Global overview: Human rabies vaccine and immunoglobulin use monitoring, reporting and forecasting

Driving progress towards rabies elimination & 2nd international PARACON
Johannesburg, South Africa 12-14 September 2018

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In collaboration with Ministries of Health, NGOs, and research institutes
Assessment Objectives

- Describe procurement, delivery, distribution, and monitoring systems for rabies PEP
- Identify areas that need to be strengthened
- Understand the feasibility and logistical requirements of increasing access to rabies PEP
Methods

• Assessment tool with questions grouped into 10 main categories
  ◦ Program delivery
  ◦ Vaccine procurement, demand, requests and distribution
  ◦ Cold-chain and vaccine storage
  ◦ Vaccine and RIG forecasting
  ◦ Vaccine monitoring and utilization

• Series of interviews with key informants at every level
  ◦ Health facility visits when possible

• Assessment tool distributed to 25 countries
  ◦ Some countries did in-depth surveys
Countries participating

AFRO
Chad
Cameroon
Cote d'Ivoire
Ethiopia
Ghana
Kenya
Mali
Madagascar
Malawi
Nigeria
South Africa
Tanzania

EMRO
Pakistan

SEARO
Bangladesh
Bhutan
India
Nepal
Sri Lanka

WPRO
Cambodia
China
Mongolia
Philippines
Vietnam
Vaccine type

- Six (26%) of 22 countries exclusively use PQ vaccines
- 15 (68%) of 22 countries use either pre-qualified (PQ) or non pre-qualified vaccines (non-PQ)
- Most common reasons for using non-PQ vaccines are lower cost and increased availability
Administration route

- 52% exclusively use IM administration
  - Essen 5-dose regimen most commonly used
- 22% exclusively use ID administration
  - Updated Thai Red Cross regimen most commonly used
- 22% use either ID and IM administration
- 1 country uses subcutaneous administration (NTBV)
Availability and cost of vaccine

• In 10 (43%) of 23 countries, vaccine is consistently provided for free to the patient in the public sector

• In 4 of 23 (17%) countries, vaccine is provided for free when available
  ◦ These countries reported limited capacity to procure vaccines due to insufficient funds, so patients are required to purchase it

• In 7 (30%) of 23 countries, patients are required to pay ($6.60-20/dose)
  ◦ Primary reason for high vaccine cost to patients, is lack of funds at the central level to subsidize vaccine costs

• In 2 (15%) of 23 countries, vaccine is provided for free to certain patient groups only
Access to vaccine & RIG by Gavi-eligibility

Access to Rabies Vaccines

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Access to RIG

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</table>
Access to Rabies Vaccine by Presence of National Programme

- Limited accessibility
- Accessible
- Widely accessible

*National program*  *No program*
Distribution

• 11 (50%) of 22 countries have a standardized PEP distribution/collection system separate to EPI program
  ◦ Frequency ranges from monthly to annual

• Combination of manufacturer distributing to facilities and MOH distribution (separate to EPI)
  ◦ 4 (18%) of 22 countries

• Ad hoc collection/distribution separate to EPI
  ◦ 6 (27%) of 22 countries

• No countries currently use EPI distribution mechanisms (at the time of the survey, 2 countries were transitioning away from using EPI)
Monitoring and Reporting

• 19 (86%) of 22 countries have some type of monitoring system for tracking patients receiving PEP, or for monitoring vaccine stock
  ◦ At least 6 (32%) of these countries reported that tools are not standardized, their use is not enforced, or is limited to selected health facilities only
  ◦ Variables collected vary by country, and in some cases by health facility within a country

• 9 (41%) of 22 countries have regular mandatory weekly, monthly or quarterly reporting on rabies vaccination
Procurement

• Most PEP procurement happens at the national level, independent of EPI program, or directly from the manufacturer
  ◦ Typically more complicated and longer than EPI vaccines

• Only one country has received a donation of vaccine and RIG; most others use their own budgets

• Time from procurement to arrival in country: ~4-6 months (0 months -1 year)
Conclusions

• Access to rabies vaccine continues to be hindered by cost
• Many countries use non pre-qualified vaccines
• Only 1/3 of countries exclusively use ID administration
• Almost half of all countries assessed have a regular system of distribution or collection for rabies vaccines, separate from routine vaccines
• Limited information on vaccine utilization in part due to lack of standardization of monitoring tools and lack of mandatory reporting
Recommendations

• Consider developing standardized global guidelines for rabies PEP
  ◦ Provide examples of standardized reporting tools
  ◦ Consider instituting mandatory reporting on PEP utilization

• Consider leveraging systems that are already established for distribution

• Encourage manufacturers to apply for pre-qualification

• Strengthen advocacy and training for ID administration
Acknowledgements

• Ministries of Health
• National and regional rabies focal points
• NGOs and research institutes
• CDC Poxvirus and Rabies Branch
Questions?