



# The Role of Prevention of Disabilities in China

National Center for Leprosy Control, China CDC

Prof. Hong-Sheng Wang, Executive Director General

## **General Introduction of Leprosy in China**

## **Factors of Disabilities in Leprosy**

## **Activities related to Prevention of Disabilities**

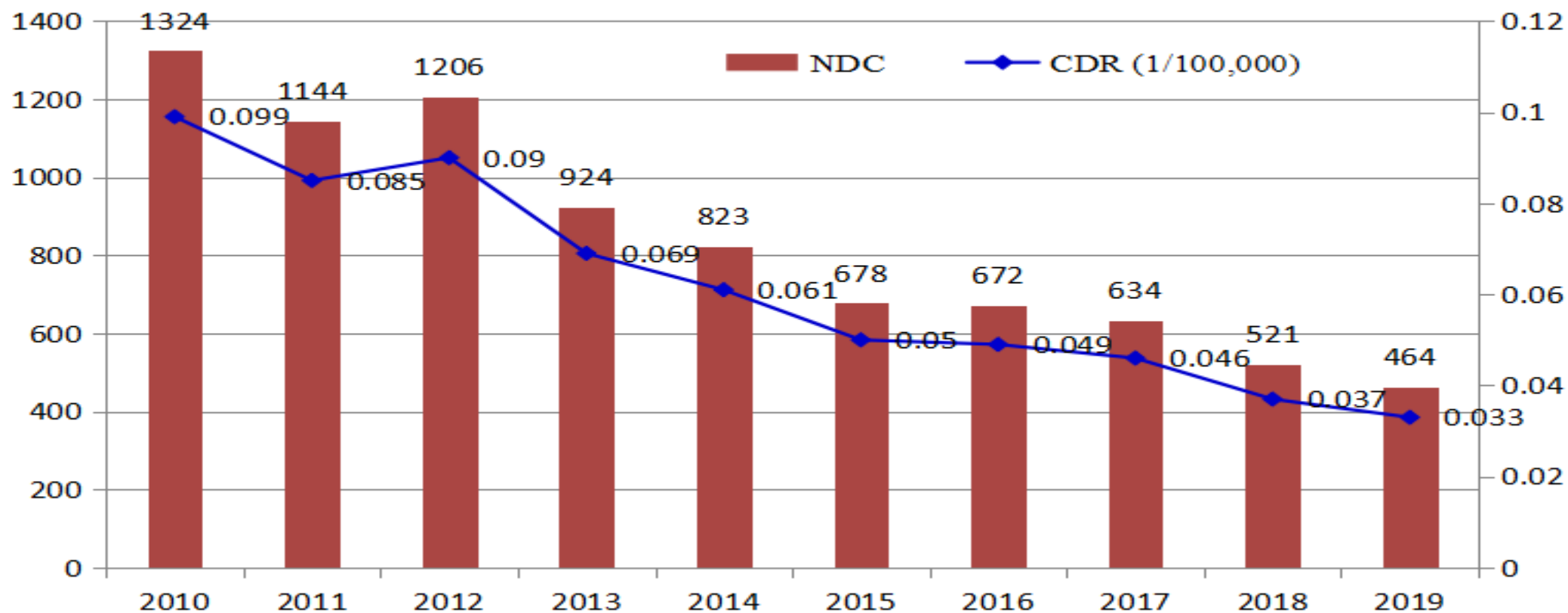


# General Introduction of Leprosy in China



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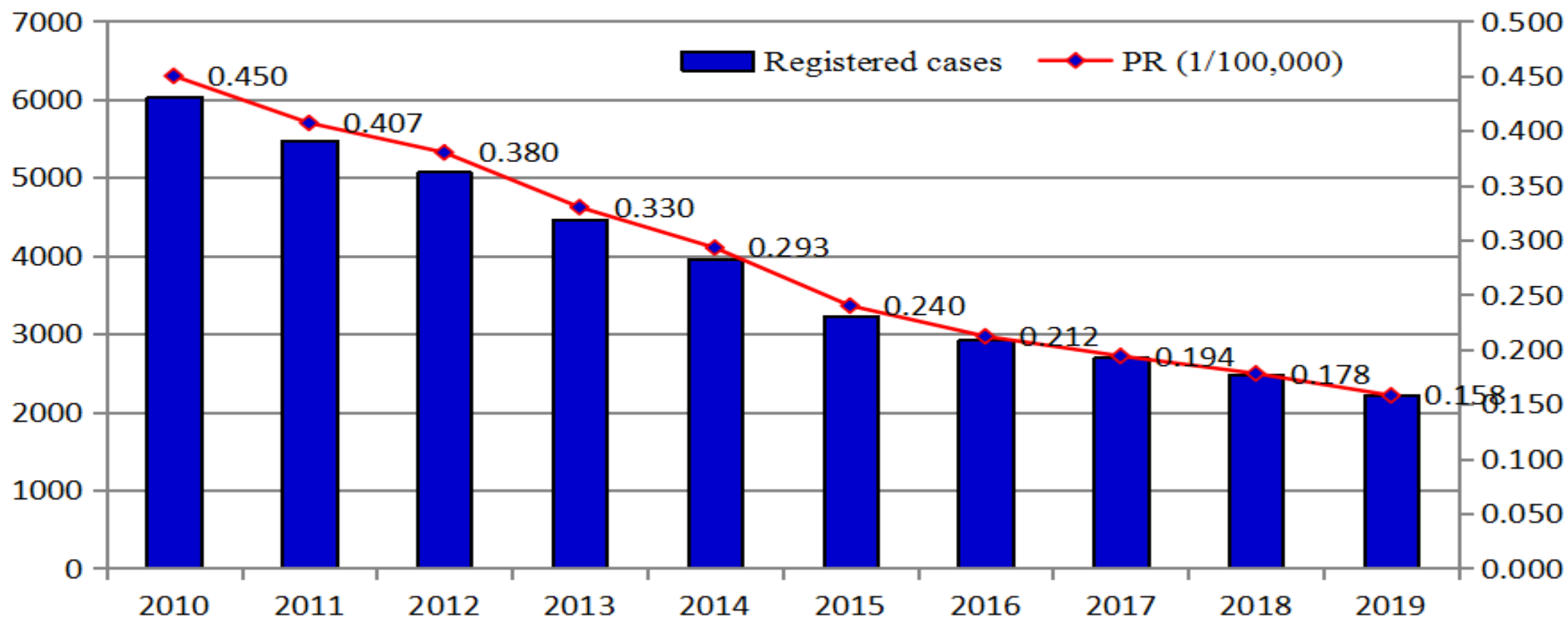
The newly detected cases of leprosy in China, 2010-2019



