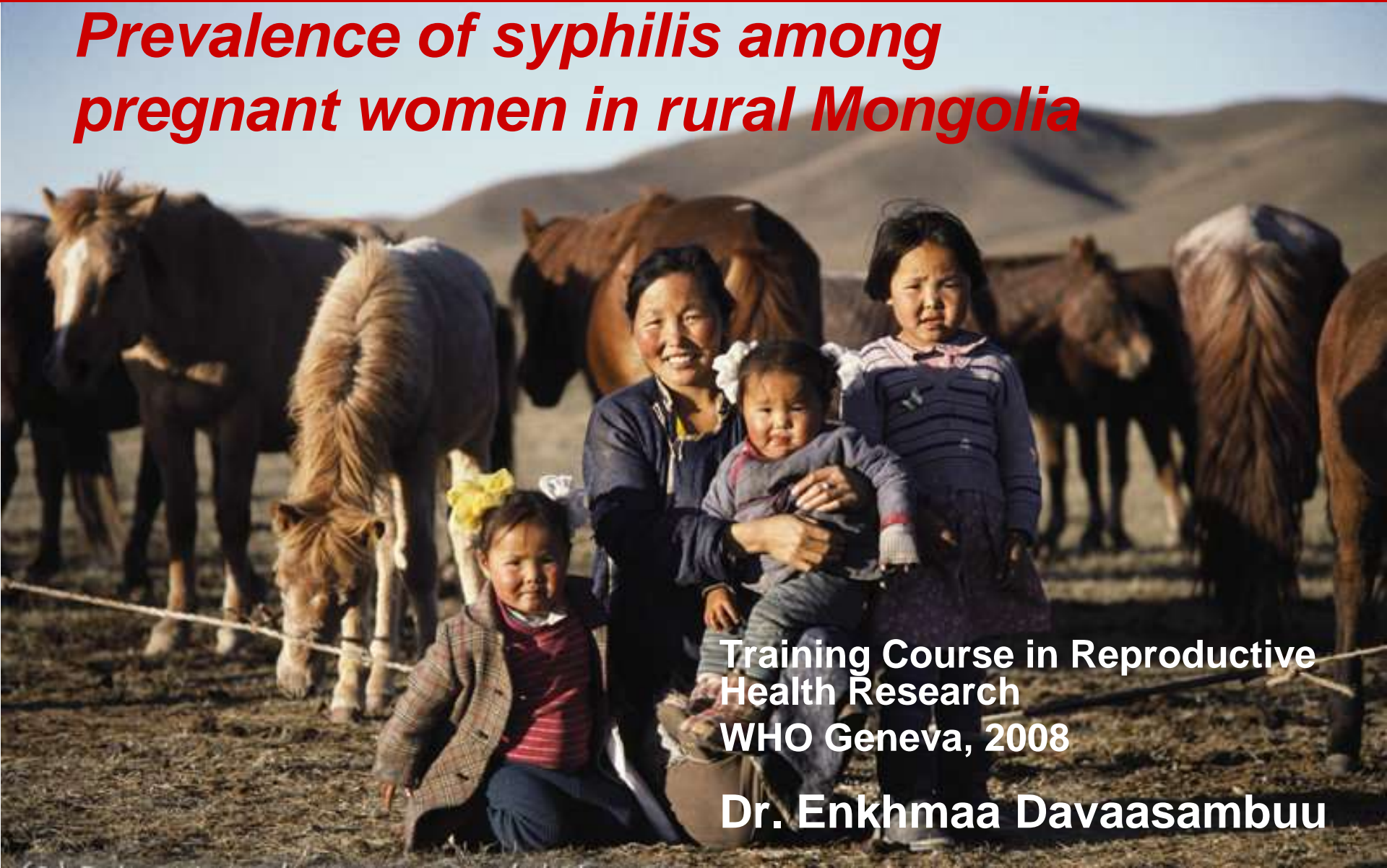


Feasibility of Rapid Syphilis Test in Antenatal Screening Programs:

Prevalence of syphilis among pregnant women in rural Mongolia



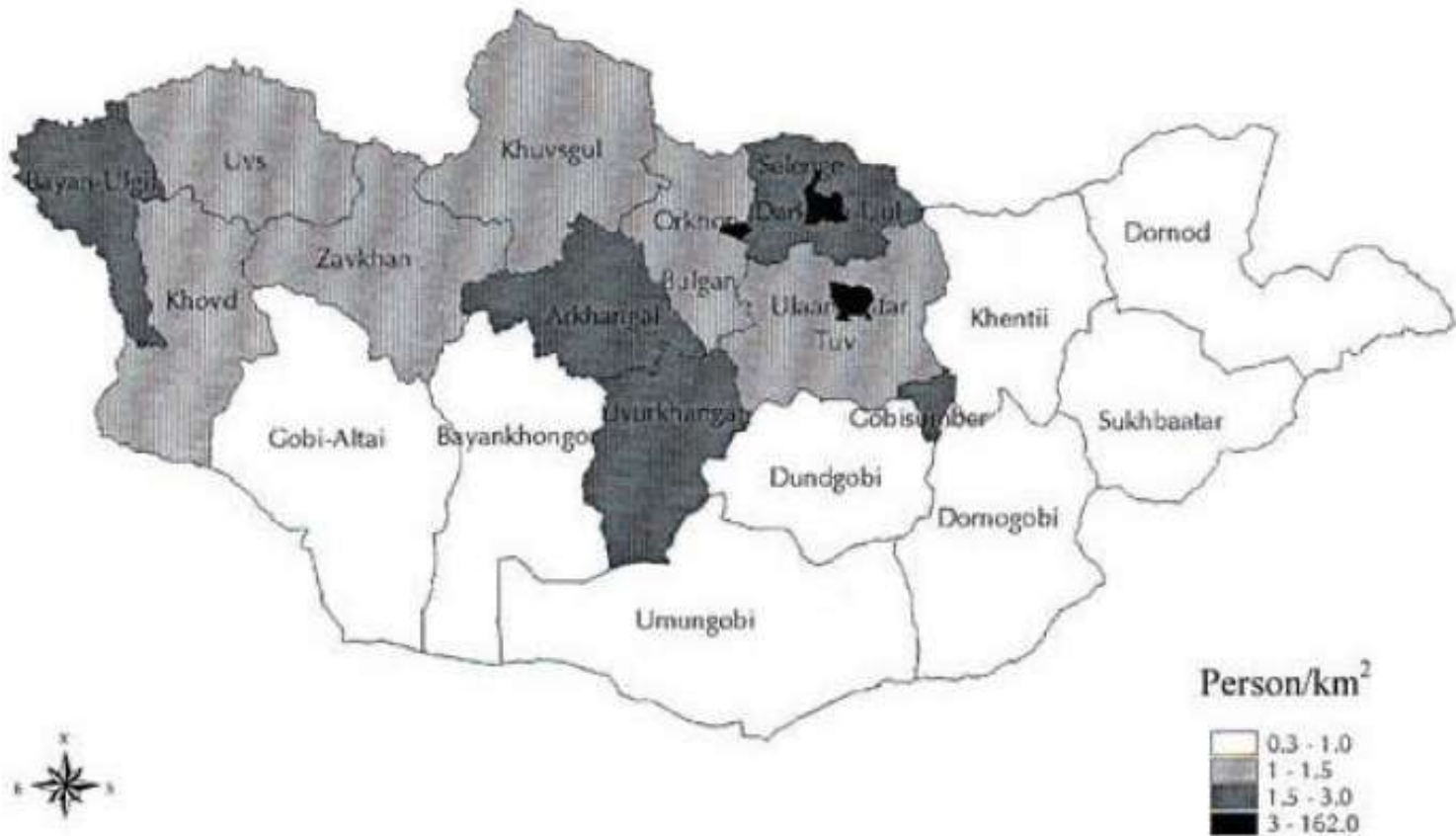
Training Course in Reproductive
Health Research
WHO Geneva, 2008

