

## Pharmaceutical Administration in Primary Health Care Centers of Tucuman, Argentine

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**Abstract:** The Pharmacy Department<sup>[1]</sup> of National University of Tucumán (UNT), since 1999, has been inserted in CAPS. In 2002, the Tucumán representative of the REMEDIAR<sup>[2]</sup> Program, requested the collaboration for the execution of the first stage of the Program, in nineteen (19) CAPS of the Center Programmatic Area of the SiProSa<sup>[3]</sup>. Answering the request, activities had been planned that would guarantee the administration of the medicine. The insertion allowed the appropriate use of the medicines, the recognition of the pharmaceutical presence in the health equipment<sup>4</sup> the strength of the relationship between University-SiProSa-Federal Health Ministry, and made evident one the great failures of SiProSa and of REMEDIAR Program, the absence of the pharmacist in health teams. The professional, who guarantees the rational and cost-effective use of the medicines is the pharmacist<sup>[4]</sup>.

**Key words:** Primary health care center (caps), primary health care (aps), pharmaceutical administration

### INTRODUCTION

The executive power of the Argentinean Republic, in March 2002, had signed a Decree N° 486 which establishes a National Sanitary Emergency with the purpose of guarantee to the population the access to basic goods and services for the preservation of health.

One of the objectives was to reestablish the supply of medicines and health products in public institutions which take care of the necessities of the citizens of low resources that live in marginal areas.

With that purpose the Federal Health Ministry, created the REMEDIAR<sup>[1]</sup> Program, as part of the Primary Health Care Reform Program financed by the Interamerican Development Bank (BID).

The objectives of this program were:

- To ensure the timely access of the population without health insurance coverage to basic and essential medicines.
- To strength the primary care model and to promote health care policies with participative administration.

The Provincial Health Care System (SiProSa)<sup>[2,3]</sup> of Tucumán, with the objective to provide health care services, was organized on the division of the province in two different areas Programming and Operational Areas.

**Programming Areas:** were defined as sanitary organizational units that must satisfy health care requirements of a delimited part of the population, with a unified programming process of available resources. These areas are: Center, East, West and South.

**Operational Areas:** were designed are the basic units of the health-administration organization of the system. Each operational area is responsible for a determined geographical area of the corresponding programming area. The operational areas, included in each programming area are four: Northwest, Northeast, Southeast and Southwest.

Inside each of the operational areas there are Primary Health Care Centers (CAPS)<sup>[4,5]</sup>. Their purpose is to take care of a sector of the population, under high risk, due to deficient economic, hygiene-sanitary, educational, social and factors.

The health care teams that are part of these CAPS, generally is integrated by clinical doctors, pediatricians, gynecologists, nurses, dentists, social assistants, and administrative personnel, etc..

In 1999, the Pharmacy Department of the National University of Tucumán<sup>[6]</sup>, became part of the CAPS to take care of the needs generated by the absence of the professional pharmacist in them<sup>[7]</sup>.

In year 2002, the provincial representative of the REMEDIAR Program, acknowledging the work of the Pharmacy Department in the CAPS, requested its collaboration for the execution of the first stage of the

Table 1: Job Administration

Human Resource	Institution	Nº
Educational Professionals	UNT	7
Educational Pedagogue Consultant	UNT	1
Educational Coordinator	UNT	2
Pharmaceutical Collaborators*	UNT	6
Students Collaborators*	UNT	9
Practitioners**	UNT	74
Health Teams of CAPS***	SiProSa	Variable
Professionals of Pharmaceutical Attention	SiProSa	5

\* Collaborators, professionals and students, were selected after an inscription, authorized by HCD of FBQYF Res. Nº 0052003. Students were required to be in the sixth year of the College of Pharmacy and had taken Assisting Pharmacy Practice

\*\* Practitioners: students of Assisting Pharmacy Practice of the College of Pharmacy

\*\*\* The health teams of CAPS is variable, generically integrated by: medical doctors, nurses, administrative personnel, etc

Table 2: Institutional Resources

UNT	SIPROSA
Practice of Assisting Pharmacy	Department of Pharmaceutical Care
Pharmacy Department School of, Biochemistry, Chemistry And Pharmacy	Programming Area Center
Medicine Information Center	19 CAPS
Pharmacy Department	

Program, in nineteen (19) CAPS of the Center Programming Area of SiProSa.

