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ORIGINAL ARTICLE

THE ACTIONS OF THE PROFESSIONALS OF THE FAMILY HEALTH STRATEGY IN THE DETECTION OF CHRONIC RENAL DISEASE

AÇÕES DE PROFISSIONAIS DA ESTRATÉGIA SAÚDE DA FAMÍLIA NA DETECÇÃO DA DOENÇA RENAL CRÔNICA

LAS ACCIONES DE LOS PROFESIONALES DE LA ESTRATEGIA SALUD DE LA FAMILIA EN LA DETECCIÓN DE ENFERMEDAD RENAL CRÓNICA

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ABSTRACT

Objective: to investigate the actions of physicians and nurses of the Family Health Strategy in the detection of Chronic Kidney Disease in hypertensives. ***Method:*** descriptive study of a quantitative approach. There was applied a form to 156 medical professionals and nurses of the Family Health Strategy in Teresina, Piauí. For statistical analysis of the data, we used the SPSS software version 19.0. ***Results:*** of all professionals 78% are female and 54,5% of Nursing; the training time was from nine years to 46% of physicians and 41% of nurses; about 80% of those professionals have expertise. From all nurses, 53% referred to the hypertensive at risk to the specialist. Difficulties have been identified with reference and counter-reference being one of them. ***Conclusion:*** the detection and diagnosis of chronic kidney disease in hypertensive patients still represent an obstacle to fighting the disease, making necessary the improvement of primary care shares through training courses. ***Descriptors:*** Chronic Kidney Disease; Family Health; Prevention; Primary Attention.

RESUMO

Objetivo: investigar as ações de médicos e enfermeiros da Estratégia Saúde da Família na detecção da Doença Renal Crônica em hipertensos. ***Método:*** estudo descritivo com abordagem quantitativa. Foi aplicado formulário a 156 profissionais médicos e enfermeiros da Estratégia Saúde da Família em Teresina-Piauí. Para análise estatística dos dados utilizou-se o software SPSS versão 19.0. ***Resultados:*** dos profissionais, 78% são do sexo feminino e 54,5% da Enfermagem; o tempo de formação profissional foi de nove anos para 46% dos médicos e 41% dos enfermeiros; cerca de 80% dos profissionais possuem especialização. Dos enfermeiros, 53% encaminharam o hipertenso de risco ao especialista. Foram identificadas dificuldades, sendo a referência e contrarreferência uma delas. ***Conclusão:*** a detecção e o diagnóstico da doença renal crônica no paciente hipertenso ainda representam um entrave para o enfrentamento da doença fazendo-se necessário o aprimoramento das ações da atenção básica através de cursos de capacitação. ***Descritores:*** Doença Renal Crônica; Saúde da Família; Prevenção; Atenção Primária.

RESUMEN

Objetivo: investigar las acciones de los médicos y enfermeras de la Estrategia Salud de la Familia en la detección de la Enfermedad Renal Crónica en pacientes hipertensos. ***Método:*** estudio descriptivo con un enfoque cuantitativo. Se aplicó una forma a 156 profesionales médicos y enfermeras de la Estrategia Salud de la Familia en Teresina, Piauí. Para el análisis estadístico se utilizó el programa SPSS versión 19.0. ***Resultados:*** el 78% de los profesionales son mujeres y el 54,5% de Enfermería; el tiempo de entrenamiento fue de nueve años a 46% de los médicos y el 41% de las enfermeras; aproximadamente el 80% de los profesionales tienen especialización. De los enfermeros, 53% de ellos encaminaran el hipertenso de riesgo a un especialista. Dificultades se han identificado, siendo la referencia y la contra-referencia una de ellas. ***Conclusión:*** la detección y el diagnóstico de la enfermedad renal crónica en pacientes hipertensos siguen representando un obstáculo para la lucha contra la enfermedad por lo que es necesaria la mejora de las acciones de atención primaria a través de cursos de formación. ***Descriptores:*** Enfermedad Renal Crónica; Salud de la Familia; Prevención; Primaria.

