



INTEGRATION OF HEALTH CARE SERVICES AND TEACHING: A PROPOSAL FOR THE INSERTION OF NURSING STUDENTS IN TUBERCULOSIS CONTROL

INTEGRAÇÃO ENSINO-SERVIÇO: UMA PROPOSTA DE INSERÇÃO DO ESTUDANTE DE ENFERMAGEM NO CONTROLE DA TUBERCULOSE

LA INTEGRACIÓN DE LOS SERVICIOS DE ATENCIÓN DE LA SALUD Y LA ENSEÑANZA: UNA PROPUESTA PARA LA INSERCIÓN DE LOS ESTUDIANTES DE ENFERMERÍA EN EL CONTROL DE LA TUBERCULOSIS

Wendel Felix¹, Waldênia Rodrigues Gomes², Luiz Almeida da Silva³, Rita de Cássia de Marchi Barcellos Dalri⁴, Sebastião Elias Silveira⁵, Maria Lúcia do Carmo Cruz Robazzi⁶

ABSTRACT

Objective: to understand the importance of the agent, student nurses in implementing specific measures to control tuberculosis during internships at the Family Health Units. **Method:** literature review, for the period from 2000 to 2010, performing electronic search using pre-determined keywords - Nursing, Tuberculosis and students in the library and in-Brazil SciELO LILACS and MEDLINE for indexed articles. **Results:** after fulfilling the inclusion criteria, 7 items are accounted for, 2 in LILACS, SciELO and 2 in 3 in MEDLINE. The importance of nursing students in the implementation of specific actions in tuberculosis control is a topic poorly discussed in the literature. There is greater concern about the risk of TB transmission among health students and the main objectives of these studies are assessing whether students in health care have knowledge about the means of transmission and prevention of disease and also to highlight the infection rate tuberculosis among students and provide guidance such as environmental and administrative control. **Conclusion:** although internship is a training ground for future professionals, unfortunately, many times, this only fulfills a curriculum requirement. However, it is necessary that the student is integrated into health services so that in this way, they can build their knowledge and, consequently, their contribution to the needs of service users (carriers of the disease) and the institution. **Descriptors:** nursing, tuberculosis, student.

RESUMO

Objetivo: compreender a importância do ator, estudante de enfermagem, na implementação de ações específicas no controle da tuberculose, durante o estágio em Unidades de Saúde da Família. **Método:** revisão integrativa da literatura, referente aos anos de 2000 a 2010, realizada no período de janeiro a junho de 2011, utilizando os descritores enfermagem, tuberculose, estudantes / nursing; tuberculosis, students, pelo acesso a SciELO Brasil - (Scientific Electronic Library Online) à base LILACS - (Literatura Latino Americana e do Caribe em Ciências da Saúde) e à base MEDLINE - (Literatura Internacional em Ciências da Saúde). **Resultados:** contabilizaram-se sete artigos, sendo dois na LILACS, dois na base SciELO e três na MEDLINE. A importância do discente de enfermagem na implementação de ações específicas no controle da tuberculose é um tema escassamente discutido na literatura. Há maior preocupação a respeito do risco de contágio de TB entre estudantes da saúde e os objetivos principais desses estudos são avaliar se estudantes universitários da área da saúde têm conhecimento dos meios de transmissão e de prevenção da doença como também, evidenciar o índice de infecção tuberculosa entre os estudantes, além de fornecer orientações tais como controle administrativo e ambiental. **Conclusão:** embora, o estágio seja um campo formador de futuros profissionais infelizmente, muitas vezes, este cumpre apenas uma exigência curricular. **Descritores:** enfermagem; tuberculose; estudante.

