

EMOFILIA

LA CERTEZZA DELLA CURA

TERAPIA SOSTITUTIVA, PERSONALIZZAZIONE, ACCESSO

27/28
GIUGNO
2019
TRIESTE
SAVOIA EXCELSIOR PALACE

Worldwide Initiative for Rh haemolytic disease Eradication (**WIRhE**)

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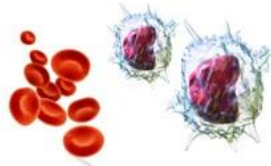
What is Rh Haemolytic Disease of the Newborn?

FIRST PREGNANCY

Mother Rh-; Baby rh+



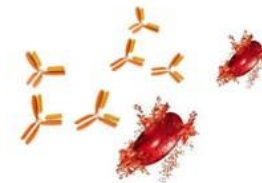
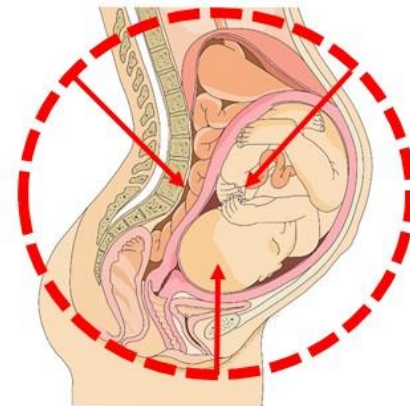
Mother exposed to fetal blood cells



Mother sensitized to Rh+

SECOND PREGNANCY

Mother Rh-; Baby rh+



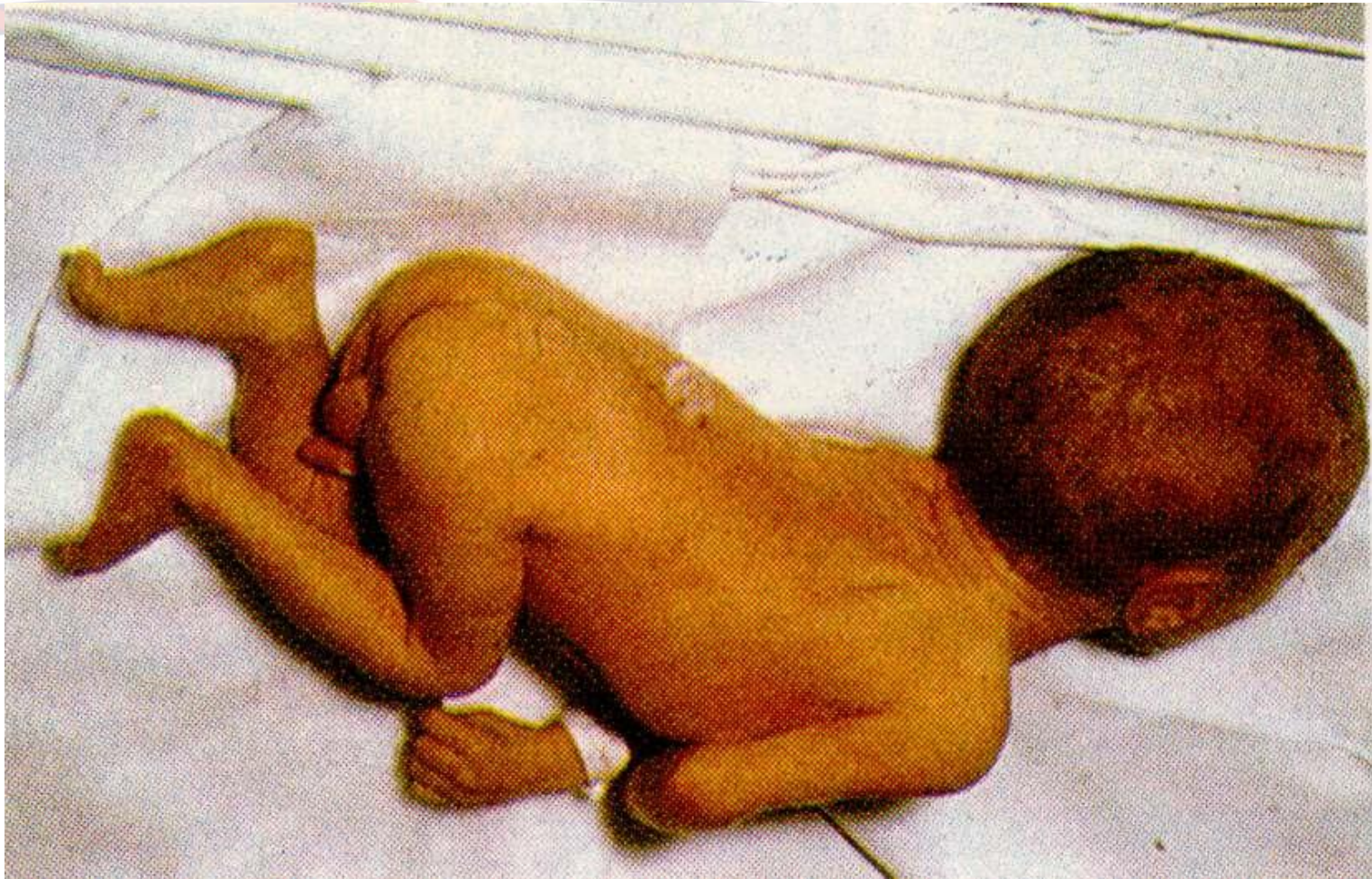
Fetal hemolysis due to mother's antibodies

