

JORNADA POST EAHP

Farmacia Basada en la Evidencia

Dra. Marta Sáenz de Tejada
Hospital Clínico San Carlos

ORGANIZA



PATROCINA



El programa

10.15	Exhibition	16.00 - 17.00	Coffee break	Hall B	
10.15 - 11.45	Coffee break Launch of	17.00 - 18.30	Seminars		Practice. What changed with
10.30 - 11.50	Award ceremony				Hall B - Booth no 26
	Section 1: Introduction 10:30 Containing Section 4: Clinical 10:40 Linezolid 10:50 Relationship Sara 11:00 Estimating patients with Section 5: Pharmacy 11:10 Computing Marta 11:20 Best practice Section 6: Education 11:30 Becoming pathways from 11:40 Designing dispensing R		Seminar ER1 - Clinical Trials in Paediatric Haematology to participate ACPE UAN: 0475-0000-18-024-L04-P. A knowledge based activity. M-B. Aretin; F. Engels		
			Seminar PC2 - Hospital mergers and the centralisation of services ACPE UAN: 0475-0000-18-016-L04-P. A knowledge based activity. A. Vermes; S. Crauste-Manciet		
			Seminar IG2 - The productive pharmacist - Process of drug development ACPE UAN: 0475-0000-18-011-L04-P. A knowledge based activity. V. Zardet; M. Frachette		
10.30 - 11.45	Good Practice		Seminar SPD2 - Bridging the efficacy / effectiveness gap ACPE UAN: 0475-0000-18-014-L04-P. A knowledge based activity. A. Gouveia; N. Groessmann		
	Section 1: Introduction		Workshop 1 - The pharmacist's role in the drugs and medicines development ACPE UAN: 0475-0000-18-027-L04-P. An application based activity. N. Martinez-Lopez de Castro; H. Plet		

23rd Congress of the European Association of Hospital Pharmacists

Gothenburg, Sweden, 21-23 March 2018

	Seminar IG1 - The efficient pharmacist - Prioritising tasks and designing processes ACPE UAN: 0475-0000-18-009-L04-P. A knowledge based activity. R. Fernandes; A. Jacklin	F2+F3
	Seminar SPD1 - Medicines shortages - A reality check? ACPE UAN: 0475-0000-18-013-L04-P. A knowledge based activity. T. Hoppe-Tichy; N. Linde-Laursen	F5
	Seminar PC1 - Clinical trial regulation and ethical committees ACPE UAN: 0475-0000-18-015-L04-P. A knowledge based activity. I. Krämer*; C. M. Romeo Casabona	A3
	Seminar PC3 - Hospital pharmacists involved in A TPM and in Risk Assessment ACPE UAN: 0475-0000-18-017-L04-P. A knowledge based activity. A. De Goede; K. Saadat	G3
	Seminar CPS1 - Managing polypharmacy - Thinking outside the box ACPE UAN: 0475-0000-18-010-L04-P. A knowledge based activity. M. Wilson; C. Morrison	G1+G2
	Seminar PQ2 - Ready to administer drugs - Is everything under control? ACPE UAN: 0475-0000-18-023-L04-P. A knowledge based activity. S. Sauer; O. Delgado Sánchez*	A5
	Workshop 2 - Assessment and clinical importance of pharmacists recommendations ACPE UAN: 0475-0000-18-028-L04-P. An application based activity. H. Toss; U. Gillespie;	J2

JORNADA POST EAHF



Normativa aplicable EC

- CH-GCP Guidelines

http://www.ich.org/fileadmin/Public_Web_Site/ICH_Products/Guidelines/Efficacy/E6/E6_R2_Step_4_2016_1109.pdf

- EudraLex Volume10, Clinical Trials Guideline:

https://ec.europa.eu/health/documents/eudralex/vol-10_en

- Guidance on Investigational Medicinal Products (IMPs) and "non investigational medicinal products" (NIMPs)

https://ec.europa.eu/health/sites/health/files/files/eudralex/vol-10/imp_03-2011.pdf

- **Regulation (EU) No 536/2014** of the European Parliament and of the Council **of 16 April 2014 on clinical trials of medicinal products for human use**



- **RD 1090/2015** por el que se regulan los EC con medicamentos
 - No aplica a estudios de no intervención
 - No aplica a estudios con PS



Principios éticos
Metodología
Aspectos legales

+

Informes de seguridad periódicos
Acontecimientos adversos severos



JORNADA POST EAHP

Good reasons for participation as pharmacist in the Research Ethics Committee

- Placement of pharmaceutical aspects
- Placement of real-life aspects
- Thinking out of the box
- Personality development
- Volunteer spirit activity for patients
- Development of better understanding for the needs of clinical researchers
- Reputation for pharmacy profession
- Keeping pharmaceutical knowledge up-to-date