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INTRODUCTION

The Unified Health System (SUS) universalizes the access to health and reorganizes the model of Primary Health Care (PHC). In 1994 it conceived the Family Health Program (FHP), now called the Family Health Strategy (FHS). The FHS appears to democratize, proposing to transform the model centered on biological in hospital practice in a multidisciplinary health care model and collective, focusing on the family and the community. The FHS is based on the relationship between the worker and the user through the commitment to linking and co-responsibility.[1]

The model of the FHS is based on prevention, health promotion and recovery. The health team is composed of physicians and nurses who have as a goal the reorganization of assistance guided on accessibility, humanization; in full, the bond, accountability and participate in the community. The FHS constitutes the system gateway and became the central axis of SUS organization.[2-3]

Mentioning about the Chronic Noncommunicable Diseases (NCDs) by line of care is to coordinate protective actions, promotion, surveillance, prevention and care. Health services in primary care are ordained as a support network, in order to meet the most common problems of the population, to coordinate the flow and counter flow of people, goods and information of this network and to commit the health of the enrolled population in health care networks and primary care teams.[4]

Professionals, doctors and nurses should establish a comprehensive approach, a continuous and a dynamic way with people, so welcomes the actions of these need to be consistent with each other in order to effectively address community health needs.[3] Caution lines should be structuring reference for both the health care developed by professionals individually and in team and for the organization of a Family Health Unit (FHU). The care coordination process establishes a link between professionals and the public, a meeting of practices and knowledge, so the health team actions based on the coordination of care are linked and are responsible for the enrolled population.[5-6]

Understanding the organization of services in Primary Health Care (PHC), the relationship between professionals and the community is as reference point of access to all health care levels. A health team structured and organized and trained lets one tracks the disease and promotes health. The effectiveness of the actions has an important role in detecting and preventing Chronic Kidney Disease (CKD), currently a worldwide epidemic.

Chronic Kidney Disease (CKD) is a clinical syndrome due to kidney damage progresses over several months to years irreversibly being defined by reduced Glomerular Filtration Rate (GFR), i.e. when less than 60 ml/min/1,73m^2, for three months or longer with or without kidney damage (proteinuria). The CKD has five stages, according to the GFR, which allows detecting, evaluating and treating the disease (Figure 1).[7-8]

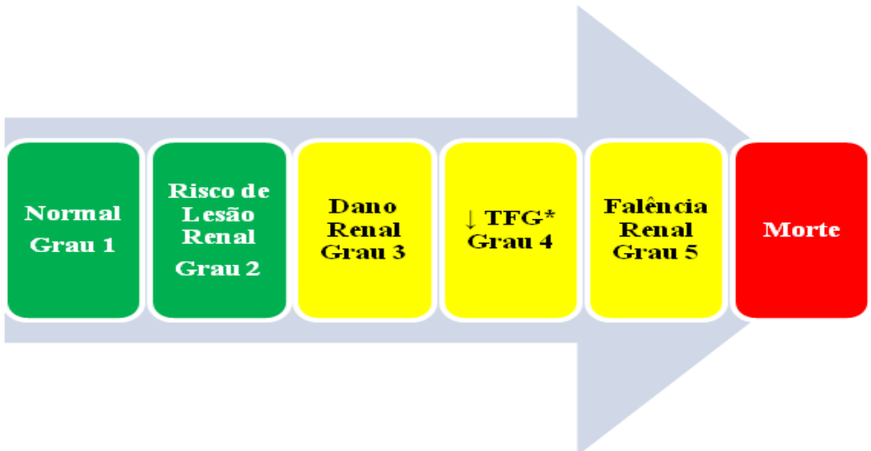

Figure 1. Stratification and progression of Chronic Kidney Disease determined by Glomerular Filtration Rate. Source: Adapted DURVASULA and HIMMELFARB, 2011.

Legend: Glomerular Filtration Rate*

CKD is a silent disease identified through simple resources, such as laboratory tests, and can be used to diagnose of CKD in its early stages. Late diagnosis results in high morbidity and mortality, requiring complex technological resources and high cost, such as Renal Replacement Therapy (RRT), dialysis.

Alarmingly the CKD impacts on global public health affecting the United States of America (USA) 13% of adults and 0,2% in dialysis or kidney transplantation. What is striking is the annual rate of 7 to 10% by extrapolating the general population growth.[9-10]

The Brazilian population, estimated at TRS, corresponds to more than 92.000 patients under chronic dialysis program; at an annual cost over 2 billion reals. However, in a laboratory data analysis revealed 2,9 million Brazilians in CKD stage 3.[11-2]

In Brazil and in the world, CKD reaches alarming proportions. Thus, it is for doctors and nurses of the FHS watch over the community and its needs. By layering risk groups for development of CKD, including hypertensive, assessment of renal function, proteinuria detection in the examination of simple urine and the use of equations to calculate the specific creatinine clearance by GFR leads to diagnosis, treatment and prevention of kidney failure at the primary care level.