Answering the request, the Biochemistry, Chemistry and Pharmacy School of the National University of Tucuman (UNT), had developed activities that guaranteed the execution of the Program, in regard to the management of the medicines, such as reception of medicine chests, storage, dispensing of medicines and filling out forms.

The medicines administration helped the appropriate use of medicines supplied by SiProSa through the Remediar Program.

The Professional able to guarantee the rational and economical medicines use is the pharmacist<sup>[8]</sup>.

## MATERIALSAND METHODS

The applied methodology was characterized by being participative and innovative<sup>[9]</sup>. It can be defined as Participative because the pharmacist involved in the present works committed to the objectives of the Program, organized workshops to support the educational assistance integration, to achieve efficiency and efficacy in the administration of the medicines in the CAPS.

In addition the methodology can be characterized like Innovative because the Pharmacy Department of UNT was the only one of the our country that collaborated in the execution from the first stage of the REMEDIAR Program.

The human resources used are shown in Table 1. The institutional resources involved in the execution are shown in Table 2.

The didactical resources used were:

**Material supplied by the Program:** Manual training's REMEDIAR: Instructions for Health Care Centers. Statistical Classification of Health Problems in primary health care centers 2001 (CEPS-APS). REMEDIAR Forms: prescription forms (R), monthly control of stock of medicine forms (B), daily registration of medicine(B1), Registry of Medicine Loss (M)

**Material Supplied by Pharmacy Department<sup>10</sup>:** Didactic Material<sup>[11,12,13,14,15,16,17]</sup>. The forms are detailed in Fig 1 to 6. Students-practicing and tutors were inserted in the health care teams, as agents generators of change.

Each CAPS received two works groups and each group daily dedicated four hours to develop the assigned tasks. The groups were distributed in the following way:

Figure 1

Pharmacy Department; School of Biochemistry, Chemistry and Pharmacy of national university of tucuman				
Inventor of Medicines				
Registered Name	Common Denomination International*	Forms	Power	Date of Dispensed Origin deadline Units

\* CDI

Fig. 1: Inventor of medicine Form

Figure 2

Pharmacy Department; School of Biochemistry, Chemistry and Pharmacy of National University of Tucumán			
Inventor of Biomedical Materials			
Product	Origin	Date of deadline	Dispensed Units

Fig. 2: Inventor of biomedical material Form

Figure 3

Pharmacy Department; School of Biochemistry, Chemistry and Pharmacy, of National University of Tucumán				
Confiscation of Medicines				
CAPS:	DATE:			

STUDENTS:

Common Denomination International Pharmaceutical Forms	Origin	Date of deadline	Reason of Confiscation	Units
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Fig. 3: Confiscation of medicine Form

Figure 4

Pharmacy Department; School of Biochemistry, Chemistry and Pharmacy of National University of Tucumán				
Confiscation of Biomedical Materials				
Programming Areas	CAPS:			
GROUP Nº:	STUDENTS:			

Product	Origin	Date of deadline	Reason of confiscation	Units
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Fig. 4: Confiscation of biomedical material Form

Figure 5

Pharmacy Department; School of Biochemistry, Chemistry and Pharmacy of National University of Tucumán							
To Give Medicines							
STUDENTS Nº	DATE	Passport Full Name	Age	Adress Pathology	PATIENT		DOCTOR
PRESCRIPTION					TO GIVE		
ORIGIN	Common Denomination International			POWER	DOSE	Pharmaceutical Form	Yes Unit No Reason

Fig. 5: Dispensation Form

Figure 6

Pharmacy Department; School of Biochemistry, Chemistry and Pharmacy of National University of Tucumán																																	
Daily Consumption of Medicines																																	
MONTH	YEAR																																
	Pharmaceutical	CAPS:																															
CDI*	Form	Power	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
* Common Denominator International																																	

\* Common Denominatio International

Fig. 6: Daily use of medicine Form

**Group A:** Monday, Tuesday and Wednesday.

**Group B:** Wednesday, Thursday and Friday.

Both groups met on Wednesday, to exchange information and experiences. All these daily work was followed by integrated weekly workshops, during 14 weeks, that took place at the Pharmacy Department and they included educators, tutors and students. Table 2.

These workshops had the objective to interchange experience among all the groups involved in the development of the REMEDIAR Program of the 19 CAPS, to contribute new ideas, to resolve problematic situations, and to establish new strategies that would guarantee the optimal application of the REMEDIAR Program.