# General Introduction of Leprosy in China



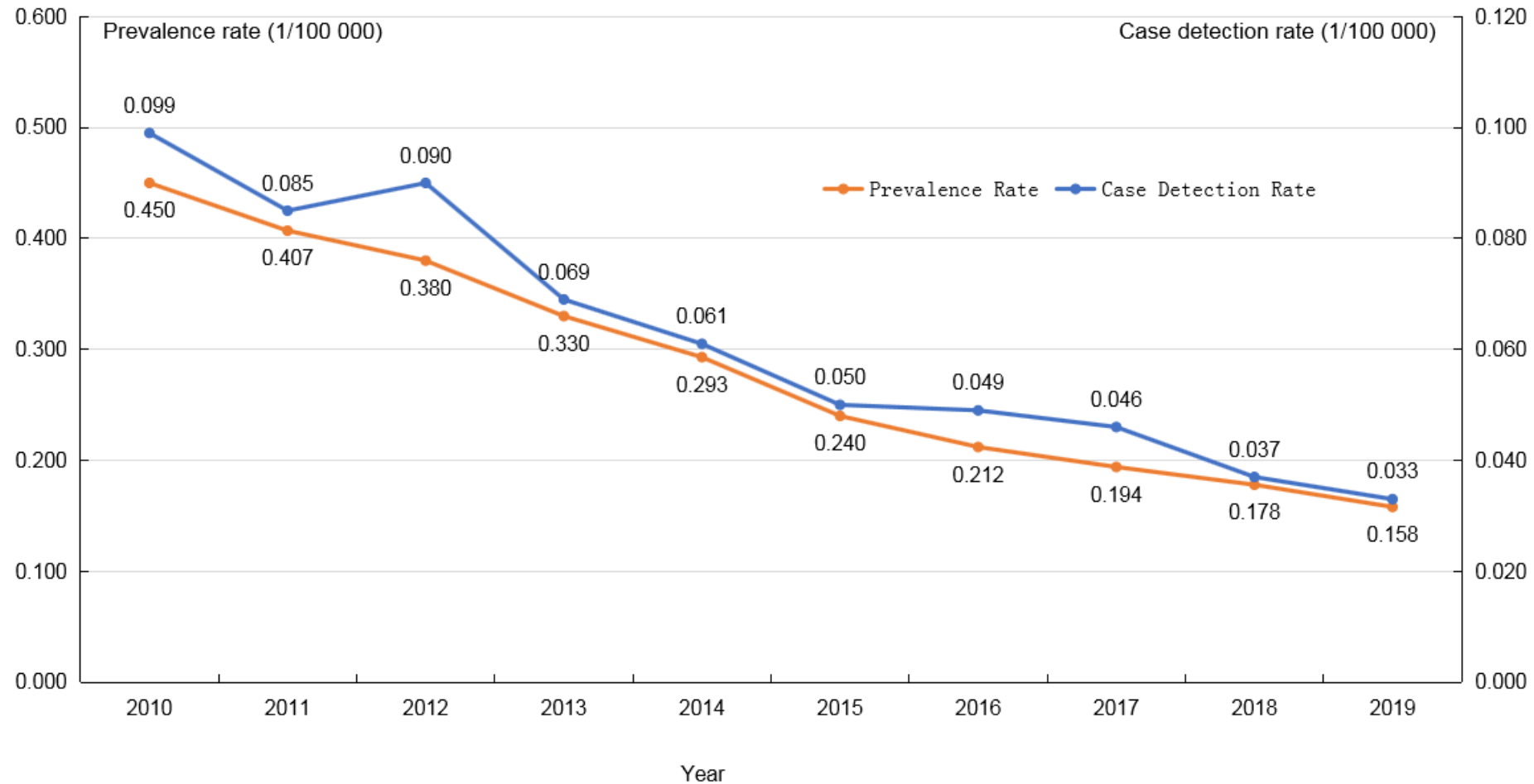
The registered cases and prevalence rate of leprosy in China, 2010-2019