RESUMEN

Objetivo: comprender la importancia de los actores, estudiantes de enfermería en la aplicación de medidas específicas para controlar la tuberculosis en la etapa de las Unidades de Salud Familiar. **Método:** revisión de la literatura, para el período 2000 a 2010, la realización de la búsqueda electrónica mediante palabras clave predeterminadas - Enfermería, la Tuberculosis y estudiantes en la biblioteca y en Brasil, SciELO y LILACS, MEDLINE de artículos indexados. **Resultados:** después de cumplir con los criterios de inclusión, se contabilizan 7 entradas, 2 en LILACS, SciELO y 2 de 3 en MEDLINE. La importancia de los estudiantes de enfermería en la ejecución de acciones específicas en el control de la tuberculosis es un tema poco tratado en la literatura. Hay una mayor preocupación por el riesgo de transmisión de la tuberculosis entre los estudiantes de la salud y los principales objetivos de estos estudios están evaluando si los estudiantes han cuidado de la salud de los medios de transmisión y prevención de la enfermedad sino también para resaltar la tasa de infección tuberculosis entre los estudiantes y proporcionar orientación, como el control medioambiental y administrativo. **Conclusión:** aunque el escenario es un campo de entrenamiento profesional en el futuro, lamentablemente, muchas veces, esto sólo se cumple con un requisito curricular. Sin embargo, es necesario que el alumno se integra en los servicios de salud de esta manera, la construcción se puede producir en su conocimiento y consecuentemente, la contribución a las necesidades de los usuarios del servicio (portadores de la enfermedad) y la institución. **Descritores:** enfermería, la tuberculosis, los estudiantes.

¹Nurse. Master's degree student of the Post-Graduate Program in Geography - Federal University of Uberlândia. Uberlândia-MG, Brazil. E-mail: wendelfelix@yahoo.com.br; ²Nurse. Professor of the Bachelor in Nursing Course of the University Centre of Triângulo - UNITRI. Uberlândia - MG, Brazil. E-mail: waldenia@netsite.com.br; ³Nurse. PHD student of the Programme of Fundamental Nursing, Ribeirão Preto School of Nursing, Federal University of São Paulo EERP-USP. Ribeirão Preto - SP, Brazil. E-mail: enferluiz@yahoo.com.br; ⁴Nurse. PHD student of the Program of Fundamental Nursing, Ribeirão Preto School of Nursing, Federal University of São Paulo EERP-USP. Ribeirão Preto - SP, Brazil. E-mail: ritacmbdalri@bol.com.br; ⁵Nurse. Master in Health Geography. Nurse of the Intensive Care Unit of Hospital das Clínicas of Uberlândia - MG. E-mail: tiao_enf@yahoo.com.br; ⁶Nurse. PHD in Nursing. Professor of the Ribeirão Preto School of Nursing, Federal University of São Paulo EERP-USP. Ribeirão Preto - SP, Brazil. E-mail: avrlmccr@eerp.usp.br

INTRODUCTION

Public policies have been created to promote the connection between teaching and service, as it is necessary to build a privileged space for reflection on the reality of the production of health care and the need to transform the current healthcare model. This transformation assumes teamwork, that is, the collective work of students and professors of health graduation courses with workers (public administrators, doctors, nurses, health workers and community leaders) who compose the health service teams, so that the solvability of detected health problems can be improved. It is also in this space that the students have the opportunity to experience day-to-day practice in the Integrated Health System - SUS - and thereby increase their interest in a more humanised practice.¹

The lack of health professionals, especially nurses, trained to work in a model that values aspects of health promotion and prevention, to offer systematic assistance to individuals with pulmonary tuberculosis (TB) and also people who they come in contact with, has been a major obstacle in the control of disease transmission. This happens because the workers who have already entered and were adapted to the health system's ways of working before the SUS don't have specific training for this service. Training cannot only take education for technical-scientific enhancement as a reference, but should contribute to raising the quality of the population's health.¹

In Brazil, there is a long history of fighting against TB, which has always had the dedication and commitment of health professionals, scholars and researchers, all selfless and enthusiasts in the opportunity to rid the population of a disease that, if treated, can be healed. Health professionals, especially nurses, have much to offer in systematic assistance to TB patients. It's up to them to assist patients and help them to complete their treatment successfully; therefore, there is an urgent need for their assistance within units operating in TB control. However, the epidemiological situation of the disease is critical, which is mainly due to poor identification of symptomatic respiratory patients (SRPs) by the Basic Health Units (UBS), lack of patient adherence to treatment, and consequently, a high dropout rate. Thus, special attention is also required from scholars during their health care training. It is essential that the student is

integrated into health services, and in this way can contribute to assisting with the disease and with the possible implementation of strategies and mechanisms for cooperation between service providers (professionals and health services) and academia - each of these agents observing the specificity of their responsibilities and roles, in order to contribute to the increase in the detection of new cases of TB, to the increase in the healing rate and to the dropout reduction.²