Comité ética clínica

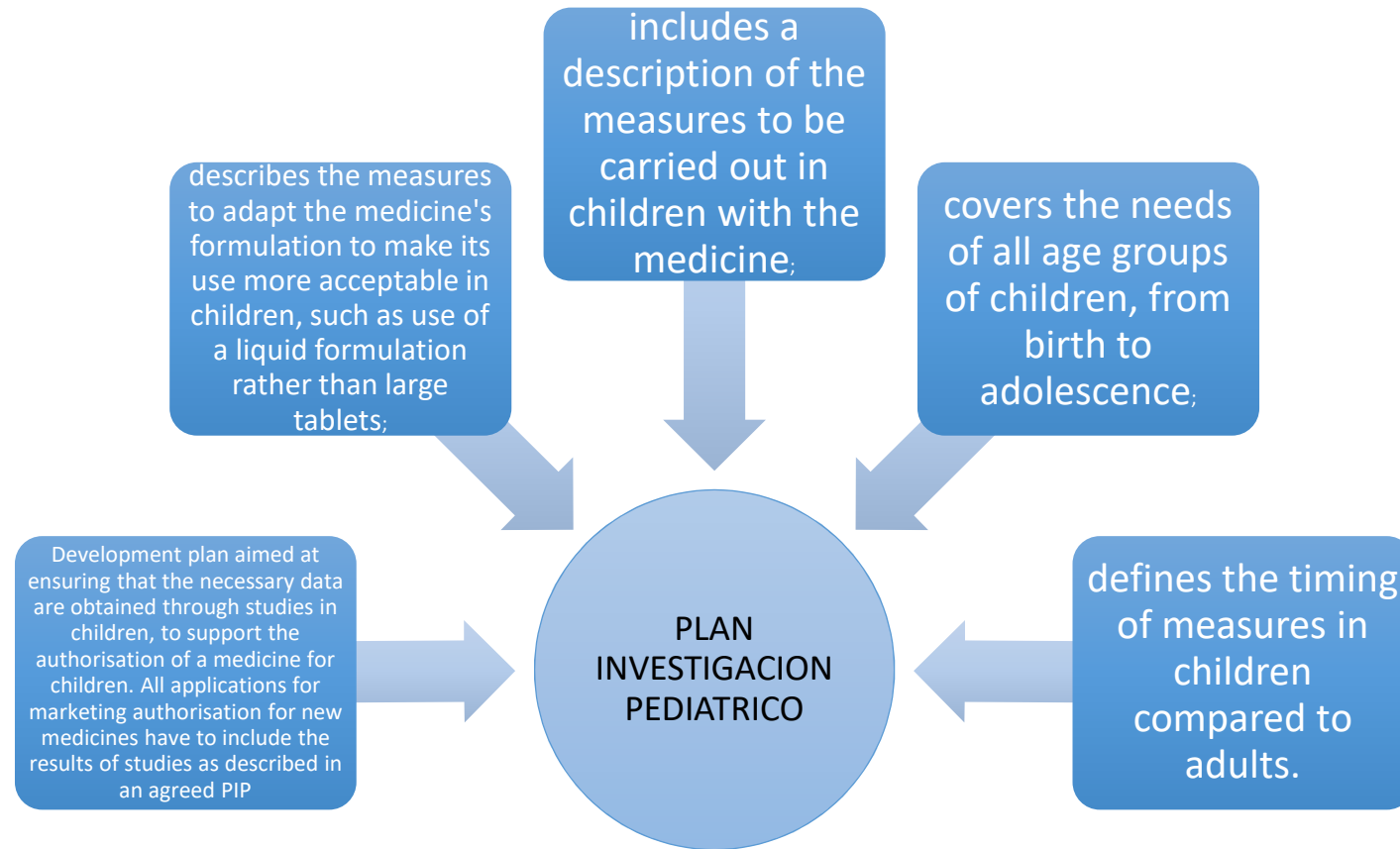
Duties of the Clinical Ethics Committee

- Education and continuing education of the hospital staff regarding clinical ethics
- Development of local guidelines for patient-oriented procedures based on ethical principles
- Consultation of the board of directors and medical directors of the clinics regarding ethical issues in medical treatment and nursing care
- Ethics consultation in individual patients requested by physicians, nurses, patients or there families/caregivers

Procedures of the Clinical Ethics Committee

- Monthly meetings
- Members: medical professionals, nurse professionals, catholic and protestant pastoral caregivers, hospital social workers, legal professional, pharmacist
- Reflection on recent patient-individual consultations
exchange of views (e.g. religious, cultural aspects)
conflicts with the advance directive
- Discussion of new regulations and court judgements regarding treatment of patients

