Elimination efforts in Nepal: lessons learned and challenges remaining

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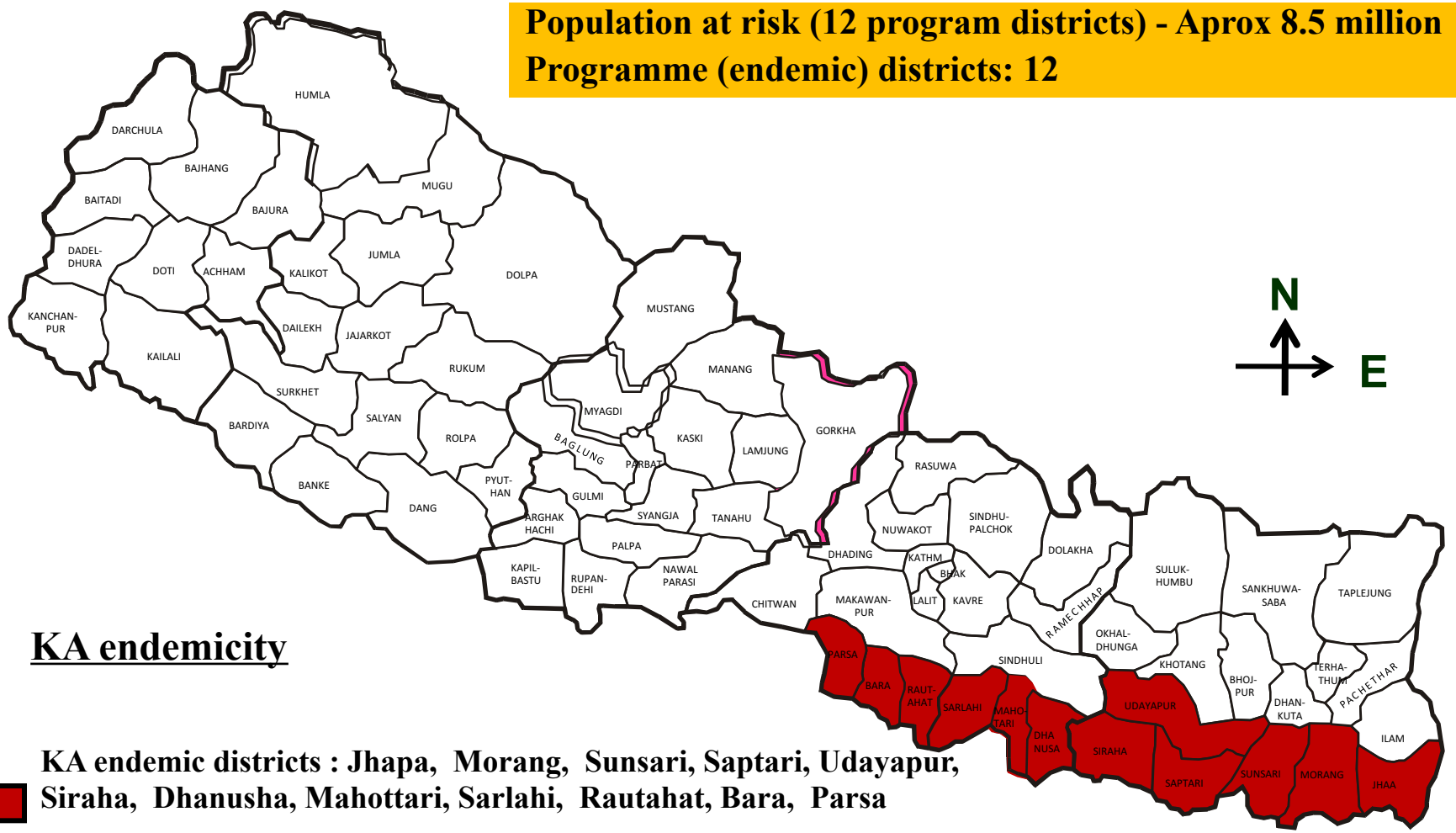
Place = KA Programme Districts in Nepal

Population at risk (12 program districts) - Aprox 8.5 million
Programme (endemic) districts: 12

