Outline

- Defintion and objectives of malaria surveillance

- Components of malaria surveillance system

- Role of surveillance in different malaria settings

- Challenges

- Suggested strategies for implementing surveillance as a core intervention

- Conclusion

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Definition and Objectives of Surveillance

What is the definition of surveillance?

- the continuous and systematic collection, analysis and interpretation of disease-specific data

- the use of that data in the planning, implementation and evaluation of public health practice
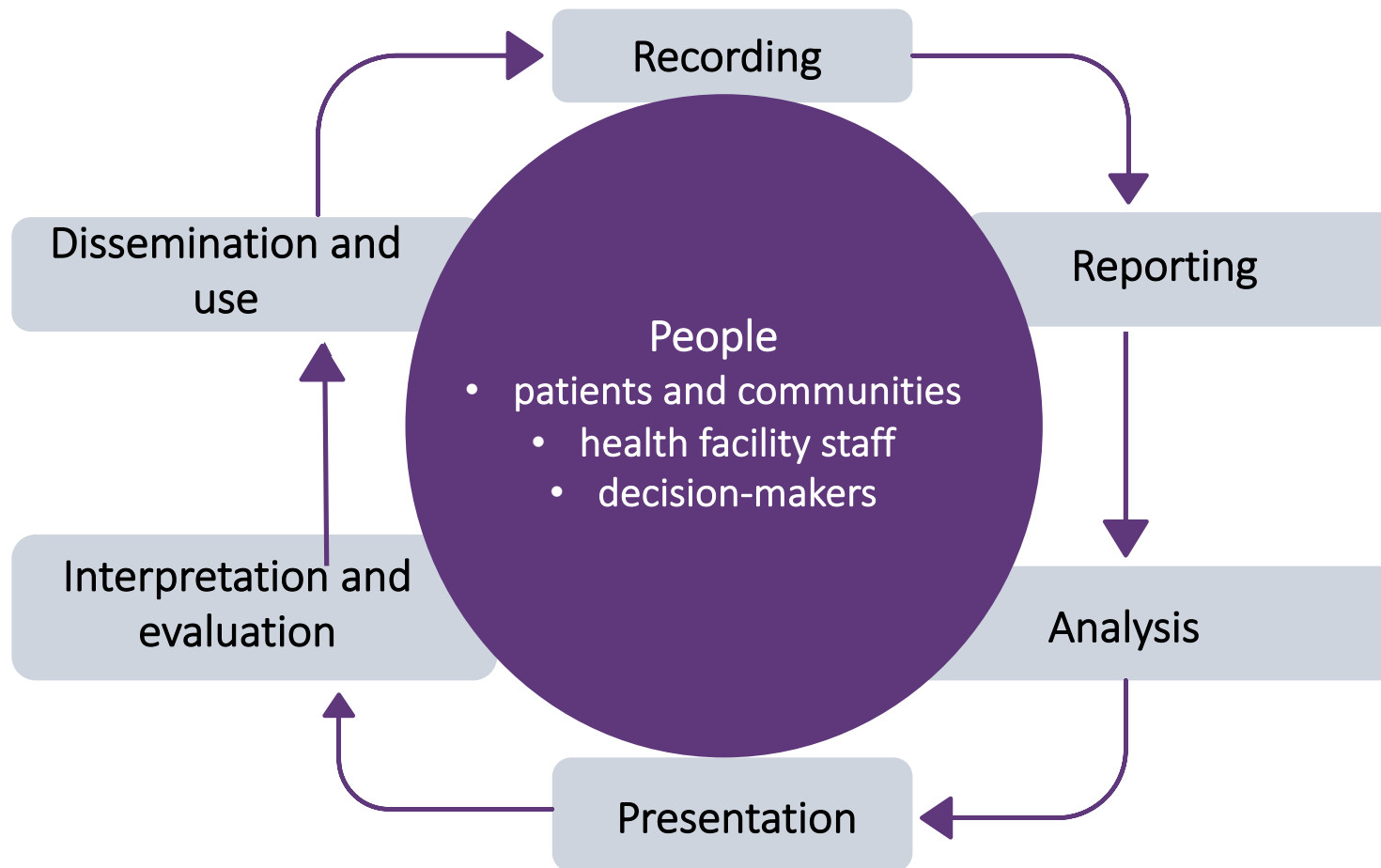
Why is surveillance critical?

