



# THE EVIDENCE-BASED GUIDE OF DETECTION OF THE ROP OPS/PAHO



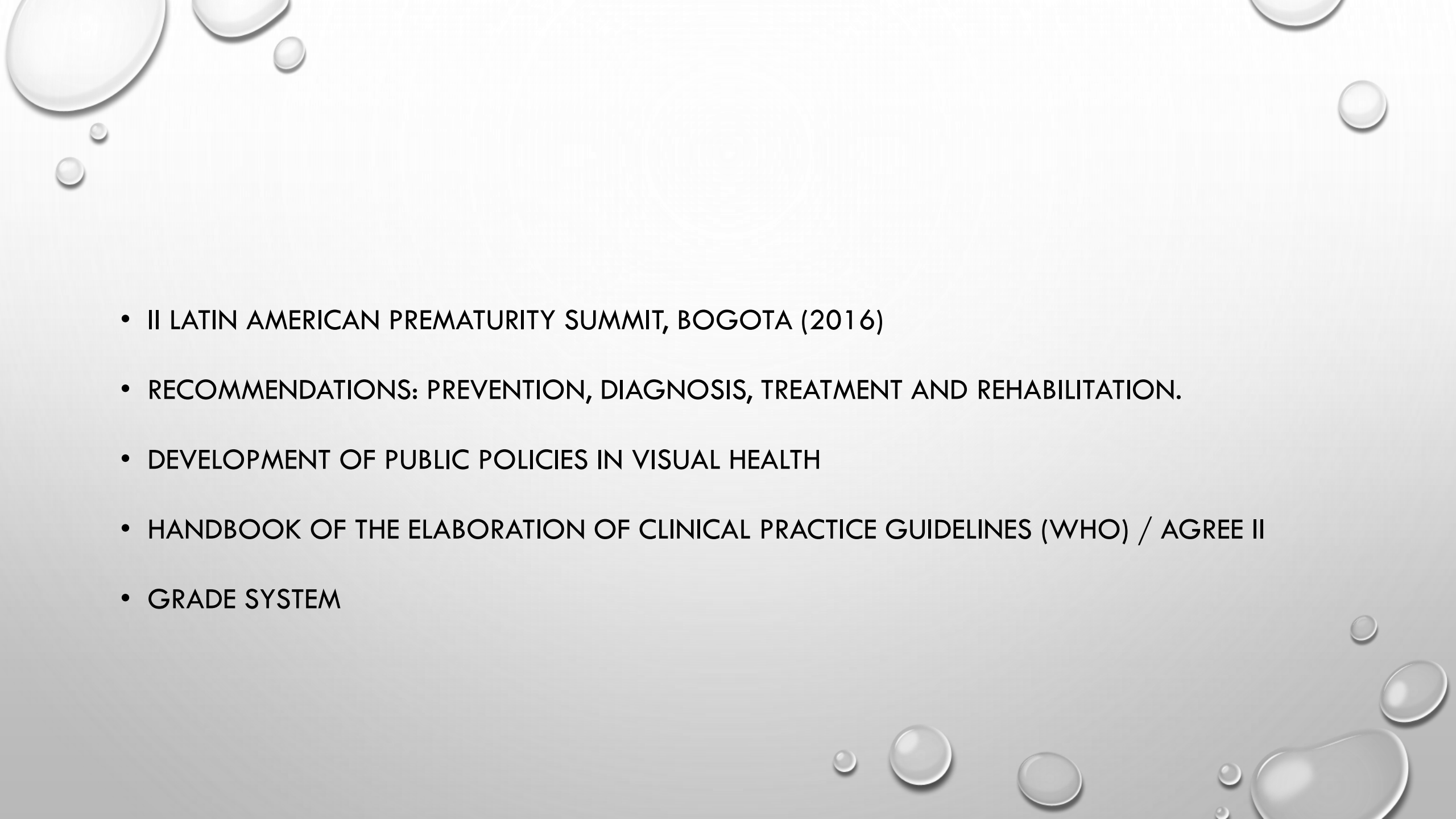
XII INTERNATIONAL CONFERENCE ON KMC

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OFTALMOLOGIA PEDIÁTRICA Y ESTRABISMO

