

# Summary of Key Points

## WHO Position Paper on Reducing Pain at the Time of Vaccination September 2015



World Health  
Organization

# Background

- Pain from vaccine injections is common concern for both vaccine recipients and health-care personnel
- Pain at vaccination is a primary source of anxiety for caregivers of children receiving multiple injections:
  - 24%-40% of parents concerned about vaccine-associated pain in children
  - 85% believe health-care providers have responsibility to make vaccinations less painful
  - 95% wish to learn how to reduce vaccine-associated pain in children



# Public Health Impact

- Unaddressed pain may negatively impact health attitudes and behaviors, which may lead to delay/avoidance of future vaccinations
- Vaccine hesitancy can result in lower vaccine coverage rates that put both the individual and public at risk
- Pain mitigation is an important strategy to counter vaccine hesitancy
- Recommendations for pain mitigation exist in some countries, however most countries do not have explicit guidance on this subject



# WHO Position – General Measures

Recommended for implementation by national immunization programmes in all countries across all age groups:

- i. Health-care personnel should be collaborative and well informed
  - Use neutral language that doesn't increase anxiety
- ii. Vaccine recipient should be positioned properly according to age
  - Infants and young children should be held by caregiver
  - Older populations should sit upright
  - Patients with history of fainting should be lying down



# WHO Position – General Measures

- iii. No aspiration should be done during intramuscular injections
- iv. If injected sequentially in the same session, vaccines should be administered in order of increasing pain
  - Rotavirus vaccine may be given first (licensed liquid rotavirus vaccine can reduce pain), then oral polio vaccine can follow
  - Injectable vaccines should be given after oral vaccines
  - If pain grading is absent, health-care personnel should determine best injection sequence based on practical experience



# WHO Position – Age-Specific Additional Measures

## For infants and young children:

- i. Caregiver should be present throughout and after vaccination
- ii. Infants and children aged <3 years should be held by caregivers throughout procedure, those  $\geq 3$  years should be seated
- iii. Breastfeeding of infants should be done during or shortly before the vaccination session if culturally acceptable
  - If co-administering oral and injected vaccines, start with oral rotavirus vaccine, then oral polio vaccine (if used), then breastfeeding simultaneously with injected vaccines
- iv. Distract children <6 years to divert attention from pain



# WHO Position – Age-Specific Additional Measures

## For adults:

- Distractions using breathing interventions, such as slight coughing or breath-holding, is recommended

## For adolescents:

- Distraction is not effective
- No additional age-specific recommendations for this age group



# WHO Position – Measures Not Recommended

- Topical anaesthetics are effective but not recommended for systematic use by national programmes due to:
  - high costs
  - lack of availability
  - additional time required for application
- Data (only available for limited number of products) shows topical anaesthetics have no effect on immune response to vaccines





# WHO Position – Measures Not Recommended

- Interventions not recommended due to lack of evidence and/or potential for altering vaccine effectiveness include:
  - i. Warming the vaccine
  - ii. Manual stimulation of injection site
  - iii. Administration of oral analgesics before or at time of vaccination
- If pain response is delayed, oral analgesics can be given to mitigate pain and/or fever during days after vaccination



# WHO Position – Advice for National Programmes

- Reducing pain at vaccination should be considered part of good immunization practice globally
- National programmes should:
  - Ensure the above recommendations are implemented
  - Strengthen related health policy through provision of training on recommended policies and practices
  - Recommend preferred order of injection for country-specific vaccination schedules where possible



# WHO Position – Advice for National Programmes

- Health-care workers should be educated on pain mitigation strategies to facilitate implementation
- Caregivers and vaccine recipients should also be educated on pain mitigation strategies
  - Information could be provided during prenatal visits, breastfeeding education, or at time of vaccination
- Context-specific education methods should include individual or group teaching, or written information



# WHO Position – Research Needs

Priority research areas include studies on:

- i. Vaccination pain concerns and its impact on vaccine hesitancy and acceptance in low and middle-income countries
- ii. Other effective pain mitigation interventions, particularly for adolescents and adults
- iii. Pain mitigation interventions effective for mass campaigns and school-based programme settings
- iv. Further assessment of which specific vaccine injections are more painful and less painful



**For more information on the WHO  
Pertussis position paper, please visit the  
WHO website:**

**[www.who.int/immunization/documents/positionpapers](http://www.who.int/immunization/documents/positionpapers)**



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