

***Use of indicators to monitor measles
surveillance quality and measles
elimination***



**World Health
Organization**

Objectives- Day 3

- Review the targets and indicators
- Present analysis of regional data per indicator
- Provide recommendations based on regional analysis



Proposed Indicators For Monitoring Surveillance Performance

- *Progress can only be monitored in the presence of a well performing surveillance system.*
- 4 indicators for monitoring surveillance system performance.
- Use the proposed indicators and evaluate their practicality and usefulness.



1. Reporting Rate

1. At national level, a rate ≥ 2 non-measles suspected measles cases/ 100,000 population. Cases must be investigated and discarded as non-measles using lab testing in a proficient lab and/or epi-linkage to another confirmed disease.
- ≥ 1 non-measles suspected measles/ 100,000 in at least 80% of the administrative units at the lowest administrative level.

Reporting Rate

- Is the reporting rate a useful indicator of measles surveillance sensitivity?
- Is the target of the reporting rate at national and district level appropriate?
- Provide guidance for small districts (<100,000 pop).
- To address these questions, need to know:
 - What are the reporting rates achieved in countries?
 - How do reporting rates vary by case definition used?
 - What are the characteristics of the districts not meeting this indicators? Silent areas over >1 year?
 - What are the reasons for low or high reporting rates?



Adequacy of Investigation

- 4. Adequacy of Investigation.** At least 80% of all reported suspected measles cases should have had an adequate investigation within ≤ 48 hours of notification.
- An adequate investigation includes at a minimum:
 - date of rash onset
 - date of specimen collection
 - vaccination status
 - date of last vaccination
 - age, sex and district.
 - an investigation of all epidemiological links.

Adequacy of Investigation

- Is 48 hours a reasonable time? Is it more realistic to have investigation initiated within 48 hours? And completed by x days?

Laboratory Confirmation/Viral detection

2. Specimens adequate for detecting measles IgM should be collected from at least 80% of suspected measles cases and tested in a proficient lab. Exclude cases epi-linked to a lab-confirmed case of measles/ other communicable disease.
3. Samples should be collected for virus detection from 80% of identified transmission chains and tested in an accredited lab.

Laboratory Confirmation/Viral detection.

- Is 80% target too low?
- Should "chain of transmission" be modified to "chains of transmission and sporadic cases"?



Proposed Indicators For Monitoring Progress Towards Elimination

- 4 indicators for monitoring progress towards/suggestive of elimination with targets.
- Use the proposed indicators and evaluate their practicality and usefulness.
- **the proposed elimination indicators should not be used in isolation. Rather, an assessment of *all four* is necessary to make reliable conclusions.**
- Once a particular country/ region has approached the targets that are suggestive of elimination, an in-depth review is recommended to validate that any given country/region has indeed achieved elimination.

Proposed Indicators For Monitoring Progress Towards Elimination

1. Vaccination coverage: Achieving and maintaining at least 95% coverage with both MCV1 and the second opportunity of measles vaccination in all districts and nationally.
2. Outbreak size: At least 80% of outbreaks should have less than 10 confirmed measles cases.
3. Incidence: < 1 confirmed case/ per million population per year. The numerator should exclude measles cases classified as imported.
4. No. endemic measles cases:
Zero cases of measles caused by an endemic virus strain for at least 12 months.

Definitions

- 1. Endemic measles transmission:** the existence of continuous transmission of indigenous or imported measles virus that persists for a period of 12 months or more in any defined geographical area.
- 2. Chain of transmission/outbreak.** When two or more confirmed cases are temporally-related (with 7-21 days between rash onset of cases), and are epidemiologically and/or genetically linked.
- 3. Measles imported case** are cases exposed outside the region/country during the 7 to 21 days prior to rash onset as supported by epidemiological and/or virological evidence.