# General Introduction of Leprosy in China



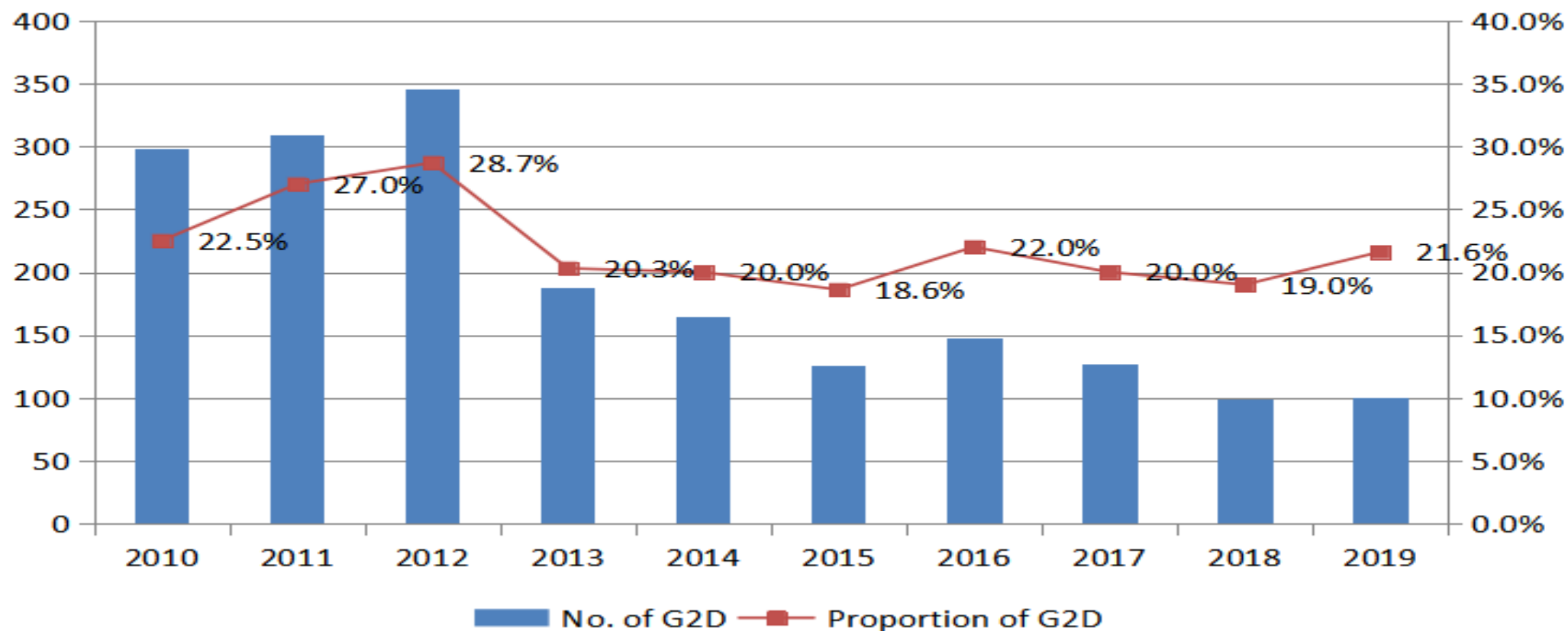
The case detection rate and prevalence rate of Leprosy in China, 2010-2019



# Action 1: Primary prevention



The G2D of newly detected cases of leprosy in China, 2010-2019



## General Introduction of Leprosy in China

## Factors of Disabilities in Leprosy

## Activities related to Prevention of Disabilities



# Factors of Disabilities in Leprosy



- **Delay of case detection**

- **Low quality of case management**

- **Low quality of health education and promotion**

- **Low quality of early detection of reaction and neuritis**

- **Low quality of POD program and rehabilitation activities**



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# Action 1: Primary prevention