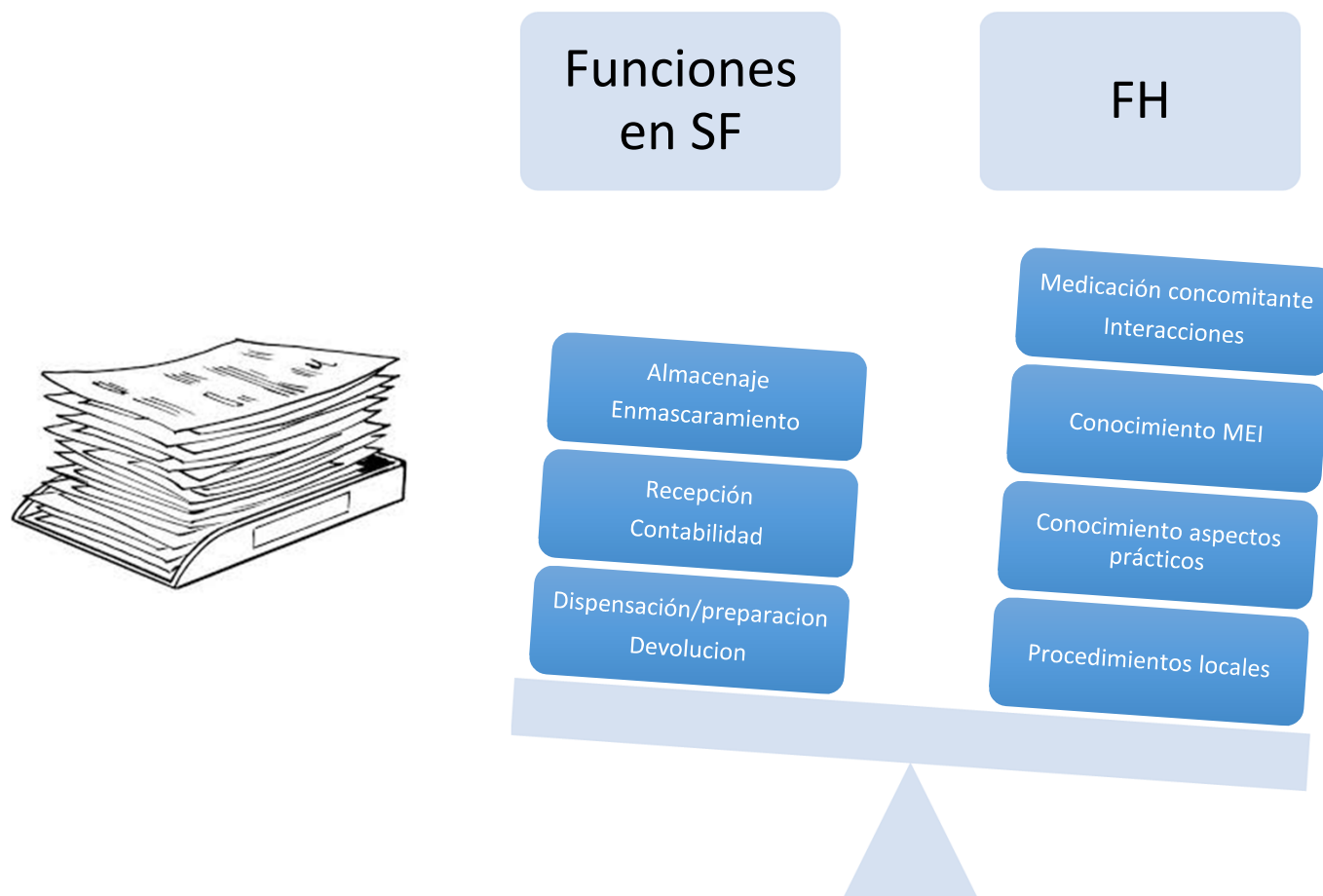
Plan investigación pediátrico (PIP)



10- year report to the European Commission

- 260 new medicines for use by children (indications & marketing authorisations).
- 83 oncology PIPs for 68 anti-cancer medicines. 5 new anti-cancer medicines authorized since Pediatric Regulation.
- 1000 Paediatric Investigation Plans but only 131 completed.
- Proportion of trials in paediatrics ↑ from 8.25% to 12.4%.

