between the guiding components of the formulation and planning of the training processes in SNVS and the offer of the Capacita-visa and Educanvisa Programs, the content was systematized in Chart 8 and indicates that the legal and normative aspects are articulated and are possible inducers of a permanent education system in health surveillance, in addition to fostering a culture of continuous learning.

It is possible to observe, still in Chart 8, that the legal competencies of SNVS specify four great categories of competencies

- regulation, standardization, control, and inspection - to be deployed in KSA and developed by the professionals, through the learning processes.

Evaluation of training actions within the scope of the SNVS

Having made the characterization of SNVS and the considerations of the analyzed documents that support the development of strategies aimed at the qualification of health surveillance professionals, it is important to evaluate Capacita-Visa in a structured way. In this sense, we will proceed to a more direct evaluation of the program, making a comparison of the program with what the literature classifies as a Corporate Education System (CES), considering the aspects pointed out below:

- CES in the structure;
- Workforce profile;
- Schools, programs, and actions offered;
- Communication and dissemination strategies;
- CE processes;
- Relationship with organizational processes;
- Relationship with human resources processes;
- Audiences served.

CES is more strategic when it can act autonomously or is located in a position close to the institution's decision-making center.

In the case of SNVS, which is a system composed of several institutions with several centers of power, it is understood that the most appropriate decision-making link is that of the maximum authority of the coordinating body of the system.

As for training programs and actions, it is important to remember that, according to Eboli et al.³⁹, the creation of schools, training programs, and actions can be considered as the heart of a CES because it is the strategy used to group the contents in

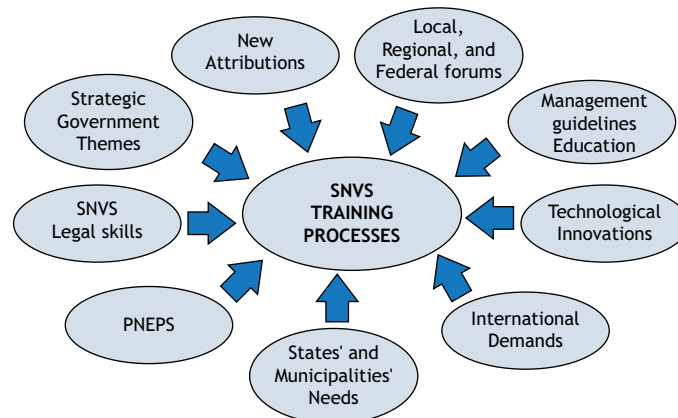


Figure 2. Preliminary categories identified through document analysis.



Chart 8. Points of articulation between the legal powers of the National Health Surveillance System (SNVS) and the documents analyzed.

SNVS competencies	Functions of the National Policy of Permanent Education in Health	Master Plan on Health Surveillance (PDVISA) guidelines	Guidelines for the Management of Health Surveillance Education	Strategies Report of the National Forum - Debate Cycle: Challenges and Trends
Develop actions/ activities of regulation, standardization, control, and inspection in health surveillance, within the scope of the three spheres of power (federal, state, and municipal)	Identify health training and development needs; Build strategies and processes that qualify health care and management and strengthen social control; Mobilize the training of managers of health systems, actions, and services; Propose policies and establish interinstitutional and intersectoral negotiations; Articulate and encourage the transformation of health practices and health education in SUS; Establish cooperative relations in the three spheres of power.	Promote professional qualification in health surveillance; Define training policies for integrating health surveillance with the different health areas; Encourage the establishment of partnerships between SNVS and a higher education and research institution; Promote educational actions to disseminate health surveillance; Develop education processes for society regarding the consumption and use of health services; Develop educational actions in health surveillance for Health Counselors.	The programming of health surveillance actions must incorporate educational actions by professionals linked to their work, considering the planning instruments of the Unified Health System (Health Plan, Programming, and the Management Report), in the respective management spheres; SNVS educational actions must prioritize health risk, regionally based planning and the design of health care networks; Education Management must consider Health Promotion and Attention policies in their interfaces with health surveillance actions; Education Management must consider health information systems and those specific to health surveillance, enabling the use of epidemiological, assistance, and other indicators when planning health surveillance actions; The educational processes in health surveillance must be in line with the final principles and organizational guidelines of SUS, encouraging the development of competencies concerning the social functions of Health Surveillance; Educational processes must prioritize active teaching-learning methodologies, with a view to meaningful learning, valuing the respective cultures and workspaces as a privileged <i>locus</i> for educational actions.	E62. Continuing education and in-service training using DE; E63. Qualify the management of health surveillance at all levels of the System, especially Planning and Financing; E70. Public policy for the formation of health surveillance inspectors; E87. Promote educational activities with civil society; E89. Use the Ombudsman as an education strategy; E91. Integration with the Permanent Education areas of the Health Offices; E92. Define in basic tripartite training content to be offered by the municipality based on the local reality; E93. Prepare health surveillance professionals to work in health education; E94. Regulate training for the entry of new health surveillance professionals.

