HEALTHCARE-ASSOCIATED INFECTION AS A TRANSVERSAL THEME IN THE TRAINING OF NURSES

Suellen Karina de Oliveira Giroti* Mara Lúcia Garanhani **

ABSTRACT
This study aimed to know the concept of healthcare-associated infections and its relevance in the training of nurses, from the perspective of the coordinating teachers of interdisciplinary modules in an integrated curriculum in nursing. This is a qualitative descriptive study, carried out through semi-structured interviews with 19 teachers in 2012. For data, analysis used the thematic content analysis. In addition, for the discussion used specific body of knowledge of the subject and theoretical premises of the Complex Thought formulated by Edgar Morin. Teachers labeled infections with theoretical definitions associating them to environments, materials and equipment, professionals, patients and antibiotic therapy. They also mentioned about the relevance of this theme and the need for it to implement in the integrated curriculum transversally in nursing education. It perceived that is a challenge for nursing faculty in curriculum study the inclusion of the topic in educational practice, and incorporated into the evaluation of performance to achieve by students, seeking the formation of a competent and committed in the prevention and control of healthcare-associated infections.

Keywords: Infection. Health services. Curriculum. Education in nursing.

INTRODUCTION
Various themes are relevant, in the formation of the professional nurse, for a professional performance consistent with the social needs in the area of health, among them, we highlight the theme health care-related infections (IRAS)\(^1\). The IRAS began to seen as a public health problem only in the mid-twentieth century, when it began to understand beyond the hospital environments\(^4\). Currently constitutes a theme quite publicized and discussed, mainly against the high levels of lethality and mortality, increased length of stay, the risk of spread of multidrug-resistant bacteria and, consequently, the high cost of health services\(^1\). We also have to consider the psychological impact that patients suffer when acquiring IRAS, are to seek a health service expect to solve a particular need for well-being and don't acquire new aggravations, like the IRAS\(^5\).

This relevance in the context of health, we believe that it is necessary the exploitation of moments of systematized discussions on vocational training in this area. Is in the process of training future professionals can acquire knowledge, develop skills and, above all, to consolidate an act with competence in health assistance\(^1\). In the case of the professional nurse, we emphasize that your role is essential due to the characteristics of your work process, as team leader\(^6\), articulator between the different health professionals, responsible for the care of continuously during periods of hospitalization, Coordinator of hospital infection Commissions\(^7\), responsible for the programs of health promotion and prevention in primary care, the nursing consultation , home visit and educational activities\(^8\), among other actions that may be related to IRAS\(^2\).

Therefore, the interest in further perspective of the IRAS in the formation of the nurse theme, we decided to study a reality that uses the integrated curriculum and develops crosscutting issues, one being the Biosafety, covering the content of IRAS\(^3\). In this proposal, the enhancement of the socio-cultural and psychological characteristics of the students, the context of the reality and the use of active methods of teaching and learning, situated between the innovative curricula from the perspective of new educational models. This curriculum has capability to train professional’s
nurses with skills and abilities to act on crucial risks and damage to the health of the population served. The role of teachers is to be an adviser and facilitator of the teaching and learning process, encouraging the student to seek your own knowledge.(10)

Thus, this study developed from the question: what is the concept that the Faculty coordinators of the modules of an integrated curriculum of nursing have on the subject of IRAS and what are their perceptions about the teaching of this subject in the curriculum? In addition, aims to analyze the concept of IRAS and your importance in the training of nurses, in the perspective of the Faculty coordinators of modules of an integrated curriculum of nursing.

This research aims to contribute to the Faculty of nursing and other health fields pay attention about their teaching practices related to IRAS, and the systematization of the theme in the curricula, so that it can reflect the students ' learning and the development of effective prevention and control measures.

METHODOLOGY

It is a qualitative research, like case study, conducted between March and June 2012 in a higher education school of nursing that develops integrated curriculum for over 15 years. The integrated curriculum defined as that which organizes the knowledge integrating the contents that maintain a connection with each other.(10) The curriculum matrix established at 16 interdisciplinary modules allows for the insertion of themes gradually, and, over the years, 4 student training through interdisciplinary. The construction of knowledge is from the questioning of the social reality and health care, by encouraging the active participation of the student in teaching learning process, valuing their previous knowledge and establishing a relationship between theory and practice.(11)

The data collected through semi-structured interviews with teachers of the course of nursing. Inclusion criteria were be interdisciplinary module Coordinator and be acting in integrated curriculum for at least two years. In this way, all the coordinators of the modules interviewed, because the shorter acting résumé among them was three years. As two modules had joint coordination of one or more teachers, the number of respondents totaled 19 teachers. The time to act as a teacher ranged from 6 to 34 years and as coordinators between 3 modulesto 10 years.