- to support reduction of the burden of malaria

- contribute to the elimination of malaria and prevention of re-establishment

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What Makes up a Malaria Surveillance System?

Recording

Reporting

Analysis

Presentation

Interpretation and evaluation

Dissemination and use

People
- patients and communities
- health facility staff
- decision-makers

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Role of Surveillance in Three Types of Settings

1 In high transmission settings:

- provide data for overall analysis of trends
- permit stratification and planning of resource allocation.

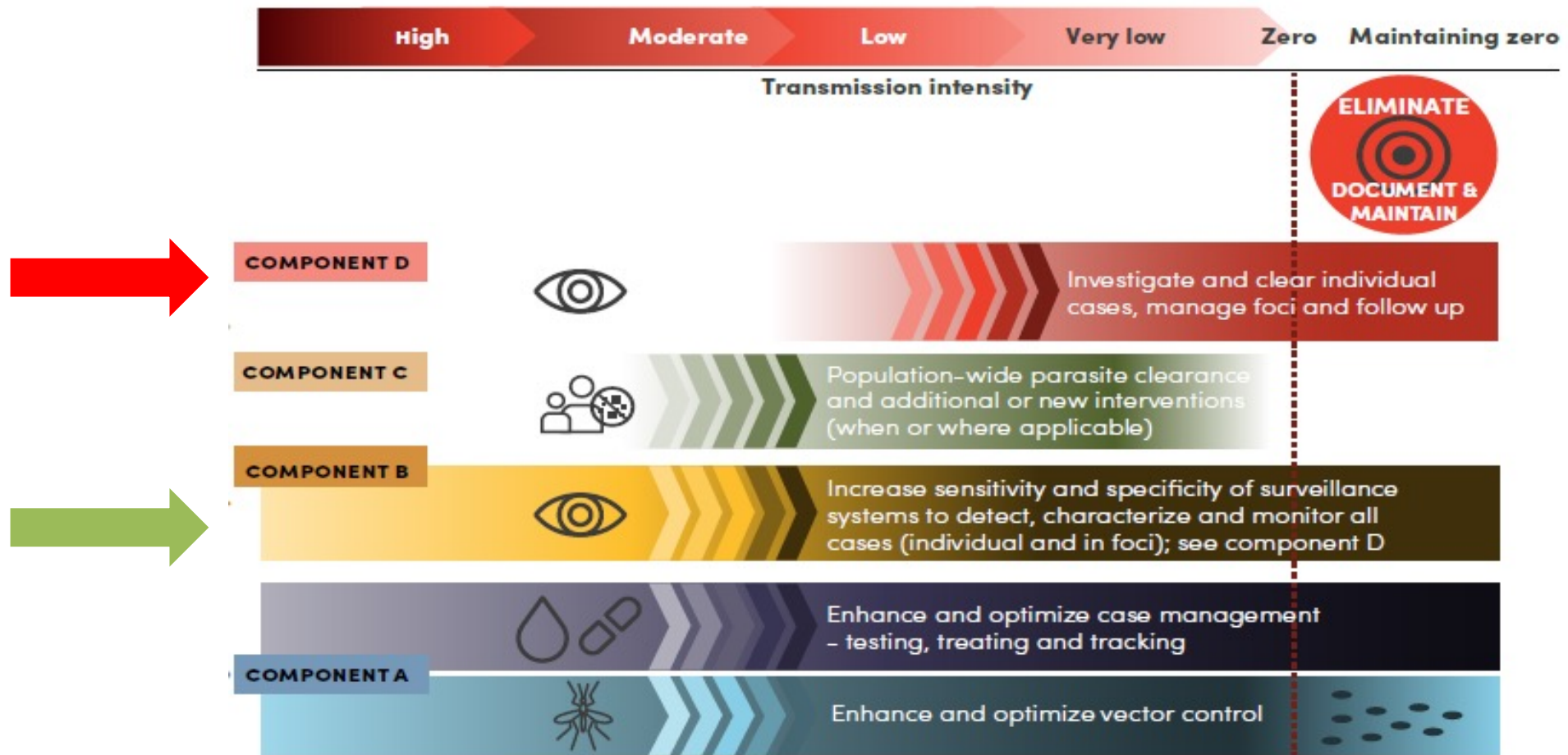**2** Where malaria is being eliminated:

- identify infections early to prevent onward transmission
- determine the most likely location of infection
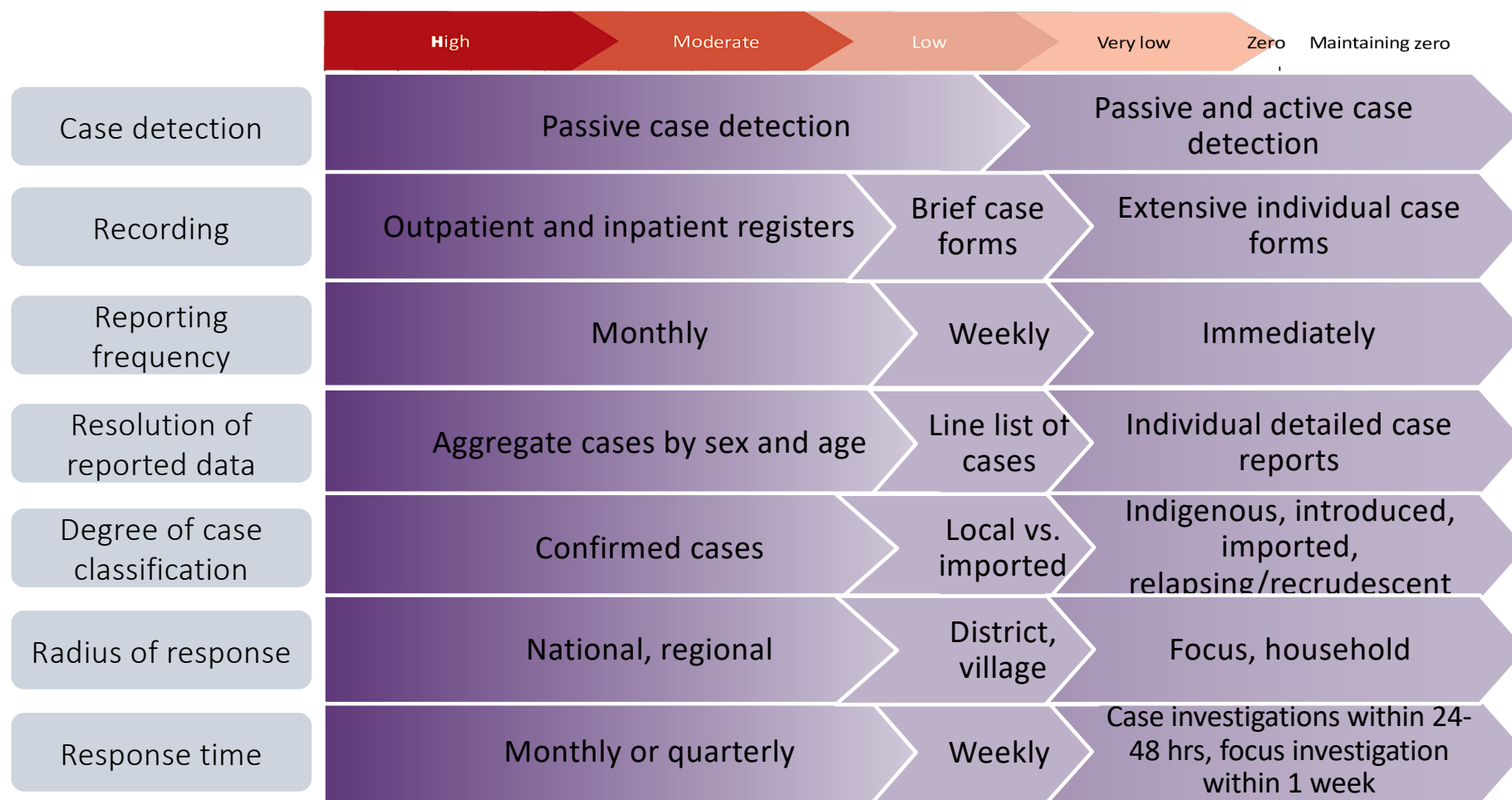- identify, investigate and eliminate foci of continuing transmission