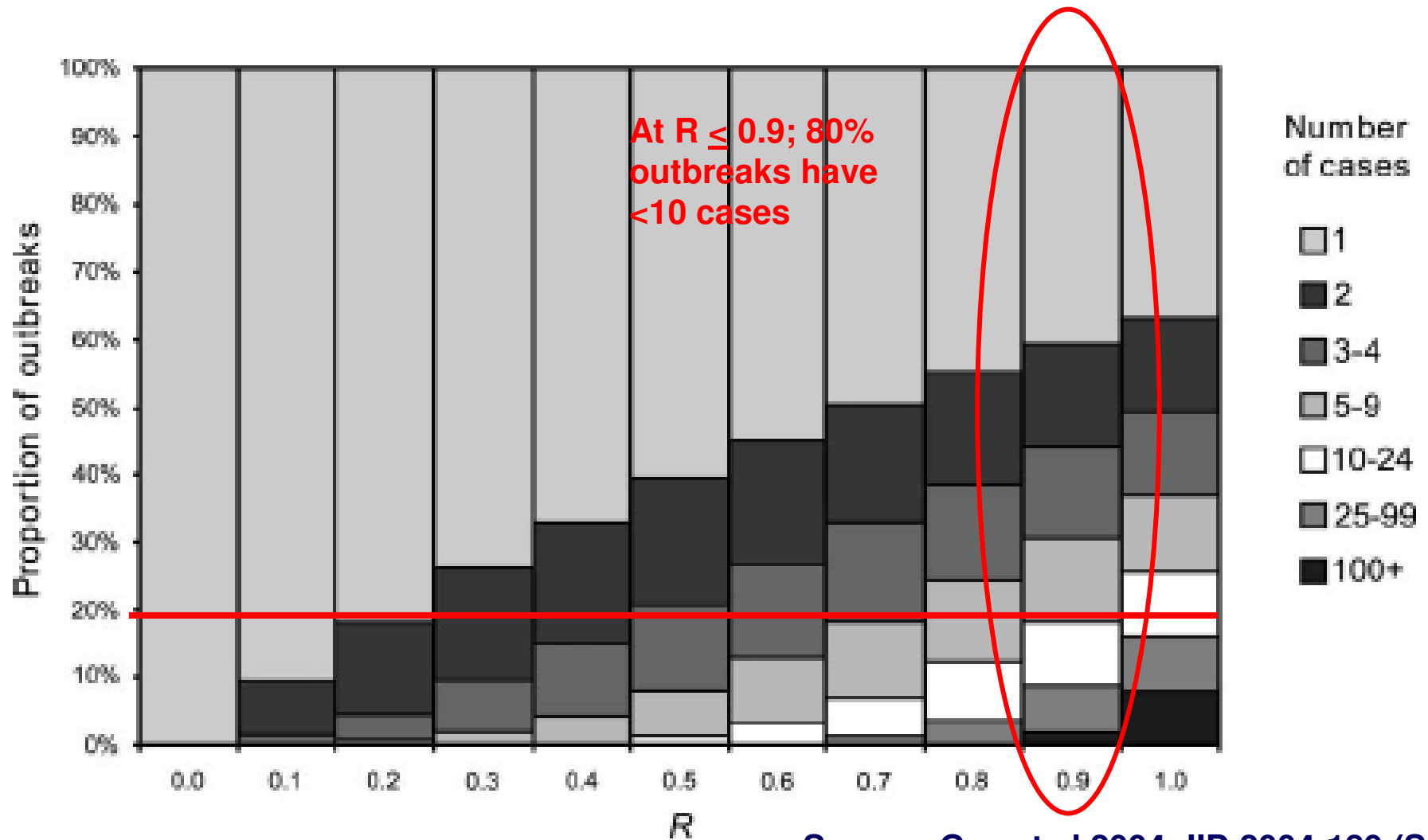


Definitions (cont.)

- 4. Measles import-related cases** are locally-acquired infections occurring as part of a chain of transmission originated by an imported case as supported by epidemiologic and/or virological evidence.
- 5. Elimination:** The absence of endemic measles cases for a period of twelve months or more, in the presence of adequate surveillance.
- 6. Re-establishment of Endemic Transmission.** Is a situation in which epidemiological and laboratory evidence indicates the presence of a chain of transmission of laboratory-confirmed virus that continues uninterrupted for a period of twelve months or more.



Outbreak Size



Source: Gay et al 2004; JID 2004:189 (Suppl 1)