Participación FH en EC pediátricos



Tipos investigación pediátrica

Ensayos industria

- Comercialización
- Procesos
- Documentación
- Instrucciones de manejo de fármaco



Procesos estandarizados
Disponibilidad local
fármacos, material
fungible
Reclutamiento
Periodos ventana si
farmacocinética

Ensayos independientes

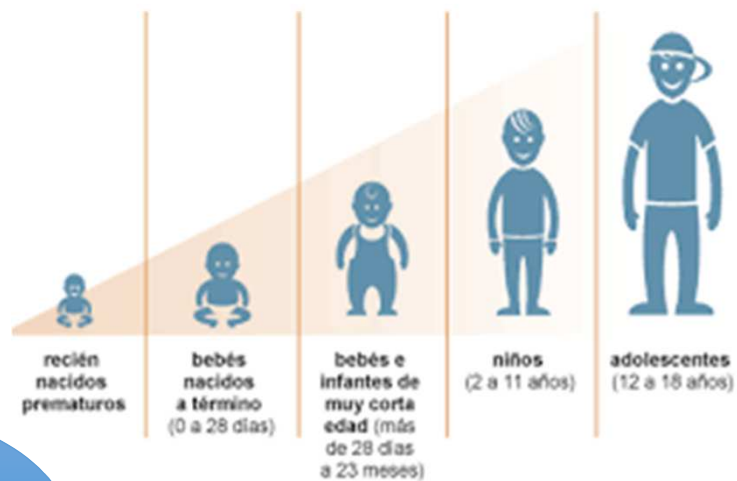
- Necesidad terapéutica no cubierta
- Investigador/ grupo independiente
- Protocolo



Menor especificación
logística:
RESPONSABILIDAD
Disponibilidad fármacos
multicéntricos
Fuera indicación
Formulación

Volumen
administración

Dosificación
según peso



Formulación
según edad

Uso fuera de
ficha técnica

JORNADA POST EAHP

Specific dosing
recommendations
Maximum dose
Rounding off
Administration issues
- Nasal gastric tube
- Masking (after)taste
Risk classification:
potentially
carcinogenic drug

Protocol
Pharmacy
manual
Investigational
medicinal
product dossier /
Investigator's
brochure
Information from
initiation visit
Prior experience

Appropriate iv
container
Small infusion
volumes: dead
volume
Supplies
Premedication
Administration times
(iv bolus / short
infusion)
Equivalent drug and
dosage

Información necesaria EECC pediatría
Responsabilidad preparación y administración segura

Evaluación del riesgo de fármacos en pediatría

Safety knowledge



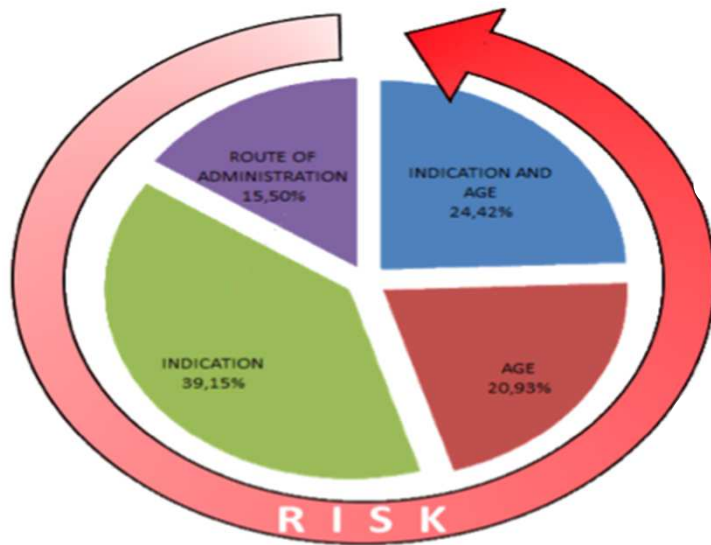
3. THE ESSENTIAL ROLE OF SAFETY MONITORING IN THE LIFE-CYCLE OF A MEDICINE

The benefit-risk assessment of any kind of medicine treatment is essential. No assessment of the treatment is, however, possible without safety data and knowledge. The “trial and error” principle is not acceptable in an extremely vulnerable population.

http://www.who.int/medicines/publications/essentialmedicines/Promotion_safe_med_childrens.pdf



Uso fuera de indicación



Age: Drug not recommended in the SmPC below a certain age

Weight: Drug not recommended in the SmPC for children below a certain weight

Absence of Paediatric Information: No mention at all in the SmPC regarding paediatric use

Lack of paediatric clinical data: Stated lack of evidence of efficacy and safety in paediatric patients in the SmPC