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## Primary Prevention

promote early case  
detection

Suspicious Symptom Monitoring

Close Contact Examination

Spot Survey, LEC

心麻风病报

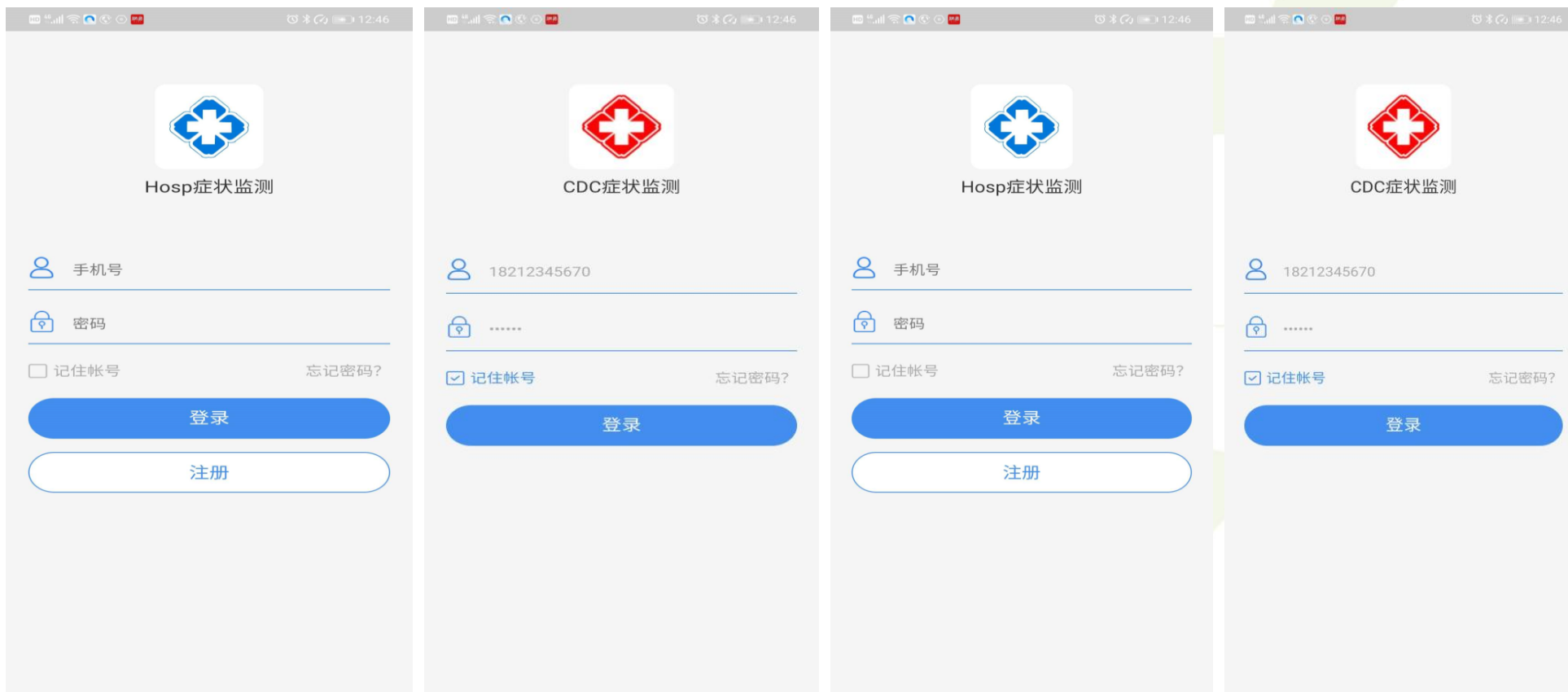