- ROP: LEADING CAUSE OF CHILD BLINDNESS
- UNITED STATES
  - 15.000 <1.250 G
  - ROP: 66%
  - ROP TREATMENT: 4.5%
  - VISUAL SEQUEL: 3.3%

COUNTRY	YEAR	INCIDENCE
ARGENTINA	2010	26.2%
BOLIVIA	2002	14.3%
BRASIL	2010	9.3%
CHILE	2004	12.3%
CUBA	2010	5.1%
GUATEMALA	2010	13%
NICARAGUA	2004	23.8%
PERU	2007	19.1%
MÉXICO	2011	9.4%
COLOMBIA	2016	3.19%

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- II LATIN AMERICAN PREMATURETY SUMMIT, BOGOTA (2016)
  - RECOMMENDATIONS: PREVENTION, DIAGNOSIS, TREATMENT AND REHABILITATION.
  - DEVELOPMENT OF PUBLIC POLICIES IN VISUAL HEALTH
  - HANDBOOK OF THE ELABORATION OF CLINICAL PRACTICE GUIDELINES (WHO) / AGREE II
  - GRADE SYSTEM

# QUESTIONS

1. WHAT ARE THE RISK FACTORS OR PROTECTORS FOR THE OCCURRENCE OF ROP?
2. WHAT ARE THE USEFULNESS AND CONDITIONS OF SCREENING OF ROP IN PRETERM INFANTS?
3. WHAT IS THE ROP SCREENING TECHNIQUE TO USE IN PRETERM INFANTS?
4. WHAT ARE THE INDICATIONS FOR TREATMENT OF NEWBORNS DIAGNOSED WITH ROP?
5. WHAT ARE THE FOLLOW-UP INDICATIONS FOR NEWBORNS TREATED WITH ROP?

# 1. WHAT ARE THE RISK FACTORS OR PROTECTORS FOR THE OCCURRENCE OF ROP?

- USE OF ENTERAL FEEDING WITH HUMAN MILK AND COLOSTRUM IN PRETERM INFANTS.
- USE OF ERYTHROPOIETIN
- START RESUSCITATION WITH POSITIVE PRESSURE VENTILATION WITH LOW OXYGEN LEVELS (BETWEEN 21% AND 30%)
- MAINTAIN, IN THE BIRTH ROOMS, THE FOLLOWING SATURATION RANGES IN NEWBORNS:
  - 3 MINUTES: 70%-75%
  - 5 MINUTES: 80%-85%
  - 10 MINUTES: 85%-95%

# 1. WHAT ARE THE RISK FACTORS OR PROTECTORS FOR THE OCCURRENCE OF ROP?

- ADJUST OXYGEN LEVELS (INCREASE OR DECREASE) EVERY 90 SECONDS
- RECOMMENDED SATURATIONS: 89% TO 94%
- GOOD PRACTICE POINTS:
  - \* USE OF BLENDERS AND ENVIRONMENTAL OXIMETERS
  - \* BRONCHIAL HYGIENE WITH CLOSED ASPIRATION SYSTEM
  - \* LOW FLOW FLOWMETERS (1-3 LT/MIN) AND COMMON (15 LT/MIN)

## 2. WHAT ARE THE UTILITY AND CONDITIONS FOR SCREENING RETINOPATHY OF PREMATURITY IN PRETERM INFANTS?

- USE GESTATIONAL AGE AND BIRTH WEIGHT AS A SCREENING CRITERION.
- **ROP SCREENING** → LESS THAN 2000 GRAMS  
→ < 36 WEEKS WITH RISK FACTOR
- **REGISTRY**
  - ZONE
  - STAGE
  - EXTENSION (HRS)
  - PLUS OR NO PLUS DISEASE