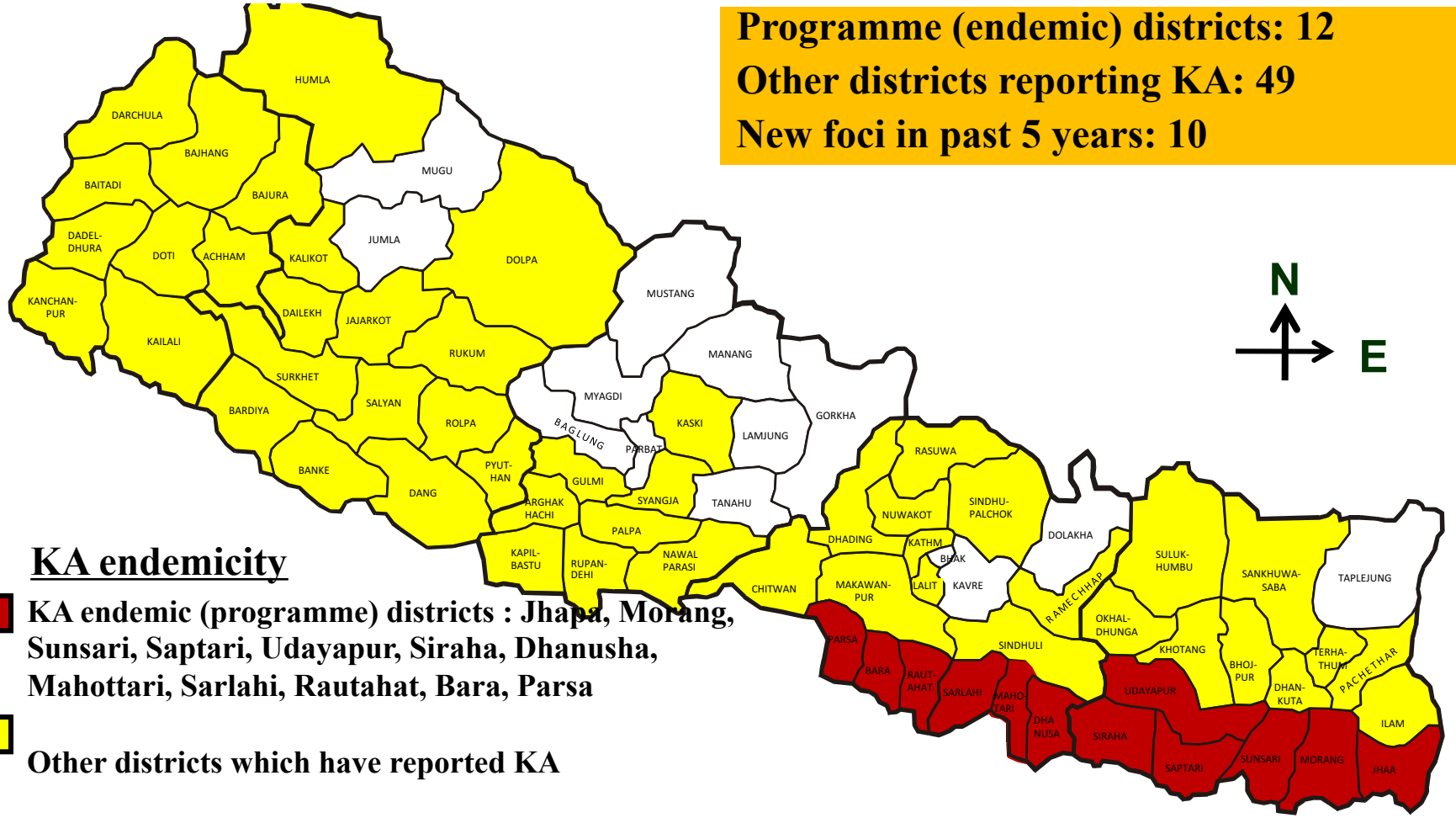


KA endemicity

KA endemic districts : Jhapa, Morang, Sunsari, Saptari, Udayapur, Siraha, Dhanusha, Mahottari, Sarlahi, Rautahat, Bara, Parsa

Place = geographical expansion of Kala-azar: 2009 - 2015

Programme (endemic) districts: 12
Other districts reporting KA: 49
New foci in past 5 years: 10