# Action 1: Primary prevention



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## HHC APP, Doctor APP and accurate early Detection of Leprosy



Mobile follow-up and Active monitoring

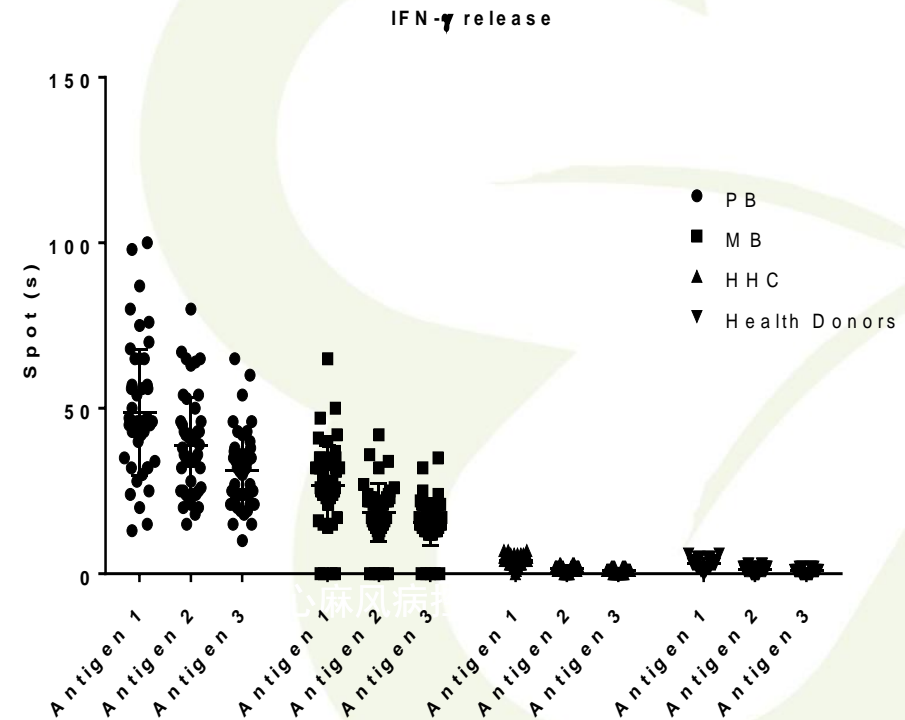
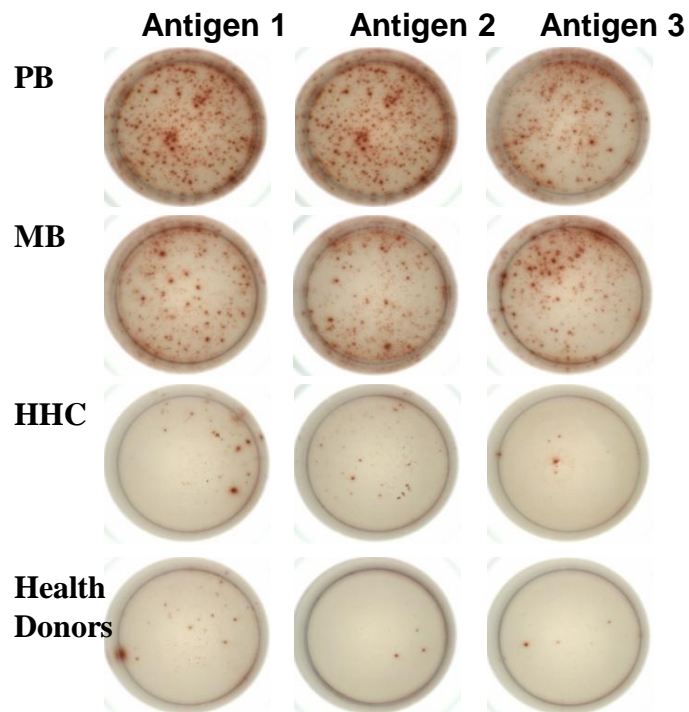