The interview composed by the questions: How do you define health care-related infections? How do you see the teaching of this subject on your perception and integrated curriculum for the training of nurses? After the transcript of the interviews, the testimony of the teachers identified by a numeral. When the modules had more of a coordinator, letters have added to identify the different coordinators involved in the same module, for example, 11A, 11B and 11C.

For the analysis of the interviews used, the thematic content analysis developed in three phases: pre-analysis, exploration of the material and processing of results.(12) In addition, for discussion used the theme-specific body of knowledge and theoretical premises of the Complex Thought, formulated by Edgar Morin. These premises enable us to reflect on the theme of IRAS in the training of nurses, including the complexity of interdisciplinary education in the pursuit of wholeness.(13-14)

The study approved by the Committee of Ethics in research involving Humans of a public University of the State of Paraná, Brazil, under number 173/2011 as CAAE 0162.0.268.000-11.

RESULTS AND DISCUSSION

The data from the interviews enabled the construction of two categories: Recognizing the interfaces of the IRAS, and valuing the IRAS as a crosscutting issue in the training of nurses.

Recognizing the interfaces of healthcare-related infections

In this category, cover the perceptions that teachers have about the IRAS and their interfaces. Some teachers, to establish IRAS resorted to theoretical definitions:

Is that the infection is a pathological process arising from contamination by bacteria, viruses, or anything, a foreign agent that takes an infectious process in that body. (15)
Other teacher has related theme with the hospital environment, conceptualizing the acquisition of nosocomial infection (IH) as can acquired after 72 hours of hospitalization and after hospital discharge for a specified period.

We watch a lot of IH, which is that the person has acquired infection after a hospitalization and that, had nothing to do with the reason why she hospitalized. (13)

Infection is that infection or contamination that occurs in health services. [...] You can have infection at another level of attention, not just hospitals. (12)

Mention the contamination and the lack of control of microorganisms in the environment of health:

In the infection linked to the hospital environment, which can provide a greater risk of the patient developing an IH [...] it is inherent, internal you are already running the risk. (10)

Prevention. Campaign to wash your hands when you have to prevent. (2)

Respondents also supported the concept of IRAS with materials, equipment, human resources, patient and microorganisms. Materials and equipment for the implementation of assistance in the health area have cited as a source of transmission of infections by indirect contact, as expressed in the speech: Infeção transmitida by the equipment (3).

These results are approaching the definition of the Ministry of health says is that gained after the IH admission the patient or after discharge when related to a diagnostic or therapeutic procedure performed. It also considered IH when you do not know the incubation period of microorganisms, without evidence of infection at the time of admission, or any clinical manifestation of infection if present from 72 hours after admission (15). Amended paragraph. IH evolved as a phenomenon that does not relate only to hospitals, and yes to all health services, carrying out procedures and actions considered of risk for the emergence of infections the patient (16).

Patients referred by teachers as possible sources of acquisition of IRAS, compared to changes in immune system or by endogenous and exogenous contamination. The use of antibiotics also reported by teachers as being a contributor to the development of IRAS, as illustrated in:

When you are with the immune system affected, as amended. (10)

We were discussing another day the issue of respiratory infection in children, such as the misuse of antibiotics in pneumonia, for example, how much it has caused, how many unnecessary hospitalizations-resistant microorganisms, so this is also a problem. (4)

The resistance that the microorganisms develop by your indiscriminate antimicrobial is another important factor to consider for the development of IRAS.

These lines relate to theoretical assumptions that claim that the infections caused by an imbalance between the normal microbial flora and its mechanisms of Defense. It known that the risk factors for developing endogenous or exogenous HOUSING can be (15).