The physician of the FHS team should be a generalist who meets all the family components, commit himself to the person and get involved with accountability to refer to specialties and direct access to the best care.[13] The nurse must assist people in need of their care, it is up to him to do nursing consultation detecting risk groups, patients with established disease, so knowing the staging of CKD has the role to intervene with patients and referring the individual the doctor when necessary; and develop educational health promotion activities with all the people in the community.[14]

The Ministry of Health recommends the guidelines in the Basic Care Notebooks N 14 and 15 informing on track risk groups, determine the diagnosis of CKD, prevent disease and refer to nephrologist. In the FHS are already hypertensive kidney patients in need of an entire network ordered care this way the actions of health professionals, doctors and nurses, concretized in the attention of health levels. CKD patients at an early stage must be met primary care level, with worsening renal function need to report to secondary care and late stage require tertiary level health care.[15-6]

The National Comprehensive Care Policy to Kidney Disease Carrier is a model of care and management in the renal patients should be approached holistically. It aims to prevent kidney disease, reduce the number of cases, the determinants of diseases causing renal disease, and therefore develop strategies for promoting quality of life. An important objective of this policy is the quality of care and promotion of continuing education for professionals of health involved.[17]

So it becomes important to provide the performance of health services efficiently and quality in order to establish and negotiate responsibilities, secure communication and secure transfer of care between professionals and users. Thus, this study wishes to contribute to better monitoring of kidney disease carrier.

Faced with this problem, the study aims to:

- To investigate the actions of doctors and nurses of the Family Health Strategy in the detection of Chronic Kidney Disease in hypertensive patients.

METHOD

This study is descriptive of a quantitative approach, carried out with physicians and nurses in Basic Health Units (BHU) in the city of Teresina, Piauí, in the period from November 2013 to June 2014.

The estimated total sample of 196 professionals, however, after applying the inclusion and exclusion criteria yielded a total 156 professionals, 71 doctors and 85 nurses. There were selected those who worked at least 1 year as a doctor and nurses; professionals temporarily away from work were excluded (vacation, permits, etc.).

The form was completed by researchers in the presence of the participants, which consisted of three parts: (1) identification of the socio-professional profile, consisting of objective questions about gender, age, marital status, training time, expertise and employment status; (2) knowledge of the DRC and its relation with hypertension; (3) was drawn up an open question about the possibility of early diagnosis of CKD in the FHS and what actions taken by the professionals involved in the study would contribute to facilitate this diagnosis.

After collecting the data, the following variables were organized and built a database cataloged in Microsoft Excel and then entered into the Statistical Package for the Social Sciences (SPSS) 19.0. For the treatment of the results there was used as kind of analysis the descriptive statistics, with absolute frequencies and percentages, average standard deviation presented in tables and graphs.

Concerning the open question there are listed the actions and most frequent difficulties reported by professionals as the

detection of CKD. Regarding the comparison groups used the chi-square test and Fisher exact test. Values of p < 0,05 were considered statistically significant.

RESULTS

There were interviewed 156 doctors and nurses of the FHS with a predominance of 78% female, and 54,5% nurses. The study found 51,3% of young professionals with lower age than or equal to 40 years old, with an average age of 42 and a standard deviation of +/- 12 years. There were 63% of married professionals, 76% doctors and nurses 55%.

Concerning the training time, 46% of doctors and 41% of nurses had up to 9 years. In relation to professional practice time 55% of doctors and 65% of nurses exercised activity up to 6 years. Graduated were 80% of nurses and 79% owned specialization of doctors. Regarding the bond, 75% of these professionals work in other health services (Table 1).

Table 1. Socio-professional profile of doctors and nurses from Family Health Strategy: according to gender, age, marital status, and time of formation and professional activities, Postgraduation and working link. Teresina, 2014.

Variables		Physicians		Nurses	
		n*	%	n	%
Gender	Female	41	58	81	90
	Male	30	42	4	10
	Total	71	100	85	100
Age (years)	25 - 35	28	39	34	40
	36 - 46	16	23	18	21
	47 - 57	17	24	26	31
	58 - 68	10	14	7	8
	Total	71	100	85	100
Marital status	Married	54	76	45	55
	Not married	17	24	40	45
	Total	71	100	85	100
Vocational training time (years)	0 - 9	33	46	35	41
	10 - 18	15	21	20	24
	19 - 27	14	20	19	22
	28 - 40	9	13	11	13
	Total	71	100	85	100
Professional performance time (years)	0-6	39	55	55	65
	7-12	23	33	21	25
	13-17	9	12	9	10
	Total	71	100	85	100
Postgraduation	Specialization	56	79	68	80
	Mastership	2	3	10	12
	None	13	18	7	8
	Total	71	100	85	100
With another work bond	Yes	53	75	63	74
	No	18	25	22	26
	Total	71	100	85	100

Legend: *Number in quantity.