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Other districts which have reported KA

Place = KA Programme Districts in Nepal (2015)

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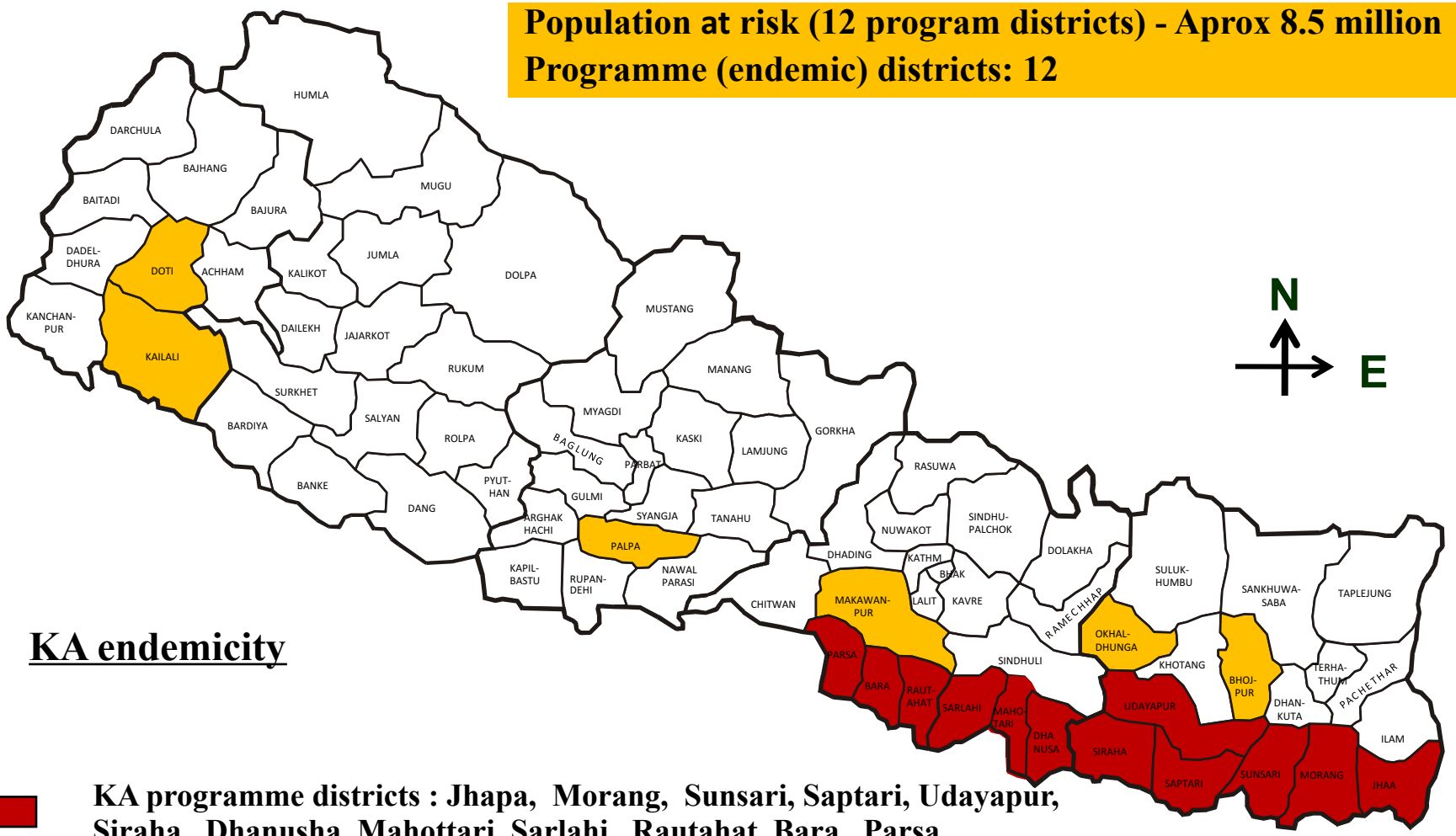
Programme (endemic) districts: 12