GA	WEEKS	PMA
22	8	30
23	7	30
24	6	30
25	5	30
26	4	30
27	4	31
28	4	32
29	4	33
30	4	34
31	4	35
32	4	36
33	4	37

## 2. WHAT ARE THE UTILITY AND CONDITIONS FOR SCREENING RETINOPATHY OF PREMATURITY IN PRETERM INFANTS?

	ESTADÍO	ZONA I	ZONA II	ZONA III	
SIN PLUS	INMADURA	Yellow	Green	Green	EXAMEN EN DOS SEMANAS
	ESTADÍO I	Yellow	Green	Green	EXAMEN EN UNA SEMANAS
	ESTADÍO II	Orange	Yellow	Green	
CON PLUS	ESTADÍO III	Red	Orange	Yellow	TIPO 2 EXAMEN EN 3 O 4 DIAS
	ESTADÍO I	Red	Yellow	Yellow	TIPO 1 TRATAMIENTO en menos de 48 horas
	ESTADÍO II	Red	Red	Orange	
	ESTADÍO III	Red	Red	Red	

*Fuente: Programa De Cero a Siempre (Colombia, 2016).*

- SUSPEND EXPLORATION:
  - VASCULARIZED ZONE III
  - NOT BEFORE WEEK 37 PMA
- FOLLOW-UP AT THE OPHTHALMOLOGIST'S DISCRETION.

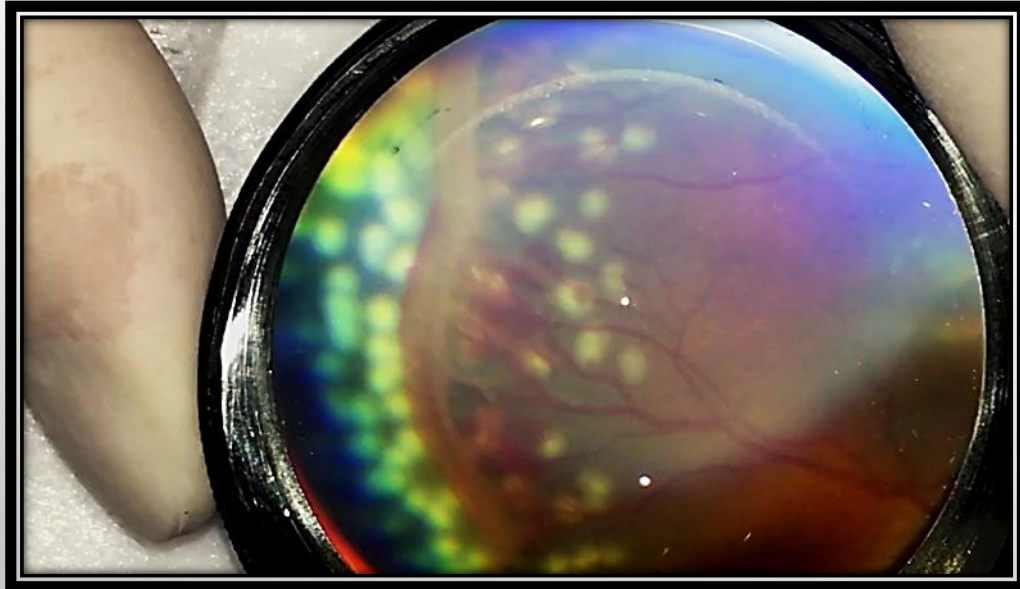


### 3. WHAT IS THE ROP SCREENING TECHNIQUE TO BE USED IN PRETERM INFANTS?

- PUPILLARY DILATATION: TROPICAMIDE 0.5% + PHENYLEPHRINE 2.5%.
- MONITORING: HR, RR AND PA
- ANESTHETIC DROPS
- REDUCE STRESS AND PAIN
- INDIRECT BINOCULAR OPHTHALMOSCOPY
- PEDIATRIC OPHTHALMOLOGIST OR RETINOLOGIST