## RESULTS

- 19 CAPS of APC were completed between August and December, 2002, from Monday thru Friday, 8 to 12, totaling 200 h.
- Physical space for the installation of a pharmacy was conditioned.
- Pharmacy Services were planned and organized in the 19 Centers of Primary Attention of Health.
- The medicine administration was strengthened by the presence of the Pharmacist.
- From October 28 thru December 16, 2002, the management of the medicine chests REMEDIAR had been handled by the Human Resources of the Pharmacy Department.
- The importance of the presence of a pharmacist was recognized in each CAPS.

- Recognition of the pharmacist in health teams.
- Strengthening of the relationship between University-SiProSa-Federal Health Ministry-Community.

**Strengths of the Program:** Free medicines were given away to needy people. Adequate monitoring and follow-up of medicine chests of the Program. The medicines from REMEDIAR cover the majority of the prevalent pathologies selected by the program. Monitoring and follow-up of the financial resources and the established goals of the program by Non Governmental Organizations (ONG). Active control participation by the community.

**Weakness:** Absence of the pharmaceutical professional in the medicine administration. Delay in the implementation mechanism for redistribution of medicines. Delay to adapt the necessary quantities of certain essential medicines. Example: mebendazol, valproic acid.

## CONCLUSIONS

The sanitary and economic crisis of our region (Northwest of Argentina) determines large portions of the population with out sanitary assistance of quality. The medicine provision, for the most vulnerable sectors of the population, is a very important step to improve health. Therefore the professional able to guarantee the rational and economical utilization of the medicines is the pharmaceutical.

The participation of the pharmacist in the CAPS had shown one of the biggest failures of the SiProSa about the

conformation of the health equipment, where the absence of the professional pharmacist is constant.

The economic factor had been an obstacle to continue of these actions upon the conclusion of year 2002, regardless of the advances and recognitions received.

For the next years the Pharmacy Department Professionals yearned for that the federal and provincial health authorities take on the challenge to change the actual model of Health Attention to the model of APS, whose health equipment doesn't ignore the pharmacist.

### REFERENCES

1. [www.remediar.org.ar](http://www.remediar.org.ar).
2. Sanz, C. and M. E. Mothe, 2003. El Sistema Provincial de Salud Si.Pro.Sa. en la Provincia de Tucumán. [www.ffyb.uba.ar/cenimeN/boletin\\_4-03.htm](http://www.ffyb.uba.ar/cenimeN/boletin_4-03.htm).
3. Ley Provincial 5652 del año 1984.
4. Domecq, C., 1985. Anais del Seminario Brasileiro sobre Assistencia Farmaceutica nas Atencoes Primarias de Saude, Brasilia, pp: 127-42.
5. UPS/OMS., 1990. Desarrolloy fortalecimiento de los sistemas locales de salud Washington: HDS/SILOS – 4.
6. Sanz, C. and M. E. Mothe, 2004. Practicantado de Farmacia Asistencial. Acta Farmacéutica Bonaerense 23 : 218-9
7. Madrid, I., G. Velásquez, E. Fefer, 1998. OMS/OPS Reforma del Sector Farmacéutico y del Sector Salud en las Américas: una Perspectiva Económica
8. OMS – OPS/HSE/ 95.1., 1998. El papel del Farmacéutico en el Sistema de Atención de la Salud.-
9. OPS/OMS 1997. Serie Medicamentos esenciales y Tecnología 5/1; 5/2; 5/4; 5/5; 13. Octubre
10. Galli, A., 1999. Programa de Formación de Formadores en Ciencias de la Salud; Volumen I, II y III.. ISBN: 987-96943-0-9.
11. Facultad de Farmacia. Universidad Nacional de Tucumán. 1999. Organización del SiProSa.
12. Facultad de Farmacia. Universidad Nacional de Tucumán. Distribución de Medicamentos 1999.
13. Facultad de Farmacia. Universidad Nacional de Tucumán. Seguimiento de Medicamentos 1999.
14. Facultad de Farmacia. Universidad Nacional de Tucumán. Farmacoepidemiología 1999.
15. Facultad de Farmacia. Universidad Nacional de Tucumán. Gestión Farmacéutica 1999.
16. Facultad de Farmacia. Universidad Nacional de Tucumán. Materiales Biomédicos 2000.
17. Facultad de Farmacia. Universidad Nacional de Tucumán. Especialidades Farmacéuticas 2000.