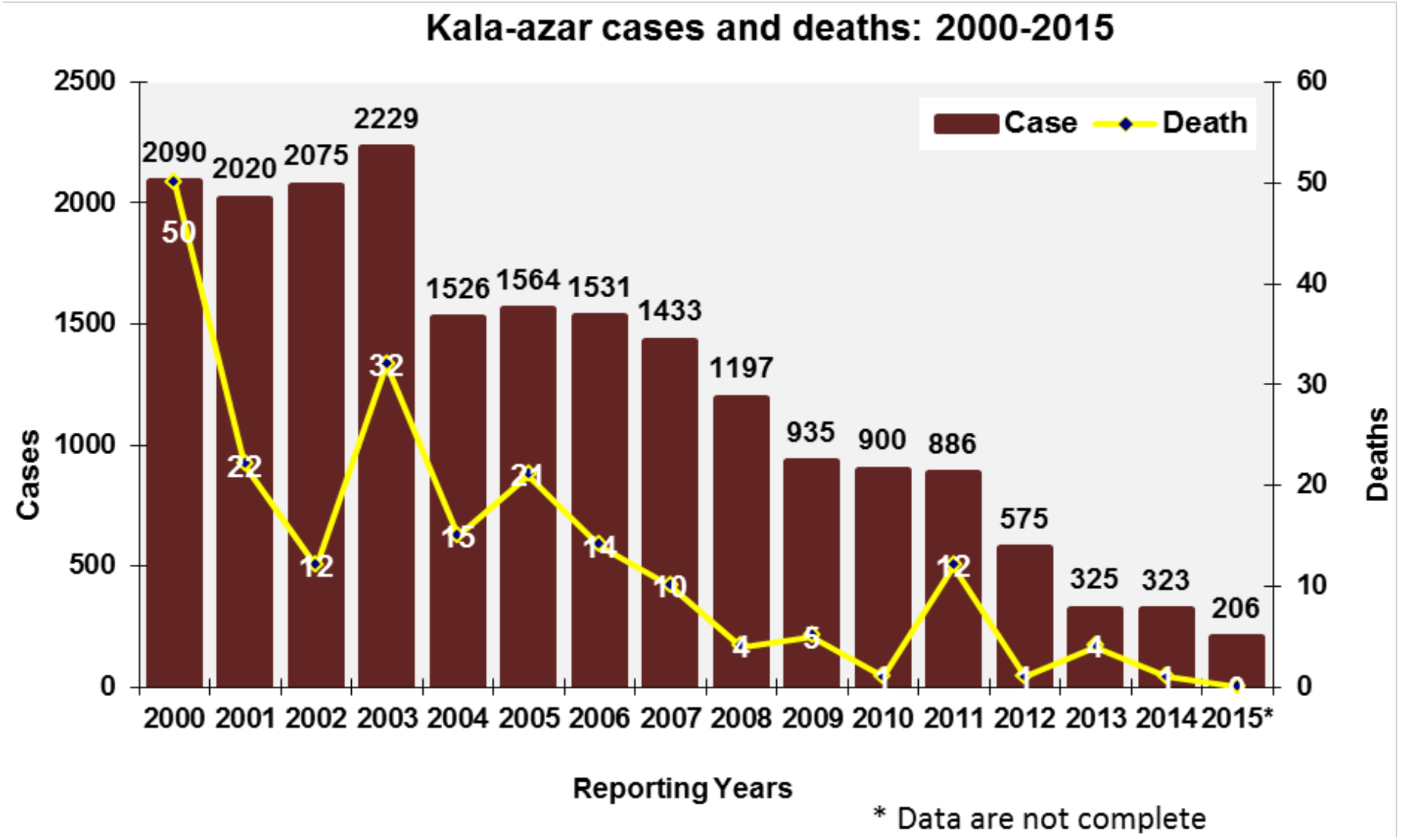


KA endemicity

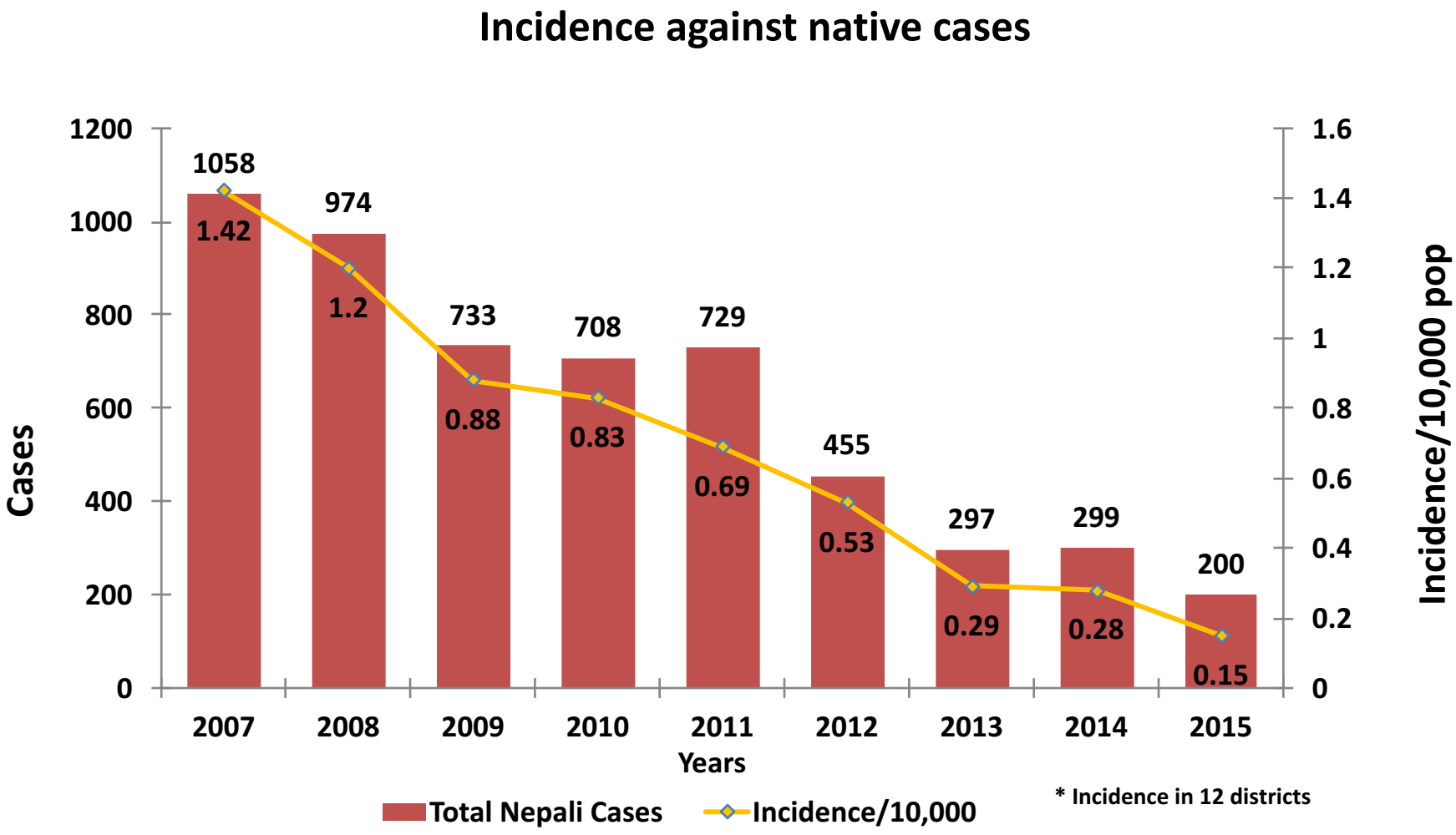
KA programme districts : Jhapa, Morang, Sunsari, Saptari, Udayapur, Siraha, Dhanusha, Mahottari, Sarlahi, Rautahat, Bara, Parsa

New KA programme districts added in 2015

Trend in KA morbidity and mortality



National Annual Incidence: 2007-2015



Implementation of the Kala-azar Programme in Nepal = phases

- **Preparatory phase= 2005 – 2006 (2 years)**
  - Development/review of national policy & strategic plans
  - Training to healthcare providers, IEC/BCC activities
- **Attack phase = 2007 – 2011 (5 years)**
  - Implementation and monitoring of activities = IRS,IVM, access to early diagnosis & Treatment.
  - ACD, PCD, Case-based surveillance, and vector surveillance
  - Access to early diagnosis, and complete treatment
  - IVM, vector surveillance etc