# Action 1: Primary prevention



## Technology development and application of ELISPOT for early diagnosis of leprosy

Leprosy specific antigen activates memory T cells in patients with leprosy to trigger cellular immune response, especially in patients with PB.



# Action 1: Primary prevention



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## Application of ELISPOT in Leprosy



A patient with rabbit eye, comes from Anhui Province;  
A patient from Nantong found finger deformity and muscle atrophy,  
numbness, dullness, nerve enlargement;  
They are both diagnosed as positive by ELISPOT

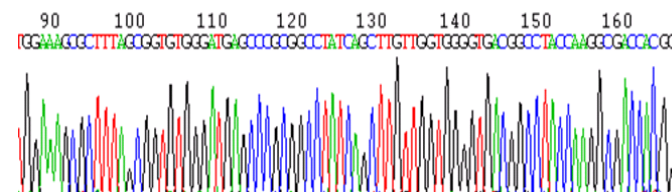
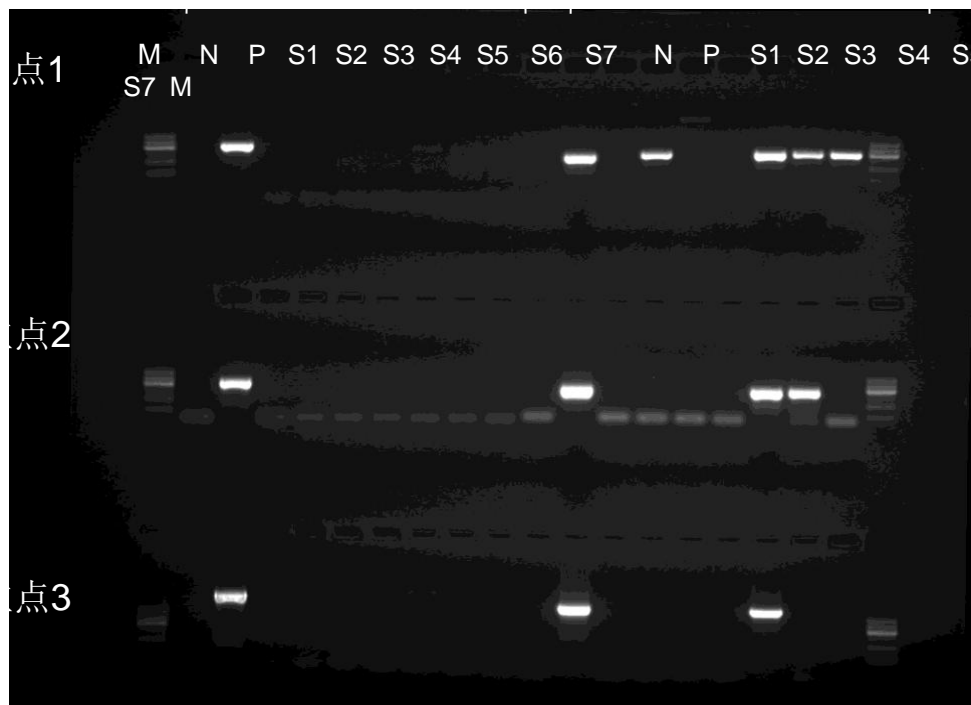
麻风病