## 4. WHAT ARE THE INDICATIONS FOR TREATMENT OF PRETERM INFANTS DIAGNOSED WITH RETINOPATHY OF PREMATUREITY?



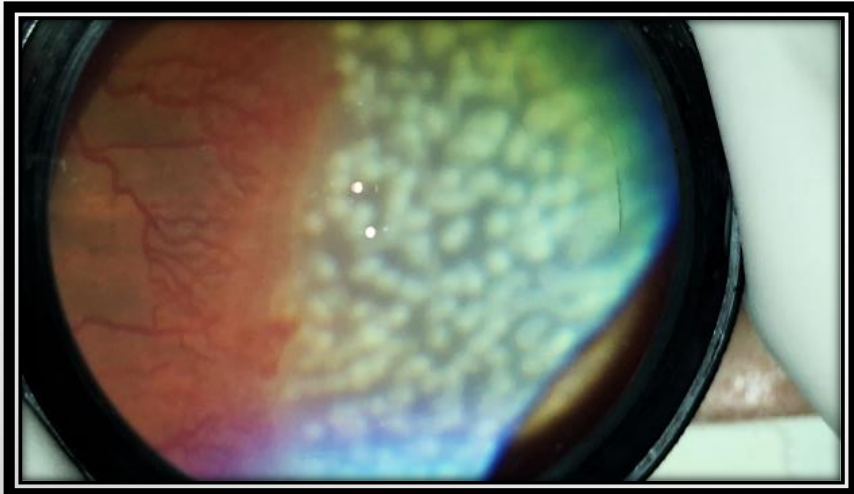
- ZONE I, ANY STAGE OF ROP, WITH PLUS DISEASE.
- ZONE I, STAGE 3, WITHOUT PLUS DISEASE.
- ZONE II, STAGE 2, WITH PLUS DISEASE.
- ZONE III, STAGE 3, WITH PLUS DISEASE.

## 4. WHAT ARE THE INDICATIONS FOR TREATMENT OF PRETERM INFANTS DIAGNOSED WITH RETINOPATHY OF PREMATURITY?

- POSTERIOR AGGRESSIVE DISEASE:  
TREATMENT < 48 HOURS.
- OTHER CASES: TREATMENT < 72 HOURS.
- EXPLANATION/CONSENT
- HOSPITALIZATION
- SITE: NICU WITH SEDATION AND ANALGESIA



## 4. WHAT ARE THE INDICATIONS FOR TREATMENT OF PRETERM INFANTS DIAGNOSED WITH RETINOPATHY OF PREMATURITY?



- TRANSPUPILLARY DIODE LASER THERAPY
- ANTIANGIOGENICS (ANTI-VEGF):
  - \* LASER TREATMENT FAILURE.
  - \* CHILD IN CRITICAL CONDITION
  - \* INABILITY TO VISUALIZE RETINA.
  - \* POSTERIOR AGGRESSIVE ROP.
  - \* ROP TYPE 1 IN ZONE I.

## **5. WHAT ARE THE FOLLOW-UP INDICATIONS FOR PRETERM INFANTS TREATED WITH RETINOPATHY OF PREMATURITY?**

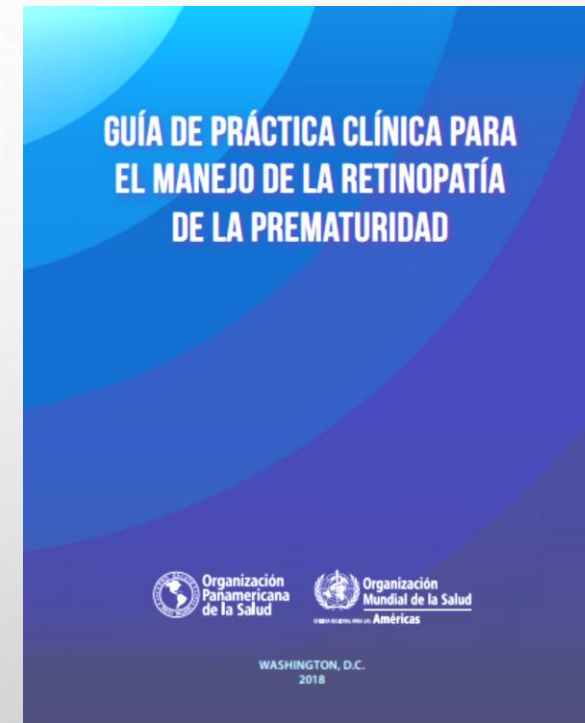
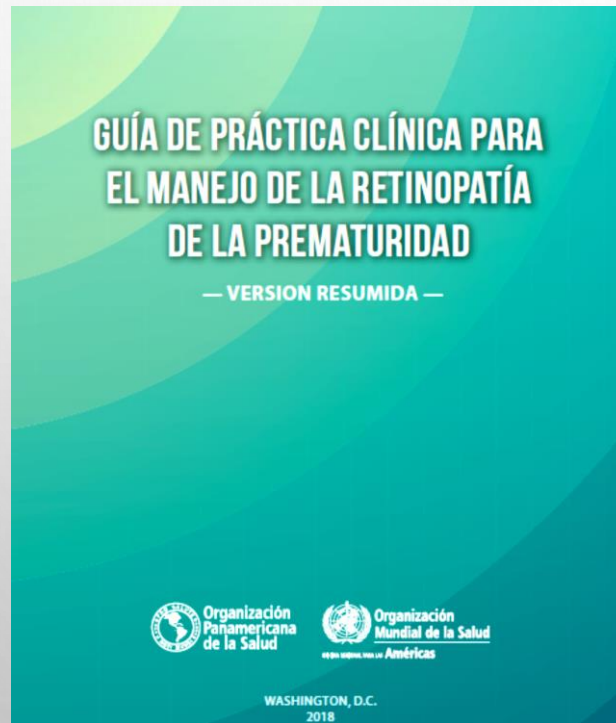
- POST-OP CONTROL IN THE FIRST WEEK (4 – 8 DAYS).
- NEED FOR RETREATMENT OR COMPLEMENTARY TREATMENTS.
- UNTIL THE DOCTOR CONSIDERS IT PERTINENT.
- FOLLOW-UP AT 3, 6 AND 12 MONTHS. LATER YEARLY.
- EARLY VISUAL STIMULATION.
- BLIND OR VISUALLY IMPAIRED: EARLY INTEGRATION INTO FORMAL EDUCATION