3 Preventing re-establishment:

- identify imported cases early to prevent local cases
- identify outbreaks quickly to prevent re-establishment.

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Surveillance Along the Continuum

Source: WHO, 2017

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Surveillance Characteristics Along the Malaria Continuum

	High	Moderate	Low	Very low	Zero	Maintaining zero
Case detection	Passive case detection				Passive and active case detection	
Recording	Outpatient and inpatient registers		Brief case forms		Extensive individual case forms	
Reporting frequency	Monthly		Weekly		Immediately	
Resolution of reported data	Aggregate cases by sex and age		Line list of cases		Individual detailed case reports	
Degree of case classification	Confirmed cases		Local vs. imported		Indigenous, introduced, imported, relapsing/recrudescent	
Radius of response	National, regional		District, village		Focus, household	
Response time	Monthly or quarterly		Weekly		Case investigations within 24-48 hrs, focus investigation within 1 week	

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Surveillance Systems - Elimination Settings

The malaria surveillance system in elimination settings must be capable of:

1   Early detection, diagnosis and treatment of all malaria infections

2   Investigation of cases to determine the likely location of infection and case classification

3   Investigation of foci to determine causes of transmission and develop a focus response plan

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Implementing malaria surveillance as a core intervention

Challenges of malaria surveillance

- Poor planning and coordination
- Weak laboratory / diagnostic capacity
- Inadequate number / training of health workers
- Lack of technical guidelines and reporting tools
- Poor supervision
- Lack of feedback
- Poor communication systems
- Inadequate financial resources

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Implementing malaria surveillance as a core intervention

Strategies

Management for surveillance

- Coordination of stakeholders (who, where, what are their roles and responsibilities)
- Communication and communication systems (strategy, systems, risk communication, advocacy messaging)
- Financial resources – (is there a plan, is it costed)

Commodities

- Laboratory capacity / diagnostics (where and how will the cases be detected)
- What systems need to be strengthened?

Human Resources capacity

- Adequate numbers
- Training
- Supervision (regular / mentorship)

Processes

- Strategic approach (what is the objective – where is the programme along the continuum?) – see next slide
- Technical guidelines (setting of standards e.g., case definitions)
- Reporting tools
- Information systems (EHRs, linkages between systems) – see next slide

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Implementing malaria surveillance as a core intervention - Process

Strategic approach

- Defines the objective of surveillance. The programme therefore determines:
  - the specific case detection method to be used (passive detection, active case detection)
  - the speed at which data needs to flow through the system (immediate vs routine)
  - the rapidity of response required (immediate investigation of cases or clusters of cases vs analysis of data on a regular basis with subsequent adjustments to a control programme)

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Implementing malaria surveillance as a core intervention – Process

Information systems

- Integration is recommended as far as possible
- The level of coordination/integration in the national surveillance system can affect:
  - performance of the system
  - cost of the system
  - sustainability of the system

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Conclusion

- The core functions of the malaria surveillance system are:
  - Case detection
    - reporting
    - investigation and confirmation
    - analysis and interpretation
    - action
  - Response actions / control
  - Feedback
  - Policy development
- Implementing surveillance as a core intervention requires that programmes think of it strategically, like other interventions, with inputs and costs aimed at delivering the desired outcome.

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