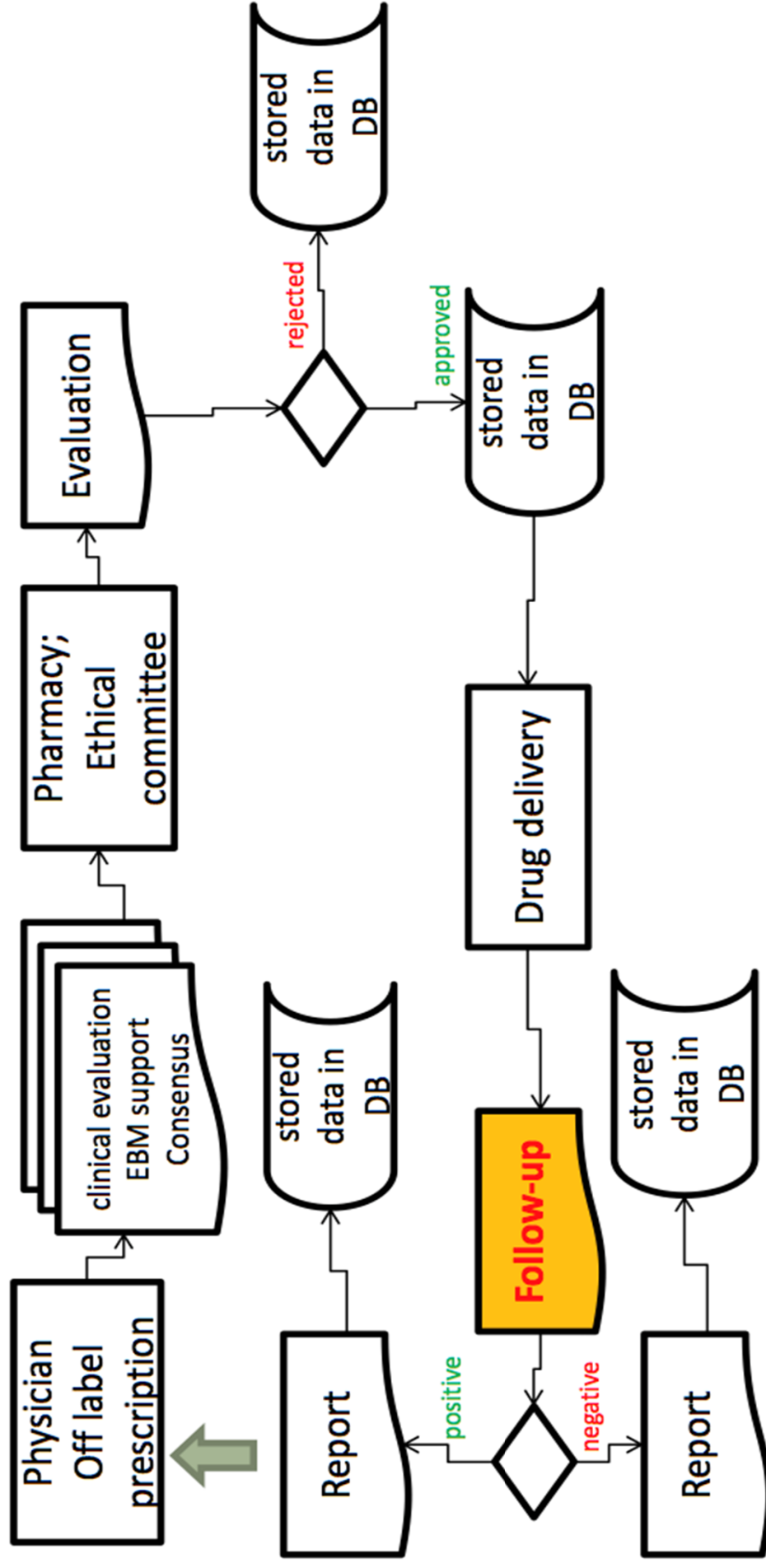
Contraindication: Statement in the SmPC that the drug is contraindicated in children

Indication: Drug prescribed for indications outside of those listed in the SmPC

Route of Administration: Drug administered by a route not described in the SmPC

Base de datos fuera indicación

ATC	Number of different indications for which the drug is prescribed								
L01XC02					rituximab (11)				
					rituximab (5)	Sclerodermia Cutanea Diffusa Sistemica			01-06-2012
					rituximab (4)	Encefalopatia autoimmune			29-06-2012
					rituximab (5)	Sindrome Nefrosica corticoresistente			09-03-2017
					rituximab (5)	Epatite Gigantocellulare associata ad anemia emolitica autoimmune	4	C	12-06-2014
					rituximab (4)	Patologie linfoproliferative post-trapianto (PTLD) associate ad Epstein-Barr Virus (EBV)			25-02-2013
					rituximab (3)	Encefalomielite Acuta Disseminata (ADEM)			01-03-2013
					rituximab (7)	Sindrome di Castelman	2	B	09-01-2017
					rituximab (4)	Anemia Emolitica Autoimmune			31-10-2016
					rituximab (6)	Porpora trombocitopenica idiopatica cronica	I	A	19-03-2015
					rituximab (4)	Nefrite lupica	3	C	28-04-2015
					rituximab (3)	Glomerulosclerosi focale segmentaria (FSGS)	I	B	25-01-2016
					</				