Source: Elaborated by the authors, 2020.
SUS: Unified Health System; SNVS: National Health Surveillance System.

order to meet the mapped needs. Its existence must be clearly linked to strategic needs and, in addition to assisting in the process of linking actions carried out concerning strategic needs and mapped audiences, schools assist in the organization and development of knowledge, in addition to facilitating the process of communication and dissemination of services.

When there is a complex network such as SNVS, with varied needs, as identified, the design of the schools is shown as an essential tool in order to be able to meet the purpose of strengthening the necessary organizational skills, especially those that have a transversal character.

As made available on Anvisa's corporate portal³⁰, the set of training actions offered under SNVS is published annually, in the form of an electronic notebook, in the three management spheres. In this sense, evaluating how close the actions offered are to the configuration of what the literature calls schools can assist in the process of checking how much the courses offered by Capacita-Visa can meet the diversity of demands and the complexity of the challenges presented. To form a slightly more comprehensive view, it was decided to consider the publications of the courses offered in the period from 2016 to 2019.

The courses offered are grouped by thematic area and presented individually, providing information on name, institution, course

load, the period of study, location, objectives and content of the course, modality, and target audience. Considering the period from 2016 to 2019, there is a total offer of 595 courses in 18 thematic areas. The Table shows in a consolidated way the number of actions offered by theme.

Analyzing the data together, it is possible to perceive a greater concentration of actions offered in the thematic areas of Inspection and Health and transversal services, which together account for 63.0% of the actions offered over the past years. These thematic areas, in addition to presenting the greatest number of actions, constitute regular offers that, although they vary quantitatively each year, are regularly present, which, given the strategy used to survey training opportunities, may indicate that, in the view of the system, such themes are a priority for the development of professionals working at SNVS.

Additionally, although they have a smaller quantity, the actions in the areas of Pesticides; Blood, tissues, cells, and organs; Worker's health and services of interest to health can also be considered as important axes, as they have been present regularly over the past four years.

Considering the set of offers present in the electronic publication Capacita-Visa, it is possible to see that the training and offers system is very similar to the traditional systems of course catalogs and, although it encompasses themes that are perpetuated



Table. Courses offered to professionals in the National Health Surveillance System, by thematic area, made available through the electronic publication *Capacita-Visa*, in the years 2016 to 2019.

Thematic area	2016	2017	2018	2019	TOTAL
Pesticides	6	5	2	1	14
Foods	-	13	14	4	31
Cosmetics	-	-	-	1	1
Inspection	45	16	72	34	167
Productive inclusion	1	-	2	1	4
Public health laboratories	-	1	4	-	5
Monitoring of products subject to health surveillance	-	-	10	4	14
Post-use monitoring	6	4	-	-	10
Ombudsman	1	-	-	-	1
Sanitizing	1	1	-	-	2
Blood, tissues, cells, and organs	14	6	6	2	28
Worker's health	11	5	18	9	43
Services of interest to health	8	2	9	9	28
Health services	41	14	33	29	117
Information systems	-	3	5	20	28
Tobacco	3	4	2	-	9
Transversal	30	10	41	9	90
Environmental surveillance	3	-	-	-	3
Grand total	170	84	216	125	595

Source: Elaborated by the authors, 2020.

throughout the evaluated period, there is no indication as to the formation of schools or that such themes, in general, are intentionally aligned with the organizational competencies or strategic needs of the System. However, attention is drawn to courses grouped under the Transversal theme, which present content more clearly directed to common issues, such as professional training in health surveillance, considering also different levels of learning grading, ranging from introductory courses to specialization courses.

This grouping, although more generally called, represents one of the axes that, apparently, are more related to organizational competencies and have a direct relationship with the institutional mission and common attributions to SNVS members.

Thus, in general, the actions offered meet several needs related to technical and normative aspects of SNVS, however, given the absence of a clearly structured process for assessing learning needs, as well as for defining the organizational skills necessary for the performance of SNVS, the *Capacita-Visa* Program is currently structured based on the consolidation of the individual perceptions and efforts of SNVS members. Thus, there is no systematic analysis of aspects related to the work context, gaps in technical and behavioral skills, characteristics of the target audience (sociodemographic, psychosocial, motivational), and learning domains. This type of analysis can influence both the engagement and commitment of individuals to the learning process, as well as the quality and

adequacy of planning learning options to the specific contexts and clientele involved.

Still, the activities related to the identification of TD&E needs within the scope of SNVS occur in an unstructured way, since the courses are offered according to the demands received from SNVS entities, who, through their representatives, indicate options for the most important and appropriate training. Thus, it is clear that the characterization of the skills gaps in terms of current and emerging KSA is tenuous, in order to solve a problem arising from a skills gap and to prepare SNVS professionals for the future.