Were also mentioned, health care professionals, as being responsible for IRAS, primarily by the lack of awareness and negligently:

Most of us are responsible. At the time did not use precautions, handwashing, aseptic techniques, we are responsible, whether any health professional, at the time that he breaks that barrier he is responsible. We are the means by which the patient contaminates. (14A)

Today the synonym of IH is the lack of awareness of health professionals. (11A)

On the other hand, some respondents reported that the IRAS represent only failures of health professionals:

I guess you cannot say the infection comes, I do not think. (14B)

The actions of control and prevention of IRAS, for the most part, are simple actions, such as handwashing, to more complex actions such as performing surgery with the guarantee of material properly sterilized. However, all actions and involve professional responsibility and ethics, and depend on the awareness and training of the professionals involved (2). So, follow rules and routines to prevent the IRAS related to changes in behaviors of professionals. These transformations include educational practices
through training and or training as well as professional motivation. Some actions that need to be effective and meaningful to be able to transform the incorrect care practices. We reinforce that behavioral changes in the pros will be achieved more easily if the insertion of this theme start during vocational training, corroborating with authors who also advocate this premise\(^1,3\).

The nurse emphasized by the faculty as one of the professionals responsible for IRAS, since this is responsible for the supervision and control of the environment, the material and the team in the development of appropriate techniques and procedures. Reworded paragraph. We recognize that all professionals who directly or indirectly Act health services need to raise awareness about the importance of your role in patient safety, but we have reinforced that the nurses supervise and guide the correct execution of the rules for the prevention and control of IRAS, both next to your work team, as with the other professionals who provide assistance to patients\(^2,6,9\).

In addition to these reflections, we emphasize that sometimes, the measures of prevention and control of IRAS not performed in full by health professionals, not only for lack of accountability, but also because of a lack of administrative support, managerial, financial and structural resources\(^2,17\).

The results showed some differences in conceptions of IRAS among the teachers, sometimes showing the scope that the theme has and other times expressing lack of knowledge of the subject. This reality can make the planning and development of related contents to IRAS, and can become a weakness in the formation of the student.

For that, knowledge becomes relevant it needs to contextualize within global in all its dimensions, calling in all parties preserving the qualities of each individual\(^13,14\). The construction of the fragmented thinking revealed in the interfaces of IRAS, because you have to look at the intimate and complex relationship between them, making it impossible to separate them. Therefore, health professionals need to understand these interfaces in your complexity. Only in this way, a path for the development of a quality assistance to users will be trodden\(^3\).

The comprehensive knowledge about IRAS by teachers is critical to a proper and complete approach with the students, since they are those that stimulate and direct the student in the pursuit of your knowledge. It is up to the teacher to facilitate and encourage the student in the educational process and mediate the relationship between the student and the object that wants to seize, helping to build the knowledge from and their own references and establishing relations with the world\(^10\).

Therefore, it makes necessary that on graduation there is a systematic approach to integrated mode and with interdisciplinary focus of this theme\(^1,3,5\). We know that this depends on the intentional actions of teachers, whereas various disciplines that are part of the curriculum matrix in vocational training courses in teaching health diagnostic and therapeutic procedures that must follow rules and routines for prevention of infection.

**Enhancing the healthcare-related Infections as a cross-cutting issue in the training of nurses**

This category brings together the perceptions of teachers about the relevance of the subject WILL be taught as a crosscutting issue in the training of nurses. Discusses positive aspects as well as difficulties and contradictions in your development, suggestions and spaces of the transversely of the theme in an integrated curriculum.

Some teachers reported that the IRAS worked in interdisciplinary modules of a systematic way as if it considered a crosscutting issue, taught in successive approximations, as a "SAP":

> I see that everyone deals with a cross shape in all modules. (13)

> The infection would be a SAP. What is SAP integrated curriculum? Should cover all modules, everybody has to work as SAP. (11 c)

Other professors spelled out suggestions for the teaching of the subject as to guarantee minimum performance and diagnose as it worked, stressing that he will become a crosscutting issue and, qEU the theme should not centered on a single interdisciplinary module. However, we also found lines that express doubts about this:
The ideal to be infection in all modules. (4)

Well, the infection, if I am not mistaken, it was to be a crosscutting issue. (11B)

Although not unanimously, teachers emphasized the need for enhancing the theme in learning and education IRAS of interdisciplinary and integrated way student. These arguments are approaching the theoretical principles that subsidize the crosscutting issues, namely, that any isolated area or discipline is enough to cover the complexity of teaching of a crosscutting issue, solidifying the idea of interdisciplinary and the complementarity of knowledge. (18).

Curricular principles course in study point out that the crosscutting issues must be present in the interdisciplinary modules, to a greater or lesser degree of intensity, such that the students incorporated over the years until the completion of vocational training. (10-11). Thus, we can observe that the teachers of the course studied in a process of appropriation of theoretical concepts of crosscutting issues and argue that the theme IRAS should developed this way.