From the 97,5% of nurses who had hypertension and CKD, 42% said they know the stages of CKD and 84% of these do not calculate creatinine clearance. Among the 79% of physicians who know the stages of CKD, 55% do not calculate the estimated creatinine clearance (Table 2). About 53% of nurses and 81,6% of doctors reported refer the patient to the nephrologist.

Table 2. Knowledge of professionals to diagnose Chronic Kidney Disease in the Family Health

Strategy. Teresina, 2014.

Variables	Profession					
	Nurse			Physician		
	Yes	No		Yes	No	
	n %	n %	Total	n %	n %	Total
Do you know about the correlation between SAH and CKD?	(83) 97,5	(2) 2,5	100	(70)98,5	(1) 1,5	100
Do you calculate clearence of creatinine?	(13) 15	(72) 85	100	(32)45	(39)55	100
Do you know about the stages of the CKD?	(36) 42	(49) 58	100	(56)79	(15)21	100

When the CKD is stratified in degrees of renal injury, 46% of professionals do not forward payment the patient to a nephrologist. Nurses 69% do not would forward the expert. Professionals who thereafter forward the patient to a specialist 54% would do to grade 3 kidney dysfunction. Physicians around 80% thereafter forward the nephrologist in varying stages 22,5% in stage 1, stage 2 32,4% and 25,4% stage 3 CKD (Chart 1).

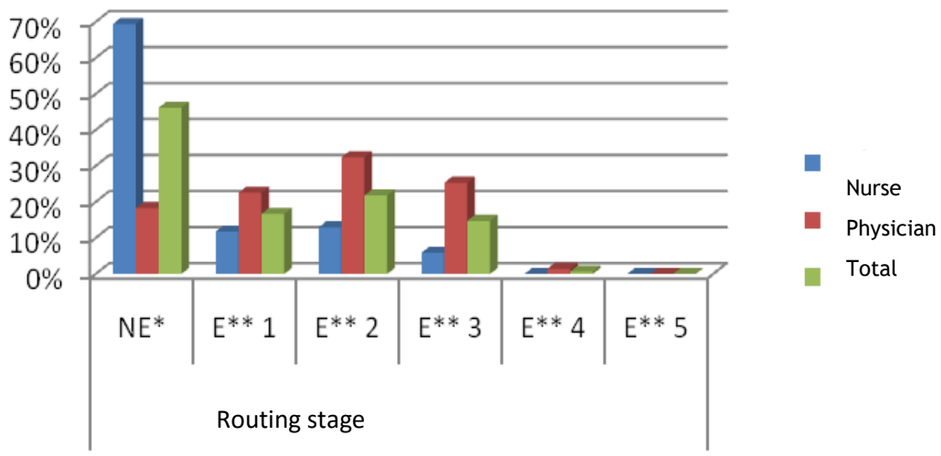

Figure 1. The actions of the professionals of the Family Health Strategy in the detection of renal failure in hypertensive patients according to the creatinine clearance. Teresina, 2014. Legend: NE* not forwards; E** forwards.

Concerning the actions that enable the diagnosis of CKD by doctors and nurses from the FHS, the lines were identified based on account thereof. It refers to competence of professionals already defined in consensus monitor risk of hypertension patient, blood pressure control; monitor renal function; refer to nephrologist; active search of patients at risk and periodic consultations and host; general guidelines and lectures.[15-16]

Table 3. Identification of actions reported by the professionals of the Family Health Strategy that would facilitate the monitoring and detection of Chronic Kidney Disease in the patient with hypertension. Teresina, 2014.