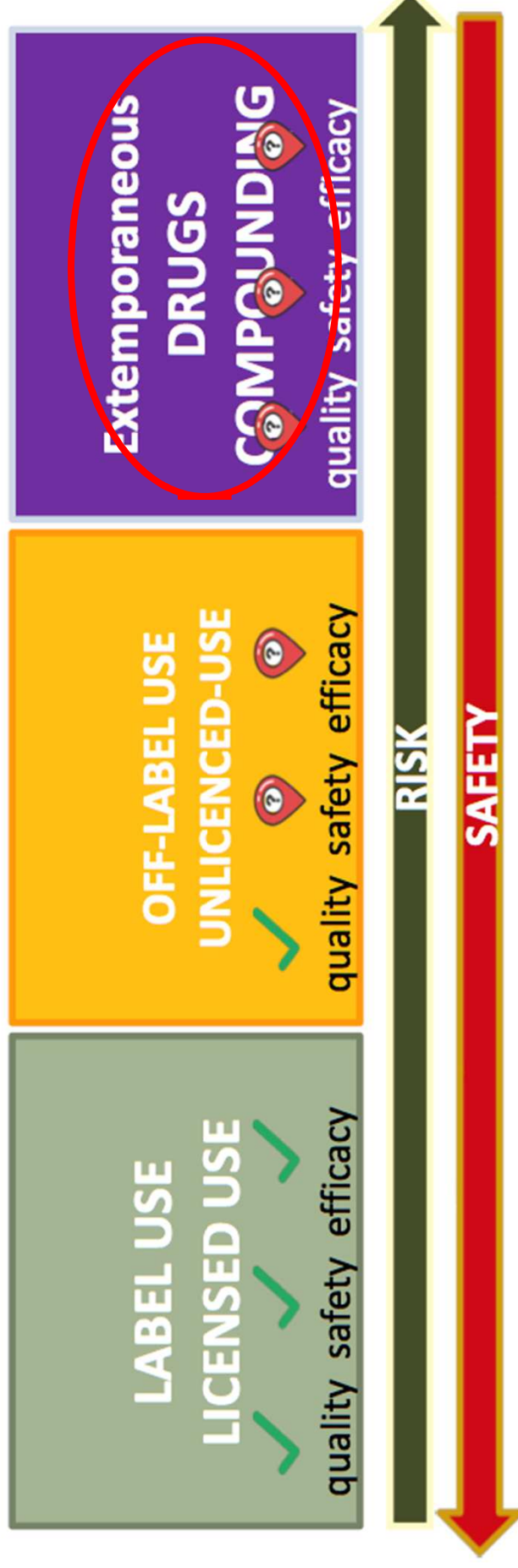


Safety knowledge

3. THE ESSENTIAL ROLE OF SAFETY MONITORING IN THE LIFE-CYCLE OF A MEDICINE

The benefit-risk assessment of any kind of medicine treatment is essential. No assessment of the treatment is, however, possible without safety data and knowledge. The “trial and error” principle is not acceptable in an extremely vulnerable population.

http://www.who.int/medicines/publications/essentialmedicines/Promotion_safe_med_childrens.pdf



Riesgos asociados a la formulacion	
Unstandardised formulations	Organoleptic issues
Calculation errors	Measurement & labelling errors
Formulation failure (OD or UD)	Toxicity & contamination of raw materials
Uniformity of dose	Bioavailability issues
Binding of drug to excipients	Safety & efficacy untested
Micro contamination	QA/GMP issues
Staff issues	Use of concentrated raw materials e.g. concentrated chloroform water



1. Conocer a tu paciente
2. Comentar el caso con su médico
3. Evaluar el riesgo de la preparación
4. Preparar la mejor formulación pero sin permitir que afecte a la estabilidad
5. Asegurar uso seguro en casa