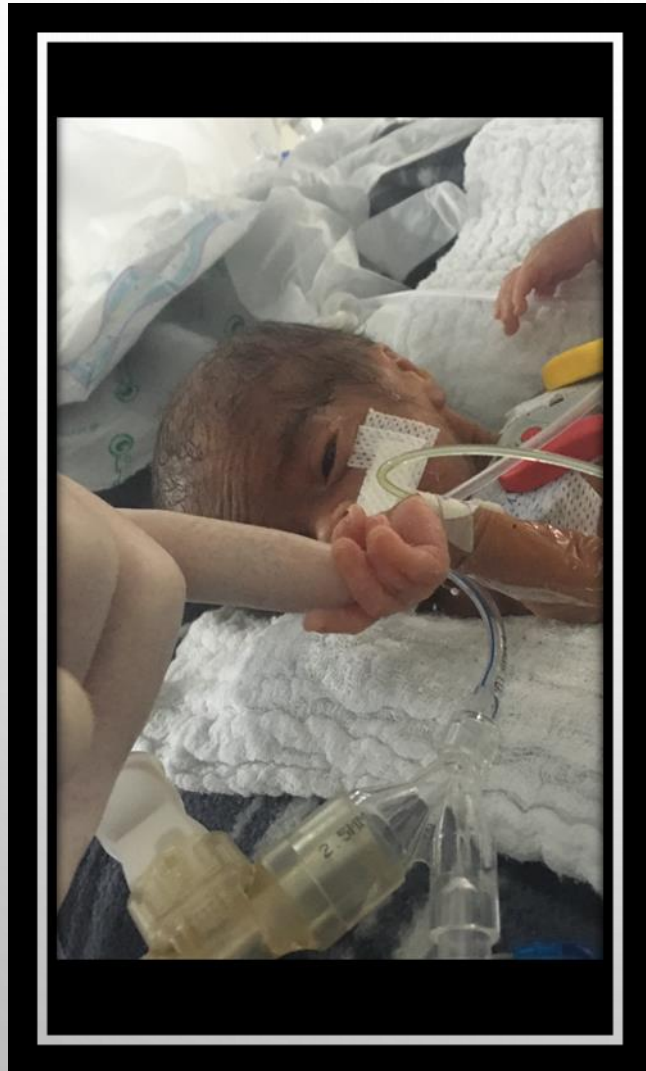
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- LATIN AMERICAN GROUP
- WHATSAPP
- TELEMEDICINE
- DIFFICULT TO MANAGE CASES
- UPDATE
- PROMOTION OF PREVENTION POLICIES IN ROP



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