Offspring of Rh alloimmunized women

- 45 - 50% Normal Hb or mild anaemia, DAT +
 - 25 - 30% moderate anaemia, hepatosplenomegaly, jaundice
 - 20 - 25% *Hydrops fetalis*, high death rate in utero or after birth. In half of these, hydrops develops at 20 - 30w gestation, or severe jaundice: *kernicterus* with death or coreoathetosis, spasticity high-freq. deafness.
- .



**Stillbirth with
hydrops fetalis
caused by Rh D
antibodies**



Infant with *Kernicterus* (brain damage caused by hyperbilirubinaemia).

Rh-HDN pre-prophylaxis

- 34 Rh-hdn deaths in 11035 deliveries, i.e. 3.2/1000 births
- 1 in 200 pregnant women: Rh abs.
- of immunised mothers:
 - 20% lost infants in 1st affected pregnancy
 - 40% in subsequent affected pregnancies

(Queen Charlotte's 1946 - 49)

Standard prophylaxis with anti-RhD Ig

- postnatal**
 - 100 - 300 μ g (500 – 1500 iu) if baby is RhD positive (country – dependent)
- antenatal**
 - for sensitizing events during pregnancy (e.g. amniocentesis)
 - 50 μ g before 20 weeks
 - 100-300 μ g after 20 weeks

Must be given **within 72h** of event

Conclusion from 2001 Cochrane review on Routine Antenatal Prophylaxis

- With post-natal prophylaxis, the risk of RhD immunisation after a 1st pregnancy is reduced from **17%** to **~ 1.5%**.
- AN prophylaxis reduces risk to **~ 0.2%**.
- **No adverse effects of AN prophylaxis reported**

Crowther 2001

Fetal Genotyping for RhD: Maternal plasma typing by a quantitative PCR before 28 weeks, to predict need for AN prophylaxis. Controls confirm the presence of fetal DNA. **Saves at least 40% of anti-D Ig when fetus is RhD negative.**