Implementation of the Kala-azar Programme in Nepal = phases

- **Consolidation phase = 2012 – 2014 (3 years)**
  - Total coverage by IRS
  - Active surveillance = no increase in the incidence rate at district
  - Limited IRS based on geographical location of cases, and in areas with high vector density
  - Intensified active-case detection, early diagnosis & complete Treatment.
- **Maintenance phase (duration to be decided)**
  - Strong surveillance against re-introduction of Kala-azar cases
  - Incidence of KA should be less than 1/10, 000 population at district
  - Sustain the elimination target at district level
  - Certification of elimination status

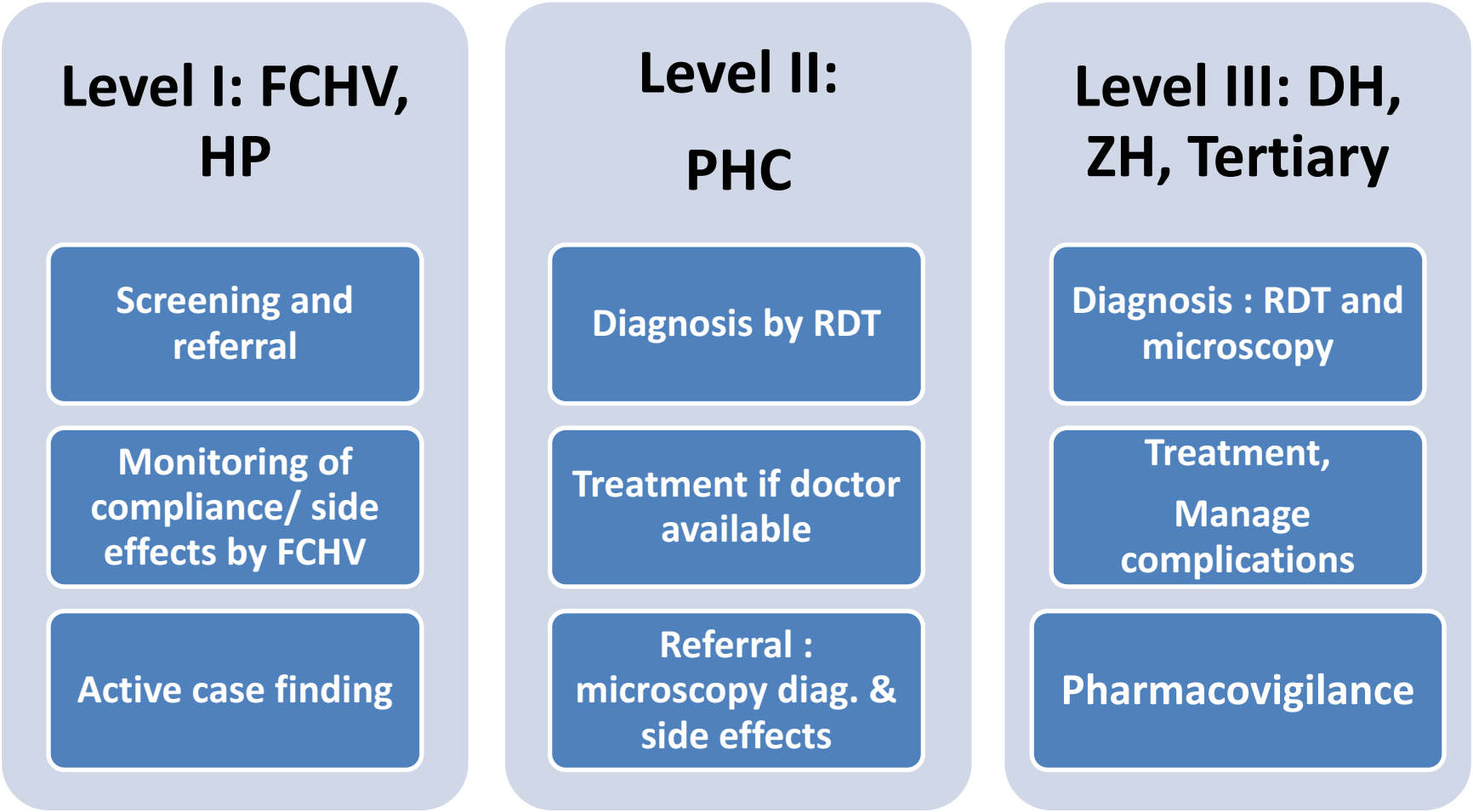
Elimination strategies adopted in Nepal

- Early case detection and completion of treatment
- Vector control activities
- Capacity building of health workers
- Maintenance of the supply chain
- Surveillance and research
- Partnership
- Pharmacovigilance
- Cross-border collaboration
- Non-health interventions (a financial incentive equivalent to US$ 10 for cases having completed treatment).

Surveillance and Information system

- Kala-azar patient and laboratory register at district level,
- Monthly Kala-azar reports by district public health office,
- Health management and information system (HMIS)
- Line listing of cases
- Epidemiological and entomological verification in districts/new foci.

Diagnosis of VL at different healthcare levels



FCHV: Female community health volunteer, HP: health post, DH: district hospital, ZH: zonal hospital

Active case finding strategies

- **Active case detection activities** in VL endemic districts and pockets;
  - Camp based approach
  - Mobilization of female community health volunteers
- **Collaboration with leprosy programme:**
  - Orientation and training to leprosy service providers on KA and PKDL;
  - Collaborative active case search in endemic districts (Combined search)
  - Rapid diagnostic test kits provided to selected leprosy service centres/hospitals
- **IEC and awareness activities**

Treatment regimen

- **1st line treatment**
  - Liposomal amphotericin B (L-AmB)
  - Combination regimens
    - Miltefosine + Paromomycin
    - L-AmB + Paromomycin
- **2nd line treatment**
  - Amphotericin B
  - Miltefosine monotherapy

Diagnostic tools available

(i) rK39 dipstick

(ii) Bone Marrow Aspiration