# Action 1: Primary prevention



## Diagnosis of Mycobacteria by Multi-site Dot-nested PCR



临床标本 JLX 16S rRNA DNA 基因测序部分截图

```
>>27294 ATCC Mycobacterium tuberculosis ssp. tuberculosis 301 unqi:N unqiITS:N (444 nt)
initn: 1002 initl: 902 opt: 1007
Smith-Waterman score: 1007: 98.104% identity in 211 nt overlap

user s          10      20      30      40      50      60      70
27294  CAGAGATACTCGAG-GGCGAACGGGTGAGTAACACGTGGGTGATCTGCCCTGCACCTTGGGATAGCCTGGGA
27294  CATGCAAGTGGAAACGGAAAGGCTCTTT.G.....T.....

user s          80      90      100     110     120     130     140     150     160     170
27294  AACTGGGICTAATACCGGATAGGACCCAGGGATGCATGCTCTGTGGTGGAAAGCGCTTTAGCGGTGTGGGATGAGCCCGCGCCATACGCTGTGTGGT
27294  .....

user s          180     190     200     210
27294  GGGTAGCGGCTACCAAGGCGACACGGCTAGCCGGCG
27294  .....TGGAGGGGTGTCCGGCCACACTGGGACTGAGATACGGCCCACTCTACGGGAGGACAG
```

临床标本 JLX 16S rRNA DNA 基因序列同源性分析部分截图

When PCR is performed in the skin lesions of patients with few bacteria, the amount of bacteria in the tissue is so small that it can not meet the requirement of template quantity for PCR. On this basis, we designed nested PCR to amplify the target band under the condition of very little template DNA.