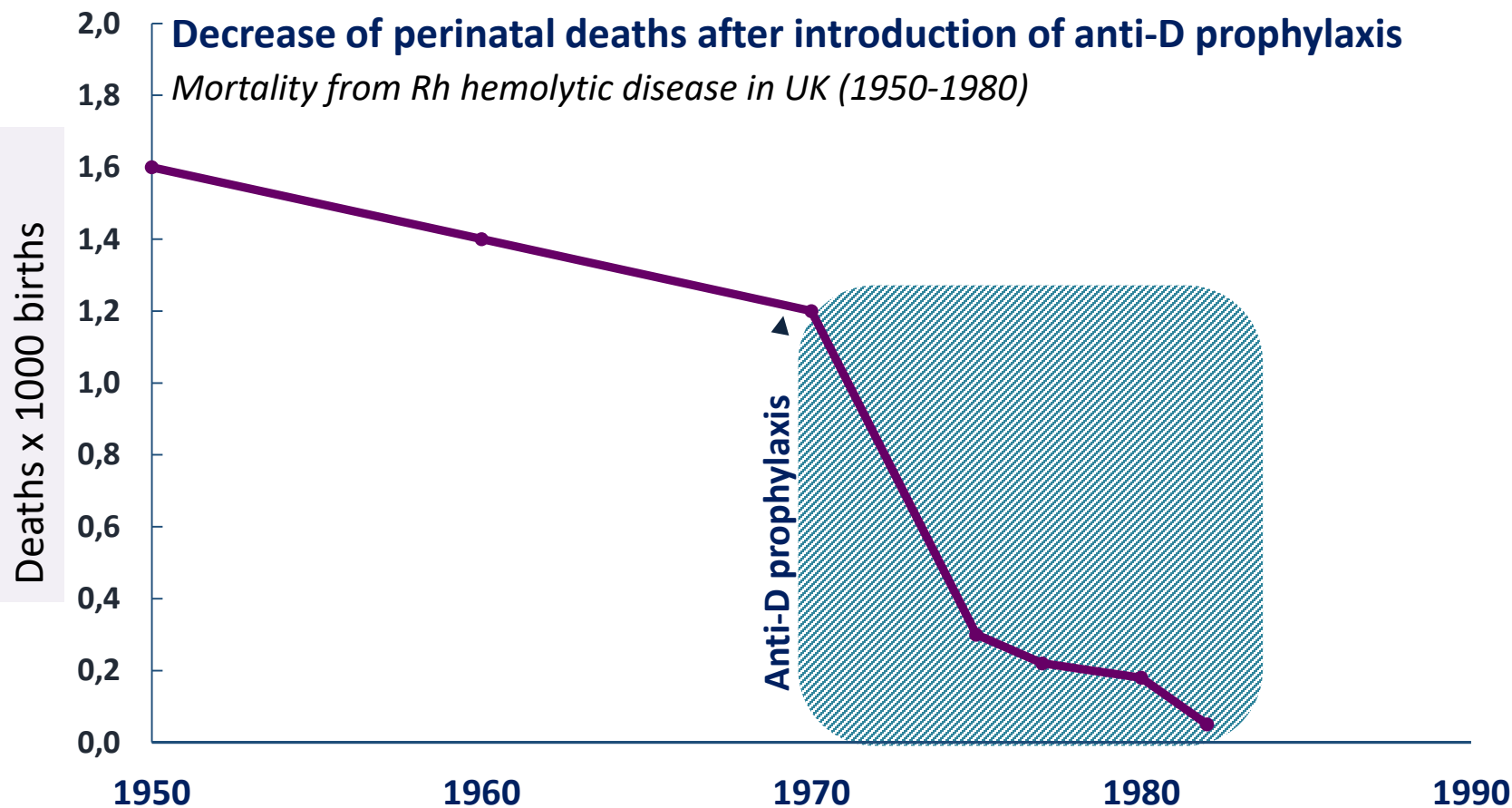


Most common use of molecular blood group genotyping

ANTI-D IG HAS MADE RH HDN 99.8% PREVENTABLE IN HIGH INCOME COUNTRIES

Decrease of perinatal deaths after introduction of anti-D prophylaxis

Mortality from Rh hemolytic disease in UK (1950-1980)



From: Tovey L A. (1984) The contribution of antenatal anti-D prophylaxis to the reduction of the morbidity and mortality in Rh hemolytic disease of the newborn. *Plasma Therapy Transfusion Technology* 5: 99–104