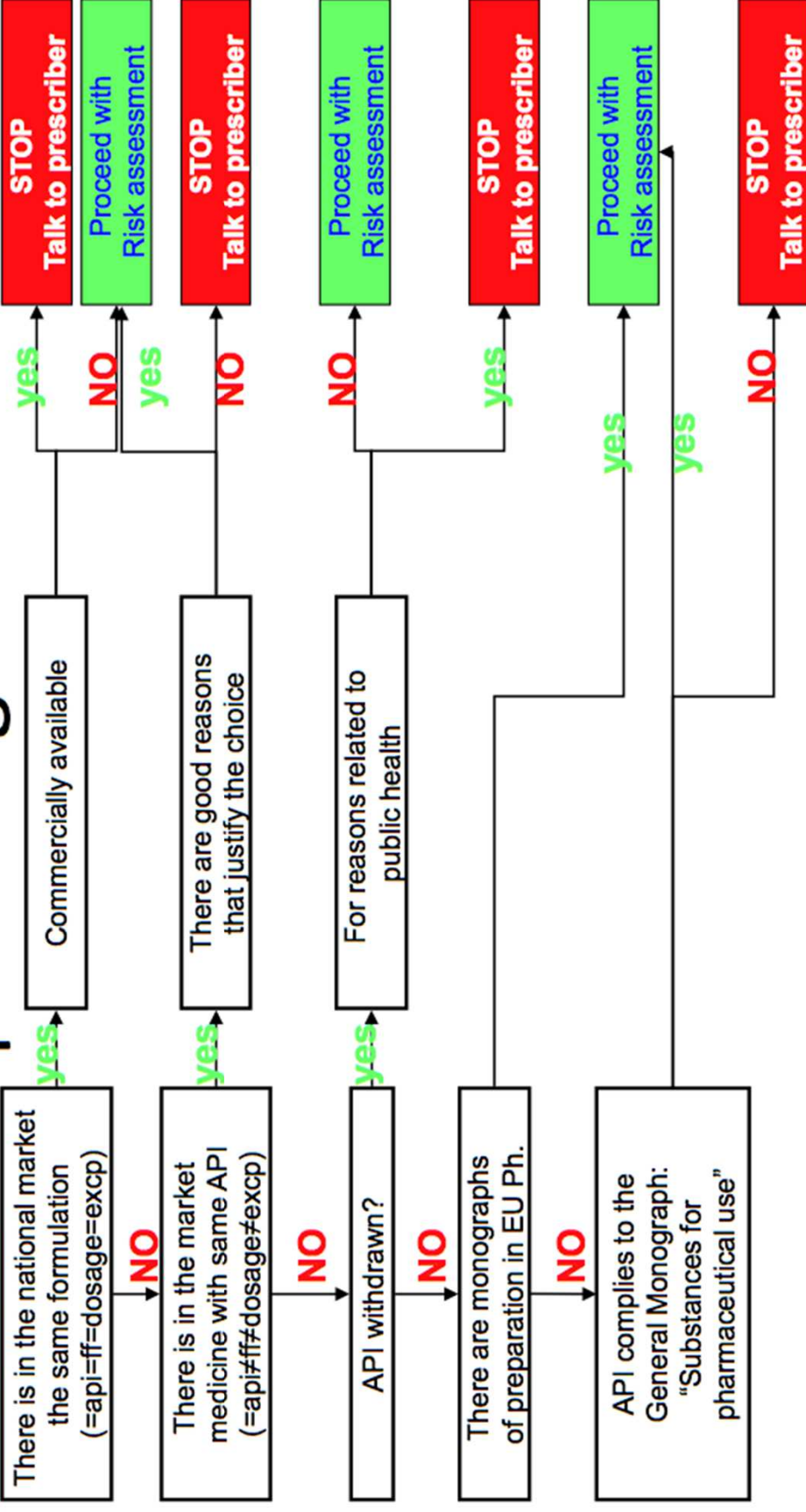
Resolution CM/Res(2016)1 on quality and safety assurance requirements for medicinal products prepared in pharmacies for the special needs of patients

All pharmacy-prepared medicinal products should be prepared using an appropriate

- quality assurance system.
- risk assessment before preparation



Compounding & risk assessment



Position Paper SIFO-SIFAP - <https://www.sifap.org/>

Table 3 Excipients known to be harmful and potentially harmful to neonates used in study population, their applications and safety concerns

Excipient	Functional category*	Applications and typical concentration	Safety concern
Table 4 Most commonly prescribed medicines (received by > 10 patients) containing known to be harmful or potentially harmful excipients			
Rank	Active substance, drug formulation	No of prescriptions	Potentially harmful or known to be harmful excipients
1	Gentamicin, inj solution	200	Parabens, sodium metabisulphite
2	Simeticone, oral suspension	108	Sodium benzoate, saccharin sodium, silicon dioxide, sodium cyclamate, sorbic acid
3	Heparin, inj solution	86	Benzyl alcohol, parabens
4	Laurilsulphate + Sorbitol + Sodium citrate, rectal solution	60	Sorbic acid

Table 2. Excipients effect in cytochrome P450.						
Excipient	CYP3A	CYP3A4	CYP3A5	CYP2C9	Glucuronidation	
Kolliphor® HS15	+				+	
Kolliphor® EL	+	+		+	+	
Kolliphor® RH40		+		+	+	
Tween-20*	+		+		+	
Tween-80*	+	+	+	+	+	
PEG400	+					
PEG1000			+			
PEG3350	+					
Myrij® 52	±	+		+		
Brij® 35	+	+				
Poloxamer 188	±					
Poloxamer 235	+					
Poloxamer 403	-		+			
Poloxamer 407	-					
Vitamin E TPGS	-	+				
Thiomers		+				
Modified cyclodextrins		+				
Sucrose laurate		+				
HPMC	+					
Crosscarmellose sodium	+					
Sodium starch glycolate	+					
Silicon dioxide	+					
Magnesium stearate	+					
Dicalcium phosphate	+					
Croscopidone	+					
Propylene glycol	+					
Acetic acid	+					
Malic Acid	+					
Triacetin	↑					
Phthalates	↑					
Lactose	-					
Cellulose microcrystalline	-					
Povidone	-					
Sodium starch glycolate	-					
Sodium lauryl sulfate	-					
Sucrose	-					
Cetyltrimethylammonium bromide	+					

(+) induction; (-) no induction; (±) variable information; (↑) enzymatic induction.