They also stated the need to learn more about each module is interdisciplinary teaching, highlighting the risk that any module must not approach the crosscutting issue. They reinforced the need for successive bailouts and progressive moments of crosscutting issues, seeking to move closer to the vision of the whole.

Check for this tune, a start ... a growing development of this knowledge, as well as ensuring minimum performance. (4)

They still reflected the formal teaching of the subject in the curriculum does not guarantee a comprehensive and in-depth approach and, that teaching as a whole is still deficient and fragmented:

It flawed in the curriculum, a greater dedication to the teaching of IH in the curriculum. (11C)

I think it is very fragmented, and at the time that fragments, the student loses all. (14A)

Complex thinking strengthens the idea of breaking up with education in disciplines, in that it expresses the need to capture what woven together, i.e. the complex. We know this, it is sometimes difficult to implement, especially in front of the great fragmentation of the education that we witness today. (13). The hologrammatic principle proposed by Edgar Morin brings the idea in which each one of the elements that comprise a set contains the total information of the larger phenomenon he represented, overcoming the reductionism that sees only the parties. This is the idea that teaching happens, where the contents of each year can relate to and maintain the connection with the whole. (14).

These results reinforce the need for a revision in the curricular structure making it more clear, as well as continuous training of teachers. (5). The creation of spaces of debate would enable the deepening of theme education IRAS, so interconnected with other content in the training of nurses. For addressing crosscutting issues, curricular proposals bring also that, active education methods should adopted to promote the dialogical reflection, so that the crosscutting is not a disordered activity and no intentionality. (18).

Even on this perspective of teaching by means of cross-cutting issues, considered current in terms of pedagogical models, some teachers interviewed still argued that the theme should have a specific time in some module, working the bases of IRAS, IH, hospital infection control Committee (CCIH) and epidemiological surveillance. They feel the need of the subject worked with greater intent:

I think you have to have a module specifically in the back with the IH, with intentionality. In addition, each in your specific module will bringing [...] but he has to have a base, without base, he cannot handle. (14B)

At the beginning of the curriculum was a module that was just of IH. Was separated, had a whole sequence of activities, so in this module we worked the issue, importance and role of HICC, the role of the nurse, the most common microorganisms of the hospital area, they saw a patient with infection, because that's all problematic, it was very tasty, I realized that they were learning more. (11C)

We can observe that some teachers showed contradictions in relation to the education IRAS to cross way in integrated curriculum, when suggest a specific module for the teaching of the subject. This demonstrates some inconsistency with the educational proposal of the integrated curriculum itself. This aims to train nurses and General Citizens, use of interdisciplinary, the
theory and practice of the integration of teaching, and community service, based on a critical-reflexive pedagogical political design, significant learning, active methodologies, in formative assessment and the development of crosscutting issues. The latter are understood as dynamic themes of academic activities, with appropriate approaches to specific contents in different modules. Therefore, there is no consistency in this proposal, the creation of a specific module for any particular subject.

This result may be related to more traditional models of teaching, in which teachers focus on the idea of the curricular structure for disciplines, based often on own pedagogical culture experienced before the integrated curriculum.

When knowledge is fragmented into disciplines often prevents that the bond between the parts and the whole. The form of teaching should replace by a mode of knowledge capable of grasping objects in your context, your complexity, your set. Fragmented and poorly articulated, subjects in which the teacher is the holder of the knowledge that transmitted to the student, who is only a taxpayer of this teaching, make it difficult for them to acquire the necessary knowledge for vocational training.

Thus, it is necessary to reflect on education with a vision of wholeness, to go back to the fragmentation and disciplining of vocational education, understanding life in all its aspects.

According to the national curriculum, Parameters the crosscutting issues should be defined with the social context in which the course is inserted. We note that the theme for your IRAS, complexity and importance now, has become as a crosscutting issue. We argue that such insertion is performed in reality under study, as well as we recommend that schools of nursing, even with traditional curriculum proposals, reflect on this possibility, given your social relevance.

We noticed a real concern of the teachers interviewed in how to work the theme education IRAS in the integrated curriculum. It is known that, as early as the students develop their knowledge, may be more qualified and committed as future professionals.

Added to these reflections we add that, often, professionals who assigned to the control and prevention of IRAS named for that function, without proper training and preparation for this area, starting from personal needs to search for specialization courses and to develop the necessary skills to this job.

