

PHARMACEUTICAL CARE SYSTEM FOR CHRONIC PAEDIATRIC PATIENTS

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BACKGROUND AND OBJECTIVE

- Meeting chronic patient's needs is essential to improve health outcomes.
- The objective was to design a pharmaceutical care plan for pediatric chronic patients using a risk stratification tool.

METHODS

- Literature review and preexisting pharmaceutical care plans
- 4 workshops with experts
- Development of a pre-test in 195 patients from 7 hospitals
- Performance of 5 case-studies analyses

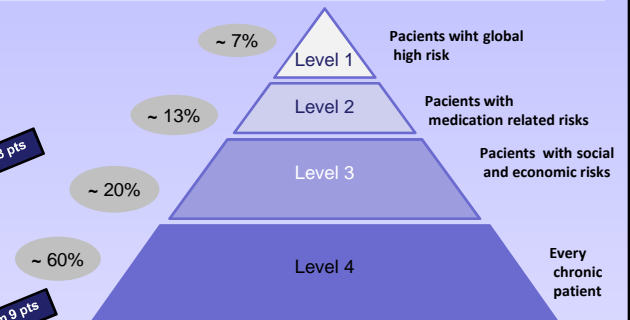
The pediatric chronic conditions and the variables of each patient with their corresponding relative weights were defined, varying from 1 (low) to 4 (high risk), and resulted in a risk matrix with increasing levels, that included the pharmaceutical care actions to be carried out in each level.

RESULTS

The care plan was applied to patients with different chronic conditions, classified into 15 groups (autoimmune, gastrointestinal, oncology, etc). 13 variables divided into 3 categories were defined, as seen in the next table.

Variable type	Variable	Definition	Punctuation	
Demographic variables	Age	Neonates	3	
		Infants: 28 days - 23 months	3	
		Preschool: 2 years - 5 years	2	
		Child: 5 - 12 years	1	
		Adolescents: 12 - 18 years	3	
Demographic variables	Obesity/ Malnutrition/ Weight > 40Kg	The patient has weight > 40 kg or presents obesity / malnutrition according to the values of height, weight and BMI for patients by age range	1	
	Patient/caregiver with social of cognitive problems	Family socio-economic conditions and / or the patient has cognitive impairment / severe functional dependence unsolved or without suitable caregiver and / or patient / caregiver expresses opposition to the treatment and / or proof of the existence of a bad relationship care team - patient / family	4	
Clinical variables and health services utilization	Hospitalizations or ER attendances in the last year	The patient has had two or more hospitalizations in the previous 12 months and / or emergency department attendances at least 3 times over the last year, as long as the use of health services is associated with poor control of pathology / treatment	3	
	Pluripathology	There are two or more chronic diseases with special complexity or comorbidity in patients	3	
	Clinical stages of the disease that require monitoring	(Examples: the patient has been transplanted in the past year, the patient is receiving palliative care, etc.)	3	
Medication related variables	Polypharmacy	The patient takes 4 or more medication	3	
	Complex patterns of administration	The patient takes one drug with complex dosing schedules	4	
	Changes in regular medication regimen	Significant changes in medication regimen in the last 3 months	2	
	Suspicion of nonadherence	There is suspicion or evidence that the patient is not adherent to their treatment	4	
	Suspicion or risk of medication related problem	Suspicion that the patient has or may have a problem with medication		
		This variable will also be considered if the patient has or have a history of allergies caused by skin contact, injection, ingestion and inhalation of drugs, foods and / or other substances		2
	Dispensing conditions	It is considered that the risk of medication-related problem is very high when the patient punctuate in at least four of the variables related to medication		
High risk medication and narrow therapeutic index drugs	Patients with at least two drugs with prescription-dispensing conditions different, being the prescription status: overseas medicine, hospital use, compounding formula, etc	3		
	The patient is being treated with a high risk medication for pediatrics or with narrow therapeutic index	4		

According to the punctuation obtained, patients could be located in 4 levels.



Percentage of the pediatric population included in the 195 pre-test, located on each level. This was considered an adequate stratified population distribution.

The pharmaceutical care system defines activities in 3 large scopes, adapted to the needs of each patient depending on the level at which they are placed:

- Pharmaco-therapeutic follow up
- Education to patients/caregivers
- Coordination with care team

CONCLUSIONS

- ✓ The pharmaceutical care plan adequately stratified pediatric chronic patients into different risk levels and can be used to prioritize those patients that will benefit more from our interventions