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 a 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 are 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
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 ≥3 years should be seated

iii. Breastfeeding of infants should be done during or shortly before the vaccination session if culturally acceptable
   o 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:
  1. Warming the vaccine
  2. Manual stimulation of injection site
  3. 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