According to the article "The resurgence of TB and impact of the study of pulmonary immunopathogenesis"³, TB has always been a problem among us, since it was not eradicated like smallpox. As stated by the authors, only developed countries were on the way to eradicating the disease. However, rates of TB returned to growing worldwide due to several factors, including migration, urbanisation, impoverishment, personal shortcomings, drug addictions (especially alcohol), lack of social assistance, extreme poverty, the growth of shantytowns and the pandemic of Acquired Immunodeficiency Syndrome (AIDS). TB is not just a result of economic and social problems; it can also be an aggravating or even the generating factor, establishing a vicious circle in which the TB itself is one of the smallest problems.

The World Health Organisation (WHO) estimates that one third of world population is infected with TB and that about nine million new cases appear each year. Even in Europe it is thought that 49 new TB cases and seven deaths occur each hour⁴. In Brazil, the goal of curing 85% of TB cases has not yet been achieved, and this country occupies 16th place in the 22 countries with the highest disease burden world ranking, behind India, Congo and China. WHO also points to the need for the country to move forward on improving case reporting and also in the strategy of supervised treatment, as the abandonment of treatment contributes to the disease's progression.

In order to improve these indicators, the WHO proposed the Directly Observed Treatment Short-course (DOTS) in 1993, an intervention proposal that increases the patients' cure probability by guaranteed assisted treatment, contributing to the interruption of disease's transmission. It is a strategy for TB control internationally recommended to cure patients, save lives, reduce transmission and prevent the emergence and spread of Multidrug-resistant tuberculosis (MDR-TB). According to the World Health Organization, this strategy consists of

five components: case detection through quality-assured bacteriology on symptomatic respiratory patients who seek public health services; standardised short-term treatment, directly observed and monitored in its evolution; an effective drug supply and recording and reporting system that ensures the evaluation of treatment; political commitment with increased and sustained financing, considering TB control as a priority among health policies.⁴

The National TB Control Programme (PNCT) was created in Brazil with the main objective of promoting TB control, meeting global targets for the disease's control, i.e. to identify at least 70% of TB estimated cases annually and cure at least 85% of these⁵. The state of Minas Gerais has had an Action Plan for TB Control Programme since 2005 which establishes greater integration of the State Health Department with the municipalities and major educational and health promotion actions⁶. These actions include the promotion of healthy behaviour, supervised treatment, investigation of contacts, financial incentives, educational materials such as pamphlets and brochures, training of health professionals involved in prevention, diagnosis and treatment techniques and integration of service systems with other social and economic systems to promote the development of better collective and individual health.⁶

The Brazilian Constitution of 1988 states that health rights must be guaranteed by public policies that target not only the reduction of harm and disease risk, but also universal and egalitarian assistance, principles included in the national policy guidelines for primary or basic health care, a denomination used in recent publications of the Ministry of Health

According to the Ministry of Health, the general principles that guide the Basic Health Care are characterised by individual and collective health actions, which include the promotion and protection of health, disease prevention, diagnosis, treatment, rehabilitation and maintenance of health. These actions are developed through management and health participatory democratic practices, which include teamwork targeted towards the populations of well-defined territories. Furthermore, these actions are guided by the principles of universality, accessibility and coordination of care, bond and continuity, integrity, accountability, humanisation, equity and social participation.⁷

The implementation of the national policy on Basic Health Care used the strategy of the Family Health Programme (PSF), adopted in order to reorient the health care model. The Program uses a team of doctors, nurses, nurse technicians and community health workers and seeks community involvement in an integral and continuous way. The activities are focused on primary care, such as the Child Health Action, Action for Women's Health, Hypertension Control, Diabetes Mellitus Control and TB Control.⁷