Identification of health professionals	Physicians		Nurses	
	n	%	n	%
To host and to assist the hypertensive patient at risk	07	09	19	22
To control pressure levels	14	20	11	13
To monitor the renal function	44	61	47	55
To refer to a nephrologist	8	11	09	10
To search for patients at risk	10	14	16	19
To conduct periodic consultations on risk hypertension patient	06	08	08	08
General guidances and lectures and make medicines accessible	18	25	28	33

Regarding the difficulties cited by the professionals in the diagnosis of CKD by the FHS, there were identified more frequently in accordance with the lines of the study participants. Difficulties are distributed: adherence and self-care of the patient, staff training; excess quota; the difficulty in directing, that is, the reference x counter reference and the need for follow-up protocol of patients.

Table 4. Relationship difficulties according to professionals in the Family Health Strategy for the detection of Chronic Kidney Disease in the patient with hypertension. Teresina, 2014.

Difficulties reported by professionals	Physicians		Nurses	
	n	%	n	%
Accession and self-care of user	13	18,4	16	19
Forwarding to facilitate patient	06	8,5	07	8,1
Lack of training of the team excess	20	28	28	33
Quota and difficulty of access of patient	16	22,5	17	20
Precarious system of reference and counter-reference	11	15,5	08	9,4
Absence of protocol for the patient's follow-up	01	1,5	04	4,7
Other reports	04	5,6	05	5,9
Total	71	100	85	100

DISCUSSION

In this study predominated females; what corroborates another study that identified feminization among health professionals, especially among the family health teams, possibly explaining by the expansion of the labor market, raising women's education levels, plus to reduce fertility rate. We cannot forget that health has a special feature, because there is a link to "care line": a woman's ability.[2]

Participant professionals were 54,5% nurses, 90% female, which does not escape the characterization of the workforce in nursing, composed in its large majority by women.[5,18]

This study revealed that 63% of professionals found themselves married. Given concordant to literature in the country and there may be a correlation with age found in this study.[19]

In this study, 39,7% of the professionals were up to 35 years old, and the average age of physicians was of 43 and for nurses, 41 years old; however, some studies have found the average age of health professionals around 40 years old for medical male;[17] however, the average age is +/- 35 years old for nurses and +/- 37 for physicians.[20] Another study found a high concentration of professionals in the age group of 30-49 years old.[2]

Professionals who had a training time of up to 9 years (43,5%), 46% are doctors and 41% nurses. The average training time stood at 16 years. Another study revealed that most doctors possessed more than nine years of training time.[18]

A date to be emphasized is that the percentage of 53% of professionals with training time of up to 12 years; and 34% over 19 years. It is a given that somehow demystifies a fact of work in the SUS is a possibility only for the first years of his career, for the FHS can be an alternative to the labor market even for doctors with extensive professional career, including retirees or those about to resort to retirement.[2]

Data revealed 60% of professionals with an operating time of up to 6 years. The average professional activity time was 7 years with a standard deviation of 5 years which corroborates a study in which the operating time was five years.[18]

This study showed that 80% of professionals have expertise, but not directed to the FHS. The qualification of top-level professionals for the implementation of primary health care in the NHS is a major challenge for public management and demand strategy to improve specific technical skills of each profession and skills of the "field" of primary care for collective actions and community activities.[21]

In this study, about 80% of physicians reported refer the patient hypertensive risk to specialist CKD variables; however, only 45% of these reported calculate creatinine clearance. Glomerular filtration (FG) is the main marker of CKF estimating the loss of kidney function. Thus the functional assessment of the kidney by creatinine clearance serves for screening, staging the CKD and identification of loss of function of risk patient because the lower the creatinine clearance of a patient greater becomes the risk of the need for dialysis. In one study data reveal the measurement of glomerular filtration rate performed by medical professionals in hypertensive patients

only 4,1% however it is inferred in this study as estimated creatinine clearance.[13]

In this study, creatinine clearance calculation data although did not represent the ideal to the Ministry of Health's findings, suggests that there is concern of professionals to detect CKD in hypertensive patients that even asymptomatic should be evaluated with tests (urinalysis, creatinine serum, creatinine clearance and microalbuminuria). According to the degree of renal dysfunction determined by creatinine clearance, estimated the individual must have the same calculated at least once a year in grade 1 semiannually on stage 2 and stage 4 quarterly and must be sent in grade 5 CKD.[15]

Most physicians (55%) and nurses (85%) did not determine the creatinine clearance thus not determine the level of decline in kidney function. It is known that the FHS professionals play an important role in the diagnosis of CKD and refer to nephrologist, but one revealed in his study low detection of CKD in the risk of hypertension.[22]