Introduction of Liposomal Amphotericin-B

- AmBisome donation (2000 vials) was received in September 2015,
- L-AmB introduced in December 2015 after training to doctors and nurses.
  - Aprpx 60 doctors and nurses from endemic districts
- Rolled out to major hospitals in endemic districts.

Vector control

- Strategy: Focal spraying in priority-selected areas
- Insecticide: Lamda cyhalothrin and Deltamethrin
- Two rounds per year
- Coverage of spraying: >80%
- Monitoring: Onsite spraying monitoring, **insecticide resistance, bioassay-**research purpose
- Sporadic distribution of Long lasting insecticidal nets (LLINs)

Factors contributed to reduction in the number of cases and deaths

- Availability of diagnosis and treatment
- Capacity building through orientation/training physicians and health workers
- Indoor residual spraying and distribution of long-lasting insecticidal nets
- Provision of transport incentives to patients after completion of treatment
- Social mobilization and awareness
- Socioeconomic interventions from non-health sectors.

Lessons learned

- For improved surveillance, Kala-azar should be made a notifiable disease in the affected areas.
- Passive case detection should be supplemented with active case detection with laboratory diagnosis
- Active case detection should be done at least once a year or ++ if possible
- ACD case detection becomes more important as the number of KA cases reported by passive case detection declines
- Disease surveillance for Kala-azar should be comprise monthly reporting with line listing of cases and feedback mechanisms at district level
  - HMIS
  - EWARS
  - Line listing of KA cases
  - Report of active case detection/case-based surveillance

Collaboration with other programs

- Combined active search for PKDL, KA and leprosy
- Training/orientation conducted to leprosy service providers/hospitals of KA endemic districts.
- Diagnostic kits (rK39) provided to leprosy hospitals.

Challenges

- Sustaining the achievement- Frequent outbreaks in endemic and non endemic areas
- Changing pattern in distribution: geographical expansion of cases- rural to urban and plain areas to up hills
- Detection of PKDL cases- even confused with other skin infections
- Diagnosis and reporting of relapse
- Drug resistance- Regular monitoring is required
- Cross border information sharing

Housing conditions in KA-endemic region of Nepal