Edgar Morin defends the teaching to the uncertainty opposing the dimension that favors the development of order and certainty. For him, the order and sure bring partial visions, reductionist, deterministic and objective. The uncertainty principle is integrated in the life of human beings, the acquisition of uncertainty is one of the greatest achievements of consciousness, by which the human adventure, since your beginnings were unknown. Reflecting on this principle, we can dare to say that in reality, even if follow-up uncertain and difficult has made possible spaces for learning achievements of students and teachers.

We reiterate that it is necessary to include the subject in a systematic way study, for the student in your academic training, be able to act in a responsible manner and committed, with adherence to prevention and control measures of IRAS in different health services. These achievements can experienced in other curricular that seek to develop the IRAS as crosscutting theme.

**FINAL CONSIDERATIONS**

We observed that the teachers of nursing presented IRAS interfaces related to health in working environment, valuing the specificity of the subject in which they are experts. On the scope that IRAS exercises in the area of health, it is necessary that the professionals to establish a dynamic inter-relation between the various contents of healthcare study with the IRAS, approaching a complex view on the topic.

The Faculty coordinators considered the theme under study as a relevant content and that should taught with greater emphasis on undergraduate studies in nursing. Teachers argued that the IRAS should considered as a crosscutting issue in the curricula of nursing.

On this challenge to be the theme in transversal theme of IRAS way systematized, pegged to specific performance to be achieved by students, we suggest that teachers of nursing participate in moments of permanent education and develop in their educational practices...
actions of effective teaching and learning along with the students, trying to train professionals committed to the prevention and control measures of IRAS and with the quality of assistance to users.

INFEÇÕES RELACIONADAS À ASSISTÊNCIA À SAÚDE COMO TEMA TRANSVERSAL NA FORMAÇÃO DO ENFERMEIRO

RESUMO
Este estudo teve como objetivo analisar o conceito das Infecções relacionadas a assistência à saúde e sua relevância na formação do enfermeiro, na perspectiva dos docentes coordenadores de módulos de um curso de enfermagem. Trata-se de uma pesquisa descritiva qualitativa, realizada por meio de entrevistas semiestruturadas com 19 docentes em 2012. Para análise dos dados utilizou-se a análise de conteúdo temática. E, para a discussão utilizou corpo de conhecimento específico do tema e premissas teóricas do Pensamento Complexo, formulado por Edgar Morin. Os professores conceituaram infecções relacionando-as ao ambiente, materiais e equipamentos, aos profissionais, aos pacientes e à antibiótoterapia. Relataram a relevância do tema ser abordado de forma transversal na formação do enfermeiro. Conclui-se que é um desafio para os docentes de enfermagem a inserção do tema na prática educativa, incorporada à avaliação de desempenhos a serem atingidos pelos estudantes, buscando a formação de um enfermeiro competente e comprometido com a prevenção e o controle de infecções relacionadas à assistência à saúde.

Palavras-chave: Infecção, Serviços de saúde, Currículo, Educação em enfermagem.

INFECCIONES RELACIONADAS CON EL CUIDADO DE LA SALUD: COMO TEMA TRANSVERSAL DE LA FORMACIÓN DE LAS ENFERMERAS

RESUMEN
Este estudio tuvo como objetivo conocer el concepto de infecciones relacionadas con la atención de salud y su relevancia en la formación de enfermería, en perspectiva para los coordinadores de los módulos de un plan de estudios integrado de enfermería de enseñanza básica. Se trata de un estudio descriptivo cualitativo, realizado a través de entrevistas semiestruturadas con 19 maestros en el año 2012. Para el análisis de datos utilizado el análisis de contenido temático. Y para la discusión utilizó cuerpo específico de conocimientos de los locales sujetos y teóricos del pensamiento complejo de Edgar Morin. Los docentes conceptualizaron infecciones relacionadas al ambiente, materiales y equipos, profesionales, los pacientes y el tratamiento con antibióticos. Informó la relevancia del tema a tratar de forma generalizada en la educación de enfermería. Uno se da cuenta de que es un reto para los docentes de enfermería la inclusión del tema en la práctica educativa, la evaluación del desempeño corporativo a alcanzar por los estudiantes que buscan la formación de unas infecciones asociadas a la atención competente y comprometido con la enfermera de control de infecciones y prevención la salud.


REFERENCES

Corresponding author: Suellen Karina de Oliveira Giroti Rua: Alexander Graham Bell, 679 apto 202, Bloco D. CEP: 86063- 250, Londrina – Paraná. Telefone: 43- 30242680/ 43- 88029171. E-mail: suellenkarina@hotmail.com

Submitted: 14/09/2016
Accepted: 22/12/2016