Within the TB Control actions, the following activities can be undertaken: active search of cases; case reporting, clinical diagnosis of cases; access to laboratory and radiology tests for diagnosis and control; patient registration; treatment of cases of smear-positive pulmonary tuberculosis (BK+) (supervised) and BK (self-administered) Identification of Symptomatic Respiratory patients (SRPs); clinical examination of SRPs and people who they come in contact with; realisation or reference for bacteriology; realisation or reference to radiological examination in smear-negative (BK-) SRPs; input and analysis of information systems; supervised treatment of BK+ cases; self-administered treatment of BK- cases; effective drug supply; assistance with complications; search for drop-out patients; Bacille Calmette Guérin - BCG vaccination; search for people whom SRPs come in contact with; treatment of latent infection; educative actions.⁷

Hence, the following was elected as a guiding question of this study: what contribution can nursing students make to TB control?

The objective was to understand the importance of the actor, the nursing student in the training field, in the implementation of specific actions for TB control in the Family Health Units, thus contributing directly to the needs of service users and of the institution.

METHODOLOGY

This is an integrative literature review study, targeting the use of innovative or proactive strategies or measures in the assistance to chronic diseases such as TB. The logical framework of the study is based on the concept of care and control. The article search was conducted from January to June 2011 using the descriptors present in DeCS: 'enfermagem' (Portuguese for 'nursing'), 'tuberculose' (Portuguese for 'tuberculosis'), 'students/nursing', 'tuberculosis' and 'students', through access to the SciELO Brazil

(Scientific Electronic Library Online), the LILACS (Latin American and Caribbean Health Sciences) and MEDLINE (International Literature on Health Sciences) databases. The inclusion criterion was articles found from 2000 to 2010 present in the three databases containing descriptors in the abstracts or in the keywords and were related to the study objective. Those not related to the objective of the study, although presenting some of the descriptors, were excluded.

In SciELO Brazil 476 articles were found discussing the topic TB, but only 2 articles address Nursing, TB and Students. The LILACS database contains 4,808 articles whose main subject is TB, but only 2 met the objectives.

As for the MEDLINE database, 38 references that discuss the topic were found; however, only 3 papers were available for free reading in full. They were published in Portuguese, English and Spanish. In addition to these databases, the Brazilian Ministry of Health and the World Health Organisation - WHO websites were used as additional research sources, in order to enhance the theoretical basis.

RESULTS

Seven articles were analysed after the application of inclusion and exclusion criteria, which have as its main theme Nursing, Tuberculosis and Students. These articles were distributed as follows:

Author	Title	Journal	Year
SciELO			
Coelho MAQ, et al	Prevalência da infecção tuberculosa em universitários da Universidade Estadual de Montes Claros, Minas Gerais	Rev bras educ med.	2009
Maciel ELN, Viana MC, Zeitoune RCG, Ferreira I, Fregonan G, Dietzel R.	Prevalence and incidence of <i>Mycobacterium tuberculosis</i> infection in nursing students in Vitória, Espírito Santo	Rev Soc Bras Med Trop.	2005
LILACS			
Moreira Mac, Nápole RG, Silva VN.	Perfil da resposta à prova tuberculínica em estudantes de enfermagem	Rev enferm UERJ.	2007
Malveira EAP, Griep RH, Cardoso, CF.	Explorando conhecimentos, práticas e atitudes de alunos de graduação em enfermagem de uma universidade pública em relação à prevenção da disseminação da tuberculose	Esc Anna Nery Rev Enferm.	2002
MEDLINE			
Maciel EL, Meireles W, Silva AP, Fiorotti K, Dietze R.	Nosocomial <i>Mycobacterium tuberculosis</i> transmission among healthcare students in a high incidence region, in Vitória, State of Espírito Santo	Rev Soc Bras Med Trop.	2007
Joshi R, Reingold AL, Menzies D, Pai M.	Tuberculosis among health-care workers in low- and middle-income countries: a systematic review.	PLoS Med.	2006
Arbeláez MP, Ocampo MC, Montoya J, Jaramillo LM, Giraldo PM, Maldonado A, et al.	Evaluación de la respuesta a la tuberculina en estudiantes del área de la salud.	Rev Panam Salud Publica.	2000

Figure 1. Distribution of articles on health students and tuberculosis published in the databases SciELO, LILACS and MEDLINE, as some of its characteristics, from 2000 to 2010.