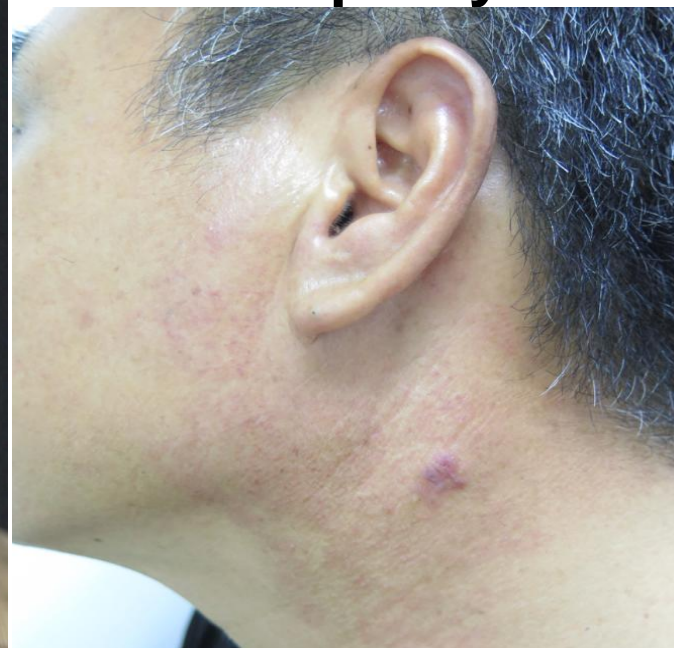


# Action 1: Primary prevention

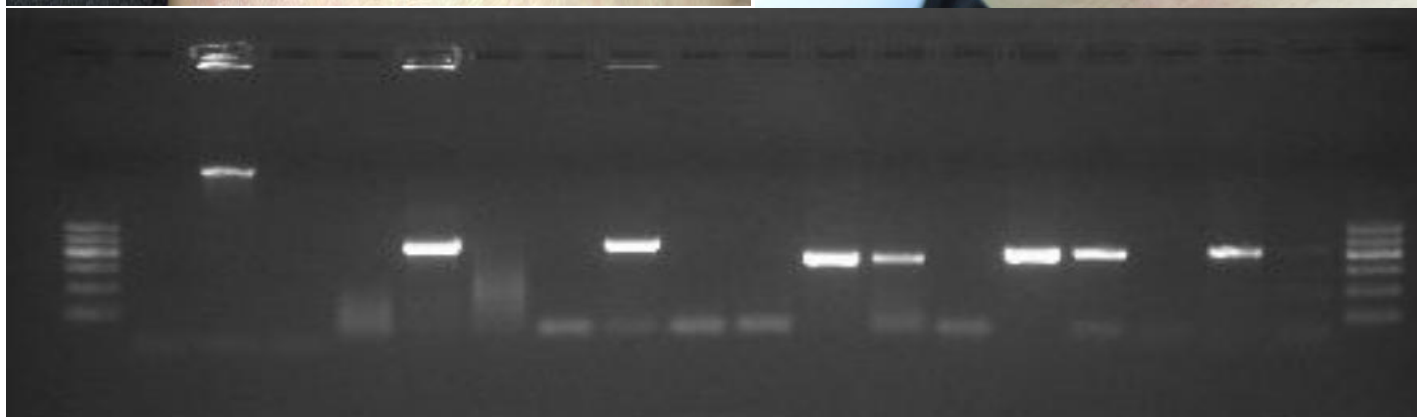


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## PCR Panel techniques and cases of Leprosy



The patient found a 3-5cm erythema on foot;  
Jurong patient found a 5\*3cm erythema, painless, slightly dull sensation, amplified positive bands by PCRPanel technique, sequenced as leprosy



心麻风病



# Action 2: Secondly prevention



## Secondly Prevention

Prevent new or  
worsen disabilities  
from case  
management

**Treatment of the disease with MDT**

**Early detection of neuritis and treatment of neuritis  
with prednisolone**

**Chemoprophylaxis with prednisolone for nerve  
impairment**

心麻风病



# Action 3: Tertiary prevention



## Secondly Prevention

Prevent secondary  
impairment from  
various activities

Providing vaseline, self-care kit, footwear and  
wound dressing kit

Self care training of POD based need  
Community based rehabilitation  
Wound and ulcer care

Reconstructive surgery  
Prosthesis for PALs

心麻风病报



# Action 3: Tertiary prevention- Community based rehabilitation



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# Action 3: Tertiary prevention- Community based rehabilitation



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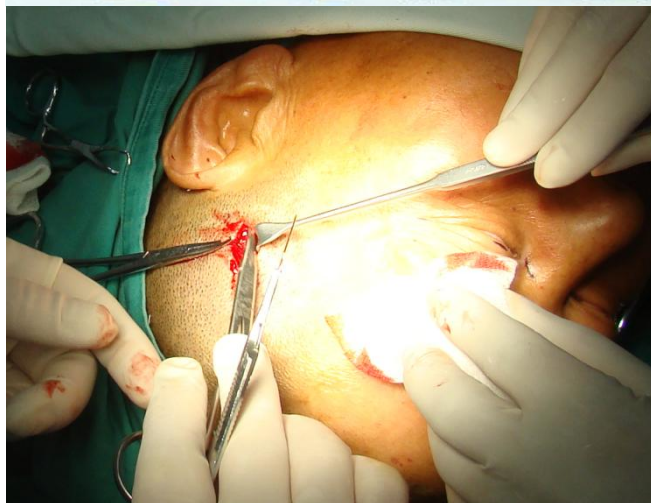
心麻风病



# Action 3: Tertiary prevention- Reconstructive surgery



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# Action 3: Tertiary prevention- Treatment of leprosy



Ulcer in right plantar

10days

30days



# Action 3: Tertiary prevention- Prosthesis for PALs



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Thanks for your attention!

