

## Define the public health objectives

- Country willingness to dedicate (scarce – limited – abundant) resources
- ← Cost-effectiveness analyses ← expected recommendations
- Expected market size ← Willingness of manufacturers to invest
- ← Expectations for potential regulatory approval
- **Severe infant pertussis**
  - All countries
- **Whooping cough in children, adolescents, adults**
  - Challenging cost-effectiveness analyses (“comfort vaccine”)
  - Reactogenicity ↔ “comfort vaccine”

# Pertussis round table

## 1. Maternal immunization

- **Problem #1 : Effective implementation!** (“the organic pregnancy”)
  - Take off the restrictive SPC labels !!! ← what data is needed for this ?
  - Training of OB/GYN ??? ← any one knowing how to do this ??
  - Novel reach out approaches to parents ? ← role for pediatricians ?
- **Problem # 2 : maximize antibody responses and transfer**
  - Optimal timing of maternal immunization ? ← data
  - Differences between TdaP vaccines ? Boosting with PT vs rPT ? ← data
- **Problem # 3 : limited antibody persistence**
  - Requires boosting during EACH pregnancy ← reactogenicity of closely spaced doses of TdaP ← safety issues for the fetus ← **aP vaccine!!**
- **Problem # 4: declining responses to PT with successive boosters**
  - Will aP elicit protective PT responses in aP-primed / boosted (6x) women ?  
← data
  - ← limit prior aP boosting ? using rPT for pediatric / adolescent boosters?

# Pertussis round table

## 2. Novel infant vaccination strategies ?

### Required if

#### 1. Failure of maternal immunization

- ← Neonatal vaccination with aP vaccine
  - ↔ willingness of industry to invest ?
  - ↔ Regulatory requirements (serology bridging ?) ?
- ← Return to the EPI schedule = 6 -10 – 14 weeks ?
- ← Novel infant vaccine : sufficient incentive if required to prevent death
  - (novel) wP-combination vaccines at an early schedule ?
  - Novel adjuvanted infant vaccines

#### 2. Th1/Th17 priming for prevention of whooping cough in older children – adolescents – adults

- Investment, risk/benefits and cost-effectiveness unlikely acceptable

# Pertussis round table

## 3. Novel booster vaccination strategies ? Required if

1. Failure to boost aP-primed/boosted pregnant women
  2. Wish to protect against children/adults against whooping cough
- Question #1 : novel aP booster vaccines ?
    - Will rPT be more effective ? ← antibody transfer during pregnancy
    - Expected impact on cough ??? ← additional antigens ?
  - Question # 2 : adjuvanted aP vaccines?
    - Capacity to redirect responses of aP-primed children towards Th1/Th17 ?
  - Question # 3 : novel mucosal vaccines ?
    - Capacity to develop /produce highly effective and non-reactogenic intranasal vaccine ?

At low costs ↔ “comfort” vaccine!