Reading the articles demonstrated that the importance of nursing students in the implementation of specific actions for TB control is a rarely discussed topic in the literature, as the biggest concern is the risk of TB transmission among health students. Therefore, the main objectives of these studies are assessing health care students' knowledge about the disease's means of transmission and prevention and showing the tuberculosis infection rate among health students, as well as providing guidance such as: effective training of health professionals, early diagnosis, infection risk assessment, patient education, evaluation of hospital infection control programmes, environmental controls such as increased natural ventilation, mechanical ventilation, ultraviolet radiation, germicidal, light and cleaning of air conditioning, and personal respiratory protection like the use of filter masks.⁸

According to the analysed articles, although

health professionals, especially nurses, are directly involved in caring for patients with TB, there is still a lack of knowledge on the part of many of these professionals about TB's control and prevention, and because of this, the nursing student as an intern in hospitals and UBS also becomes susceptible to contamination by the *Mycobacterium tuberculosis* (MT) bacillus, the TB agent.⁹

Therefore, one can observe that none of the analysed articles focused on the contribution of nursing students in the training field to the needs of service users and of the institution, but rather emphasised the lack of basic knowledge about the disease.⁹

DISCUSSION

With the health reform movement in the late 1970s, health services faced two problems in the area of human resources. Firstly, the inadequate profile of health care workers that were being trained and

incorporated into the SUS, and secondly, the problem related to the skills of workers already inserted and adapted to the health system's ways of working prior to the SUS, meaning they were used to an organisation focused on the physician and the disease, as many including several nursing staff had no specific training for the new approach.¹⁰

This way, several strategies were adopted to face these challenges, such as the partnership of health services with educational institutions in order to train health workers. In Brazil, in the 1950s, the work of teachers and students in in universities' health care services was already part of Teaching-Service Integration programmes. However, it was only after the recommendation of the Ministry of Labour and Social Security that this expression was taken in the early 1970s. Law 8080/90, Article 14, addressed later the need for training of human resources for the SUS and for health services, thereby considering the importance of human resources for achieving a quality health system.¹⁰

• Teaching-service Integration and its impact on student education

The teaching-service integration strategy can be understood as collective work between students and training courses teachers with health workers that make up the teams of health services, including managers, aiming at the quality of individual and collective care, the quality of human resources training and the continuous development of health professionals, as well as the satisfaction of health service workers.¹¹

Teaching-service integration is a strategy that can cooperate with health care development; as the University is the place where new knowledge is constructed, professionals (teachers) and students can be helpful in the dissemination of scientific knowledge, in improving care practices and in the development of new technologies, consequently promoting the qualification of the service and directly benefiting the population served.

The areas where dialogue between work and education takes place are a privileged place for the perception that the student will develop about those in daily care. They are spaces of citizenship, where service professionals and teachers, users and students, will establish their own social roles in the confluence of their knowledge, ways of living and seeing the world. On the other hand, the university also benefits, as the proximity of the theoretical-academic context

with the practical-professional one, during internships, give students the ability to insert themselves into assistance activities, providing opportunities for learning spaces and theoretical and practical knowledge exchange.¹¹

In this perspective, regarding TB treatment, all PSF workers should be included, in addition to students, families and communities, giving them proper training so that they contribute with assistance in those places where the number of health professionals is not sufficient to monitor the treatment, this way increasing the network of supervised care.¹²

On 7 November 2001, the National Education Council (CNE) established the Nursing National Curriculum Guidelines (DCN), which aim to define the principles, fundamentals, conditions and procedures of nursing formation, providing Higher Education Institutions (IES) the direction for the installation and implementation of political-pedagogical projects. The DCN cannot be regarded as unique determinants, since each IES is surrounded by its own socio-political and cultural environment and therefore requires innovative ways of knowing, acting and existing, i.e. there is an autonomy to build a pedagogical model capable of adapting to the dynamics of social needs and also to ensure flexibility, diversity and quality of the training offered to students, in which graduation is the initial step in the process permanent education.¹³