2018 a year long celebration KEDRION BIOPHARMA

LOOKING TO THE FUTURE



1st Annual International Symposium for the Global Eradication of Rh Disease
3rd Annual Dr. John G. Gorman Lectureship for Excellence In Transfusion Medicine



November 1, 2018
Columbia University Irving Medical Center

FEBRUARY 5
Meeting "Celebrating 50 Years of Rh Disease Prophylaxis" at Columbia University Irving Medical Center, New York, New York, United States

APRIL 19
Publication by Alvin Zipunsky, Vinod K. Bhutani, and Isaac Odame: "Rhesus Disease: A Global Prevention Strategy." The Lancet Child & Adolescent Health 2:7 (2018): 536-542.

AUGUST 15
Meeting "Celebrating 50 Years of Rhesus Disease Prophylaxis" at the Sickle Cell Foundation Center, Lagos, Nigeria

OCTOBER 17
Position Paper and Statement "The Continuing Burden of Rh Disease, 50 Years After the Introduction of anti-D Globulin on Behalf of FIGO's Safe Motherhood and Newborn Health Committee" at the International Federation of Obstetricians and Gynecologists (FIGO), World Congress, Rio de Janeiro, Brazil

APRIL 5
Meeting "50 Years of Rh Disease Prophylaxis - Looking Back-Looking Forth" at the Centro Nazionale Sangue, Rome, Italy

MAY 5
Meeting "Celebrating 50 Years of Rh Disease Prevention" at The Hospital for Sick Children, Centre for Global Health, Toronto, Canada

SEPTEMBER 26-28
Meeting "Special Symposium on Rh Prophylaxis, Mother & Child Health Conference" at the Kulakov Center & the Russian Society of Obstetricians, Moscow, Russia

NOVEMBER 1
Meeting Symposium "1st Annual International Symposium for the Global Eradication of Rh Disease" at Columbia University Irving Medical Center, New York, New York, United States

2018 A YEAR-LONG CELEBRATION: LOOKING TO THE FUTURE

APRIL 12
Meeting "Special Symposium: 50 Years of anti-D: Accomplishments and Challenges" at the International Federation of Obstetricians and Gynecologists (FIGO) Regional Congress in Middle East and Africa, Dubai

APRIL 19
Meeting "Anti-D: Donor Celebration" in Buffalo, New York, United States

MAY 29
Meeting "The Shot Heard 'Round the World," Anniversary of the first anti-D injection, at Kedrion, Fort Lee, New Jersey, United States

MAY 29
Meeting "50th Anniversary of anti-D Symposium" at the 2nd Eurasian Summit at Kulakov Center, Moscow, Russia

OCTOBER 13
Meeting Symposium "50 Years Later: The Current Status of the Epidemiology, Pathophysiology, and Treatment of Rh Disease" at the American Association of Blood Banks (AABB) Annual Meeting, Boston, Massachusetts, United States

OCTOBER 17
Meeting Symposium "50 Years of anti-D Prophylaxis: Accomplishments and Challenges" at the International Federation of Obstetricians and Gynecologists (FIGO), World Congress, Rio de Janeiro, Brazil

NOVEMBER 15
Meeting Special Lecture "Fifty Years of Rh Disease Prophylaxis - Looking Back, Looking Forth" at the Birth Conference, Venice, Italy



PRESENTING SPONSORS



Dr. Vincent Frezza and John Gorman



"Celebrating 50 Years of Rh Disease Prophylaxis" on February 5th at Columbia University Irving Medical Center