In this study it was found that 98,5% of doctors are aware about the association between hypertension and CKD, but only 45% calculated creatinine clearance determined the stages of kidney disease. This would not be possible track the hypertension risk, diagnose and referral to specialists going against the Ministry of Health regulations.[15]

The physicians, 80% who reported calculate creatinine clearance refer hypertensive patients risk to the expert. Even in England the acceptance and understanding of CKD by the professionals is uncertain and some professionals are unaware of how to perform the actions of management of this condition adequately.[22] In Brazil, a study revealed that the coping strategy of professionals in determining the CKD implicated when to refer the patient under their care at the secondary level health care.[13]

About 69% of nurses reported no referral to specialists; only 15% calculated creatinine clearance. Nurses who refer to nephrologist forwarded in grades 1, 2 and 3, respectively, 12%, 13% and 6%. Would nurse's actions detection of risk groups and patients with established disease, in addition to knowing the staging of CKD and intervene with patients.[14] But this procedure has often not been carried out and patients are usually referred late, when test results are much changed and patients have a higher risk of morbidity and mortality.

80% of doctors who know the stages of CKD 19% would forward the risk of hypertensive patients to specialists in stage 1, 33% Stage 2and 28% Stage 3. It was found in a study that most of the patients were referred to nephrologist in stage 3 CKD.[12]

This study revealed the chi-square and Fisher's exact test, the professional who calculates the clearance is a strong indication that he knows the stages of CKD. So it is important that the FHS professional use determinations from the Ministry of Health adopt practical actions to determine the creatinine clearance.[15-6]

The actions identified by the FHS health professionals revealed doctors and nurses concerned in active search of patients, the blood pressure control of the most rigorous patient, the general guidelines to hypertensive patients, in monitoring renal function and routing specialist. It emphasizes the host as a way to operate the work processes in health in order to meet everyone seeking health services, listening to their requests and assuming a posture able to welcome, listen and give appropriate responses to users.[23]

A study in England revealed that even in the country where there is work to pay for performance mode, for example, general practitioners would have a goal to reduce the blood pressure of hypertensive patients. Despite the CKD be a priority of education were concerned then refer the patient to secondary care and also need for professional training.[24]

The professionals from the FHS in this study reported difficulties in detecting CKD. They cited the excessive number of families accompanied by staff as the main obstacle to the effective exercise of the activities. This aspect shows increasingly the need of the teams being complete and the maximum considered families.[5]

Another reported difficulty was the precariousness of reference and counter reference. Still coexists with the lack of studies on the patient's referral to the nephrologist at earlier stages of nephropathy. A job inferred the need for further studies to evaluate the efficiency of the reference models and active counter-reference in the country, in order to streamline supply and demand of service of medium complexity in nephrology.[25]

Information about deficiency is questioned, regarding Chronic Kidney Disease by professionals or even in school curricula there is a more effective direction to promote and prevent harm to the population. We know there are consensus easily accessible to

professionals and care policies and care for NCDs and their grievances. One wonders about the existence of barriers to the detection, diagnosis and referral interventions to health services. The actions of the professionals show up shy and difficulties seem to be the biggest facing the CKD.

Global and local alarming data about CKD requires a set from health professional effort, public health managers to implement follow-risk patients' protocols as a way to still detect early kidney disease. Effectively prevent harm to the population and reduces health care costs. The organization and preparation of health teams through specific protocols, training and continuing education courses can enable the effectiveness of the actions of the professionals, facilitating coping with Chronic Kidney Disease.

CONCLUSION

The Family Health Strategy professionals in Teresina are characterized for being women, young and experts. The professional practice time and the operating time are according to the literature, up to 6 years. Doctors and nurses, despite knowing the association between hypertension and chronic kidney disease not determined, in most cases, the creatinine clearance. In general who did not estimate the creatinine clearance had difficulty reference the patient to a specialist. It wonders about professional training, for the development of skills related to quality of care.

The detection of kidney disease is still a challenge even with guidelines established. Although the diagnosis of CKD is established simply screening for kidney disease seems shy in the Family Health Strategy in Teresina. The actions of health professionals based on careful line must turn to the prevention of injuries and diseases. It is important to identify, detect and refer the risk of hypertensive patients in the early stages.

The FHS organized, structured and trained is a stage of active and dynamic transformation in the health of users where all that make up this care network can enjoy without discrimination in a comprehensive and universal manner as stated in the principles of the Unified Health System.

Future studies can be developed related to the development and validation of a chronic kidney disease detection protocol in hypertensive patients in the Family Health Strategy.

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