The resolutions established in the DCN for the bachelor in Nursing course address the profile of the graduate/professional (art. 3), general and specific competences and skills for nursing education (art. 4 and 5 respectively), the essential elements for the course (art. 6), the mandatory supervised internship (art. 7) and complementary activities (art. 8).¹³

As for the training of the graduate/professional, the CNE recommends that its objective should be: to provide the professional knowledge required for the profession, based on scientific and intellectual rigor and on ethical principles; to ensure comprehensive care with emphasis on the SUS; and to offer a generalist, humanistic, critical and reflective education. The document also reinforces the need for professionals who are able to understand the more prevalent problems/situations of health and disease in the national epidemiological profile and in their region, to identify the dimensions of bio-psycho-social needs of its determinants and to be able to intervene,

confirming the need for commitment to citizenship and social responsibility that professionals should take as health promoters.¹⁴

When analysing art. 3 of the DCN for Nursing, a concern with the building of knowledge can be noticed, which must be founded on scientific and intellectual principles, besides aiming for a generalist, critical and reflective education. According to this proposal, the nurse must be a person open to the world and able to pursue continuous learning, to assuming the rights of freedom and citizenship, to understanding trends in today's world and the country's development necessities. Therefore, health professionals must learn how to learn, that is, to seek the increase of knowledge in its different aspects and also have responsibility and commitment to education and training/internship for future generations of professionals, so there is mutual benefit and promotion of both academic and professional qualification.

A second issue addressed in the DCN is learning how to act, which embraces equally the scientific, technical and socio-evaluative aspects. The graduate/professional should know and be able to intervene in the more prevalent health and disease problems/situations in the national epidemiological profile, with emphasis on their region. The student must also be trained to work with a sense of social responsibility and commitment to citizenship, as a promoter the human being's integral health. They must also respond to regional hygiene specificities through strategically planned interventions on levels of promotion, prevention and rehabilitation of health, giving full attention to the health of individuals, families and communities.¹⁴

Learning 'to act' means more than just empowering someone to perform a certain task. It involves certain skills and abilities that can ensure comprehensive care, prevention, promotion, protection and rehabilitation health actions, individual and collective, required for each case at all levels of system's complexity.¹⁵

On the other hand, there should be a concern with a training model based simply on the reproduction of knowledge, based on an instrumental didactic, i.e. on a reductionist neo-technicism, which can mean the devaluation of the intellectual knowledge so necessary to student's education.¹⁶

The third topic discussed, learning to exist

and live together, comprise a humanist, ethical education committed to the social aspect and citizenship. Nursing education should be democratic, pluralist, open, critical, and above all, sensitive and responsive to cultural differences and individual needs, so that future professionals can have an emancipated vision on all socio-cultural problems, this way acting as a facilitator in building more democratic and solidary societies. Paulo Freire's pedagogy sees the teacher as a constructing subject who learns, builds and is being built in their interaction with students.¹⁷

The nurse, in the same way, is also under construction, who by dealing with others build their professional identity and learn from and through experience to solve problems, not only from theories, which cannot be overlooked, but by making use of these theories and thoughts on building themselves as political and transforming subjects.

As can be seen, the significance of education as a social process goes beyond formal education, i.e. the simple technical instruction, as the development of specific skills does not encompass the complexity of scientific knowledge or the complexity of the work of these professionals. It takes a critical formation theoretically founded and legitimised according to the social reality in which the education is based to be able to generate and achieve desired changes according to transformations in the political, economic, social aspects of education and health in Brazil and in the world.¹⁶

The DCNs are intended to enable the graduating students addressing rapidly-changing knowledge and its reflections in the working world by proposing learning based on knowledge, scientific evidence and problem solving, while also being community oriented.

Regarding the development of the nursing student as a future professional responsible for the actions of TB control in the PSF, according to three themes present in the DCN related to TB control (learning to know, learning to act and learning to exist and living together), it can be noticed that the graduates do not, during the internship in the health unit, exercise the knowledge, skills, abilities, prevention, promotion, protection and rehabilitation actions, whether on individual or collective levels, proposed in the lectures. Therefore, it is necessary to broaden the discussion of the importance of compliance with Article 14 of Law 8080/90 so that there is real integration of academics with health services, thus allowing the

students' contribution to the continuing education of professionals who are providing the services and then implementing specific actions for TB control in PSF Units.