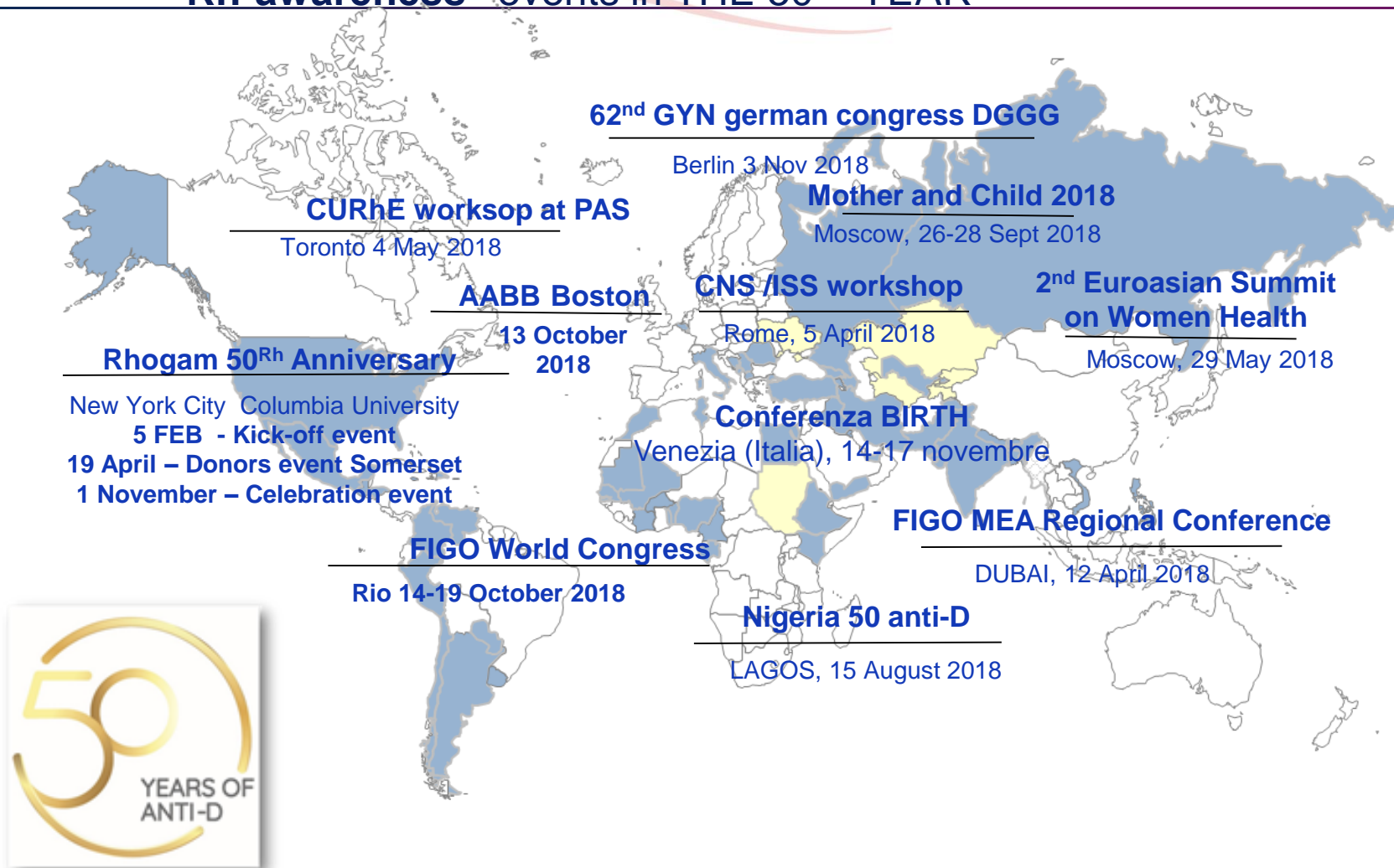
PATRON SPONSOR



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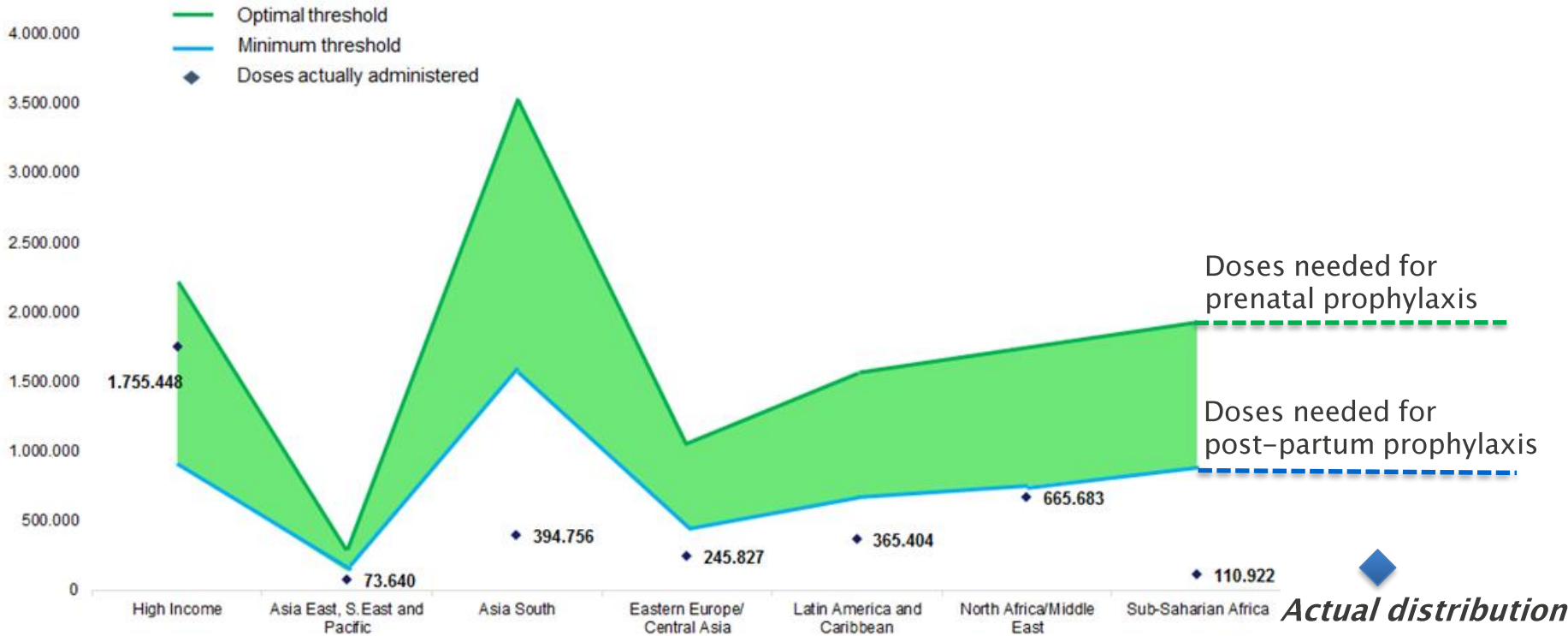
“Rh-awareness” events in THE 50^{Rh} YEAR



D (RH1)

- Clinically most important Rh antigen due to its high immunogenicity in RhD – negative subjects
- European Caucasians 82% - 88% RhD+
- Middle East 82% - 88% “
- SE Asia 92% - 96% “
- Africans 90% - 97% “
- Chinese, Japanese >99% “

ALIGNING GLOBALLY : IS PRACTICE FAR AWAY FROM POLICY ?