It is noteworthy that the poorly structured process of analyzing skills gaps tends to present diffuse offers and little focus on the development of essential skills across SNVS and the dispersion of resources contributed to TD&E actions. In addition, the improvement of didactic aspects, educational approaches for adults in the work context, and the use of active learning technologies may be absent, important points for effective learning, in line with the PNEPS and the Health Surveillance Education Management Guidelines.

As for the execution strategies, using the courses offered in 2019 as a reference, it can be seen that, of the 125 courses offered, only 27, the equivalent of 21.6%, are offered in virtual mode. Considering the great geographical dispersion and the number of professionals involved in the process and the predominant strategy of offering shares, which is face-to-face,



there is a mismatch between the capacity of the Program to meet both the quantitative need and the accessibility for participation, given the costs and limitations that surround face-to-face actions.

In the researched material, there was no reference to structured processes for evaluating the results obtained, such as more managerial information or evaluations indicated by the literature. The management information is related to the numbers and percentages of SNVS professionals who were trained, the hours of training per professional, the *per capita* investment, among others. The evaluations indicated by the literature include the participants' satisfaction with the actions offered, the degree of learning and the retention of the content, and the effectiveness of the results achieved with the participation in the actions.

Regarding the interaction of programs with organizational processes, a clear relationship is perceived, since the thematic areas used for the grouping can be easily associated with SNVS' various areas of activity, in their respective spheres of activity. This relationship is in line with the premise placed by PNEPS that the training actions reflect the context and the specific need of each institution.

As for the relationship between the Program and the actions offered with other people management processes, no direct relationship was found between the participation of professionals in training actions with any processes related to performance management, progression, and functional promotion, whether in a specific career or for management positions, or even policies related to improving the quality of life and retaining professionals.

From the above, we can highlight some aspects that can facilitate the implementation of a permanent education model for health surveillance, such as the systematization of needs assessment processes, in order to consider organizational skills, thus reconciling SNVS general interests with the local needs of the entities that compose it and the professionals who work directly or indirectly in the SNVS. Such systematization can offer better bases for an active and systemic planning process of the offered actions, considering strategic priorities at the expense of individual efforts and needs. This can be considered an important challenge, considering the complexity of SNVS, the geographical dispersion, the working and training conditions, and the regional and local needs, which vary with the profile of each locality of activity.

In addition, there is the importance of planning the offer based on the expansion of the use of distance learning instructional technologies, especially in view of the geographical dispersion of the actors and professionals involved in the process. The use of this type of technology, in addition to expanding the reach and offering the capacity of educational actions, can provide less costly conditions for training those involved, avoiding traditional expenses with space rental and displacement of participants.

As for the public served, due to the diversity of courses and audiences described in the offers, as well as the expansion and variation of the thematic areas, it is clear that there is a concern to cover a diversity of professionals, however, given the absence of data and information on the participation of people in actions, one cannot have a clearer view of the real public served.

CONCLUSIONS

After conducting the document research, it was possible to form an overview of SNVS and the efforts to promote education in the System.

In this sense, it is important that the process of proposing a CE model that can meet the different needs of the actors and the system, in general, takes into account relevant factors in the literature that contributed to the training and development of SNVS professionals.

The facilitating aspects identified: legal competence to promote studies and research within SNVS's scope; the National Policy for Permanent Education in Health (2004), which has as important functions the valorization of professional development in SUS, in an integrated way and collegiate management; the realization of local, regional and federal forums, which specify strategies, challenges, thematic axes, and training areas for SNVS (2001, 2007, 2015); the diversity of professional profiles working in SNVS; norms that make explicit that continuous learning is relevant for a performance of excellence within the scope of SNVS; and, finally, Anvisa's role as the coordinating entity of the System, promoting educational actions in states and municipalities.

The challenges pointed out: improving the articulation between SNVS entities and the integration and articulation with health sectors, markedly the areas of Health Surveillance and Primary Care, which favors a competitive and non-collaborative stance among such actors; Anvisa's role as a central body, based on the real needs of other SNVS entities; actions to improve levels of integration and uniformity in the execution of actions; overcome the low commitment of managers to risk analysis and innovation in work processes; a clear definition of distinctions of size, conditions, and levels of qualification in each region and municipalities.

It is also emphasized the importance of making efforts aimed at mapping the organizational and individual competencies of the System, considering the different spheres of activity and actors involved. Such mapping will be essential so that the design of programs and training actions can be properly articulated and effectively contribute to SNVS's strategic development.

Finally, it is understood that, based on this set of punctuated questions, it is possible to build a proposal for an educational system that, when comprehensively considering the relevant aspects in the literature, meets the demands and needs of the various actors that make up SNVS and that add value to professionals in a specific way and the system in general.



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Author's Contributions

Pantoja MJ - Conception, planning (study design), acquisition, analysis, data interpretation, and writing of the work. Rabelo CPG, Francisco MFF - Writing of the work. All authors approved the final version of the work.

Conflict of Interests

The authors inform that there is no potential conflict of interest with peers and institutions, politicians, or financial in this study.



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