Internship is a field of knowledge training for future professionals, and is therefore an integral part of curriculum design. The reflection that occurs in the classroom on professional practice is insufficient for an ethical and political education filled with scientific and educational knowledge, creativity and sensitivity. Therefore, internship has the following objectives: guiding the student in a theoretical and practical training; broadening the understanding of social reality and corroborating possible changes; enabling the realisation of joint projects between the educational institution and the institution where the internship takes place, and providing the students with training opportunities to review and enhance their choice of service, as well as providing a reflection on the importance of the acquisition of ethical values in their education and the manifestation of these values in all areas of human activity, especially as professionals.¹⁶ However, in order to make those actions possible, it is important to build a partnership between the Municipal Health Secretaries and Education Institutions that form health professionals, especially universities and learning centres, which should point to new paths and demonstrate, through research, the effectiveness of PCT and its problems, be they of the administrative or the care (diagnostic, treatment or treatment compliance) order.

The health services should support the Institutions that train human resources for health care by providing qualified human resources for research in the area. It is also necessary that the teacher feels welcomed by the institution where the internship takes place, as they usually are the ones promoting the dialogue between the student-institution-health service user triangle. Without the teacher, the possibility of student interference in the work process is hindered, in the care organisation and in the process of developing such new professionals. A close collaboration between these groups will enable the promotion of teamwork and thus reduce disputes over power and knowledge between those components.¹⁸

It is in this context that a discussion is proposed about the role of the nursing student in the transformation of teaching practices, and, consequently, in the practice of

professionals in the articulation of prevention, promotion, protection and restoration of health at both individual and collective levels according to the rules of the PNCT, and all activities will be significant in their training as professional nurses, especially in the Basic Health Units. These programmatic actions must be based on the assumptions of comprehensive health care and must rely on the monitoring and supervision of teachers and in the partnership with health service workers.

Dessa forma, os acadêmicos de enfermagem construirão o seu conhecimento a partir da realidade vivenciada pelos usuários dos serviços de saúde do SUS e, ao executar o cuidado dentro de uma visão integral, obterão uma formação crítica e reflexiva.

This way, the nursing students will build their knowledge from the reality experienced by SUS health services' users and by carrying out care within a comprehensive vision, will gain a critical and reflective education.

FINAL CONSIDERATIONS

Internship is field training for future professionals, but unfortunately this often only fulfils a curriculum requirement, distancing from a model that advocates the encouragement of active learning, centred on the student as the subject of learning and the teacher as facilitator and mediator of this teaching and learning process. Therefore, close coordination aiming at the transformation of professional practices and work organisation may alleviate the various problems that have prevented the realisation of more effective actions for TB control.

The integration of teaching and service is a practice committed to the building of knowledge both for the health professional and the academic, since there is the mission of acting in the service production, and concern about identifying service needs and establishing teacher/student contribution pacts for such services.

Education is undoubtedly a powerful tool to correct the differences between the orientation of the training of health professionals and SUS principles, guidelines and requirements. It is therefore necessary to create public actions aimed at changing the profile of future health workers, with strategies and policies of training and development of professionals built on the light of the public health system principles and guidelines. It is essential that the student is integrated with health services, and this

way can contribute to the needs of service users (people with the disease) and the institution, in order to collaborate to raise the detection of new TB cases, to increase the cure rate and to reduce the dropout rate, consequently reducing morbidity and mortality TB indicators.