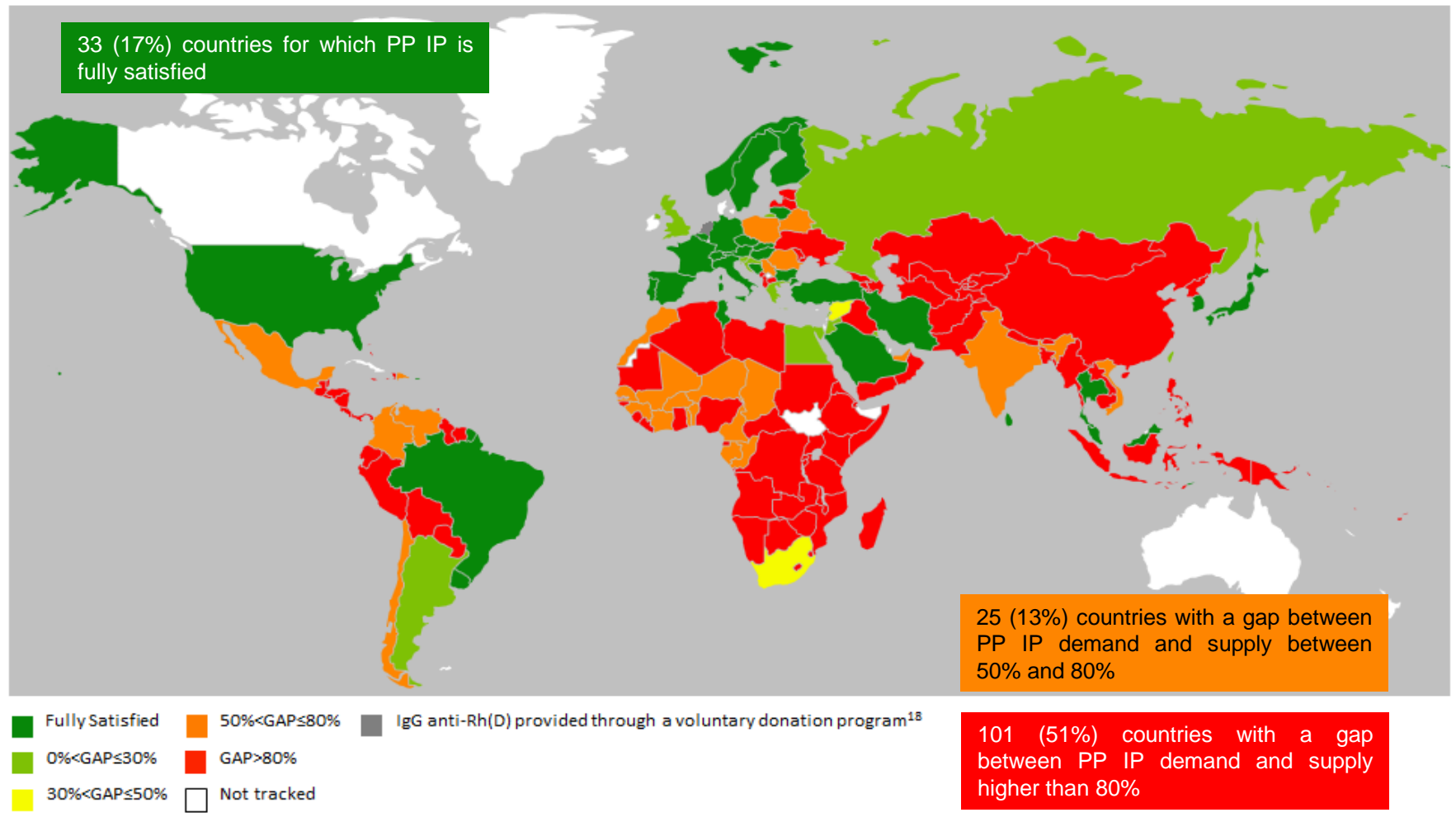


Year 2017 - Source of data:

Anti-D Doses distribution : IQVIA Midas **Nativity data**. UNICEF Rh Prevalence: Bhutani et al. 2013, Flegr, J. (2016).



The gap study



GLOBALLY 50% OF WOMEN AT RISK DON'T RECEIVE ANTI-D



Year 2015. Source of data:

Anti-D Doses distribution : MRB , IMS Health. **Crude birth ratio**. World factbook 2015. **Russia** : GSK research institutes.



“WIRhE” kick off event – all WELCOME!!



September 28th 2019

Florence - Spedale degli Innocenti

GLOBAL ERADICATION OF Rh DISEASE:

VICTORIES AND PITFALLS

*Public Symposium + John Gorman Lectureship
to be given by Professor Giuseppe Remuzzi M.D.,
F.R.C.P.*