HPMC: hydroxypropyl methylcellulose; TPGS: Tocopherol polyethylene glycol succinate.

Table 3. Excipients effect on transporters.						
Excipient	P-gp	MRP2	BCRP	OATP		
Kolliphor® HS15						
Kolliphor® EL	+	±	+	+		
Kolliphor® RH40	±	+	-			
Tween-20*	+					
Tween-80*	±	+	+			
PEG400	+	+	-			
PEG300	+					
PEG2000		+				
Myrij® 52	+		-			
Brij® 35	+					
Brij® 30	+					
Span® 20	+		+			
Span® 40	-		-			
Span® 80	-		-			
Poloxamer 181	+		-			
Poloxamer 188	±					
Poloxamer 235	+	+	+			
Poloxamer 333	+	-				
Poloxamer 403	+					
Poloxamer 407	+	±				
Vitamin E TPGS	+	+				
Sodium lauryl sulfate	+	+	-			
Transcutol®	+					
Sucrose laurate	+	-				
Labrasol®	+	±				
Gelucire® 44/14	+					
Stearyl ether	+					
Softigen® 767	+					
8:0 phosphocholine	+					
10:0 phosphocholine	+					
cis-22:6 phosphocholin	+					
Propylene glycol	-					
Ethyl oleate	-					
Triacetin	-					
Inwitor 742®	+					
Miglyol®	+					

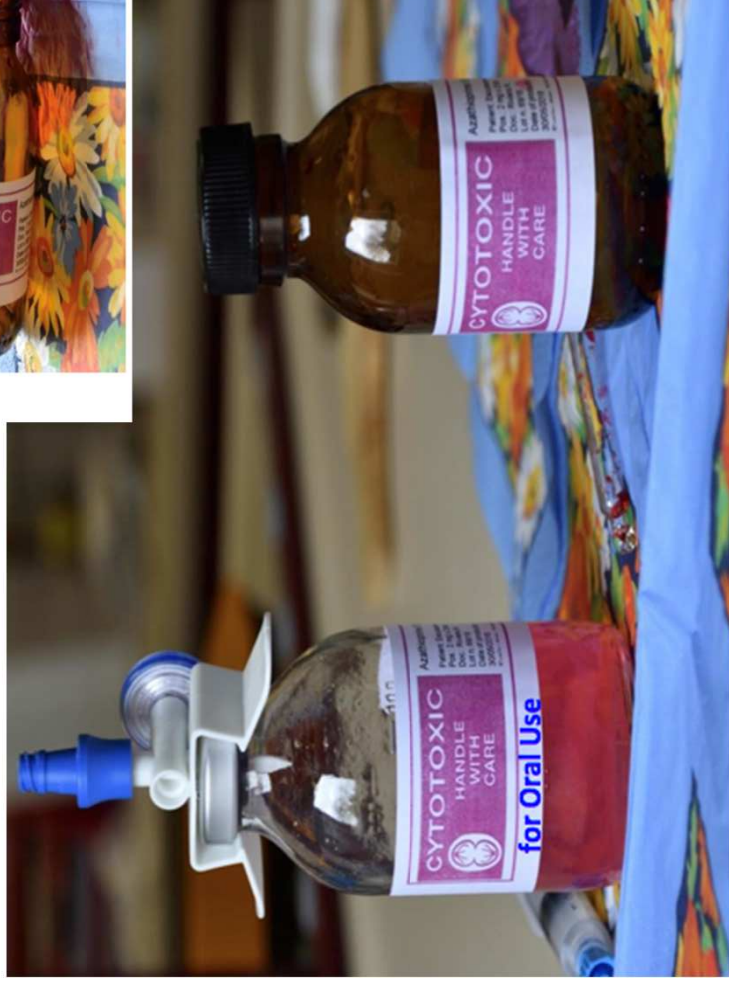
(+) inhibition; (-) no inhibition; (±) variable information.

BCRP: Breast cancer resistance protein; MRP2: Multidrug resistance associated protein 2; OATP: Organic anion transporting polypeptide; P-gp: P-glycoprotein.

The biopharmaceutical classification system of excipients, Teófilo Vasconcelos, Sara Marques, Bruno Sarmiento, Ther. Deliv. (2017) (2), 65-7



JORNADA POST EAHP



JORNADA POST EAHF



Tack så mycket
Muchas gracias