REFERENCES

1. Ceccim RB, Feuerwerker LCM. O quadrilátero da formação para a área da saúde: ensino, gestão, atenção e controle social. *Physis*. 2004; 14(1):41-65.
2. Salviato DT, Pagliari J, Carvalho M, Mateus PR. A extensão como proposta de integração e ensino-serviço em saúde coletiva. *Seminário Nacional - Estado e Políticas Sociais no Brasil*. 2003 June 26-8; Cascavel - PR, UNIOESTE; 2003. 1-9.
3. Lapa e Silva JR, Boéchat N. O ressurgimento da tuberculose e o impacto do estudo da imunopatogenia pulmonar. *J bras pneumol*. 2004;30(4):388-94.
4. World Health Organization. Community involvement in tuberculosis care and prevention: Guiding principles and recommendations based on a WHO review. WHO, 2008; 83p.
5. Brasil. Ministério da Saúde. Fundação Nacional de Saúde. Centro Nacional de Epidemiologia. Coordenação Nacional de Pneumologia Sanitária. Plano nacional de controle da tuberculose. Brasília; 1999.
6. Minas Gerais. Secretaria de Estado de Saúde. Atenção à Saúde do Adulto: tuberculose. Belo Horizonte: Secretaria do Estado de Saúde Minas gerais; 2006.
7. Brasil. Ministério da Saúde. Política Nacional de Atenção Básica. 4th ed. Brasília (DF): Ministério da Saúde; 2007.
8. Coelho MAQ, Biscotto CR, Tinois BR, Freitas FC, Oliveira JS, Azevedo MF, et al. Prevalência da infecção tuberculosa em universitários da Universidade Estadual de Montes Claros, Minas Gerais. *Rev bras educ méd [Internet]*. 2009 [cited 2011 July 12];33(4):535-41. Available from: <http://www.scielo.br/pdf/rbem/v33n4/v33n4a04.pdf>.
9. Moreira MAC, Nápole RG, Silva VN. Perfil da resposta à prova tuberculínica em estudantes de enfermagem. *Rev enferm UERJ*. 2007;15(3):387-92.
10. Brasil. Congresso Nacional. Lei Orgânica da Saúde [Internet]. Lei n° 8.080, de 19 de setembro de 1990 [cited 2011 July 8]. Available from: <http://www.scielo.br/pdf/rbem/v33n4/v33n4a04.pdf>.
11. Albuquerque VS, Gomes AP, Rezende CHA, Sampaio MX, Dias OV, Lugarinho RM. A integração ensino-serviço no contexto dos processos de mudança na formação superior dos profissionais da saúde. *Rev bras educ méd*. 2008;32(3):356-62.
12. Nogueira JÁ, Silva CA, Trigueiro DRSG, Trigueiro JVS, Almeida AS, Sá LD, et al. A formação de profissionais de saúde na atenção a tb: desafios e contradições da prática. *Rev enferm UFPE on line [Internet]*. 2011 June [cited 2011 Sept 04];5(4):778-87. Available from: http://www.ufpe.br/revistaenfermagem/index.php/revista/article/view/1323/pdf_498.
13. Ministério da Saúde (Brasil). Secretaria de Gestão do Trabalho e da Educação em Saúde. Aprender SUS: o SUS e as mudanças na graduação. Brasília: Ministério da Saúde; 2004.
14. Brasil [Internet]. Ministério da Educação. Resolução CNE/ CES N° 3, de 7 de novembro de 2001. 2001 [updated 2011 June 20; cited 2011 June 20]. Available from: <http://www.mec.gov.br/sesu/diretriz.htm>.
15. Delors J, Al-Mufti I, Amagi I, Carneiro R, Chung F, Geremek B, et al. Educação: um tesouro a descobrir. 3th ed. São Paulo: Cortez;1999.
16. Pimenta SG, Lima MSL. Estágio e docência. São Paulo: Corte; 2004.
17. Freire P. Pedagogia da autonomia. 31th ed. São Paulo: Paz e Terra; 2005.
18. Almeida M, Feuerwerker L, Llanos M. (orgs). A educação dos profissionais de saúde na América Latina: teoria e prática de um movimento de mudança. São Paulo: Hucitec; 1999.

Sources of funding: No

Conflict of interest: No

Date of first submission: 2011/09/03

Last received: 2012/03/23

Accepted: 2012/03/24

Publishing: 2012/04/01

Corresponding Address

Luiz Almeida da Silva

Av. Imbaúba, 1400, Bl. 06, Ap. 304 Bairro

Planalto

CEP: 38413-108 – Uberlândia (MG), Brazil