Dr. Enkhmaa Davaasambuu

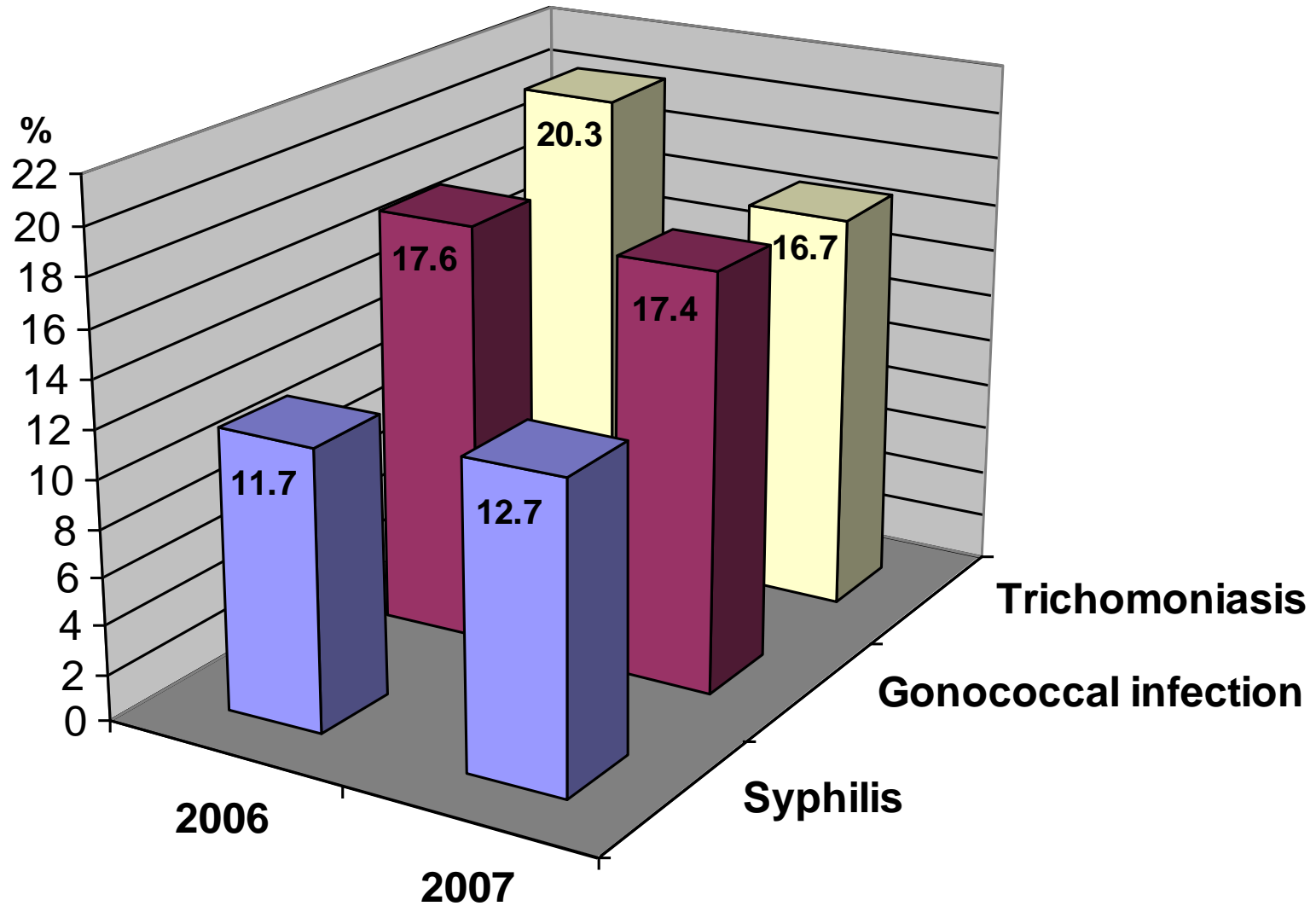
Mongolia Overview

- Landlocked between Russia and China
- Population - 2.6 million
- Density - 1.7 person/km²

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Prevalence of STDs in Mongolia



Project Context

- Syphilis: A common infectious disease in developing countries
- Untreated syphilis in pregnancy leading to adverse outcomes for both mother and infant:
 - Miscarriage, pre-term delivery, stillbirth, congenital syphilis
- The screening and treatment of syphilis in pregnant women is the standard measure for preventing congenital syphilis but is not fully operational in Mongolia.

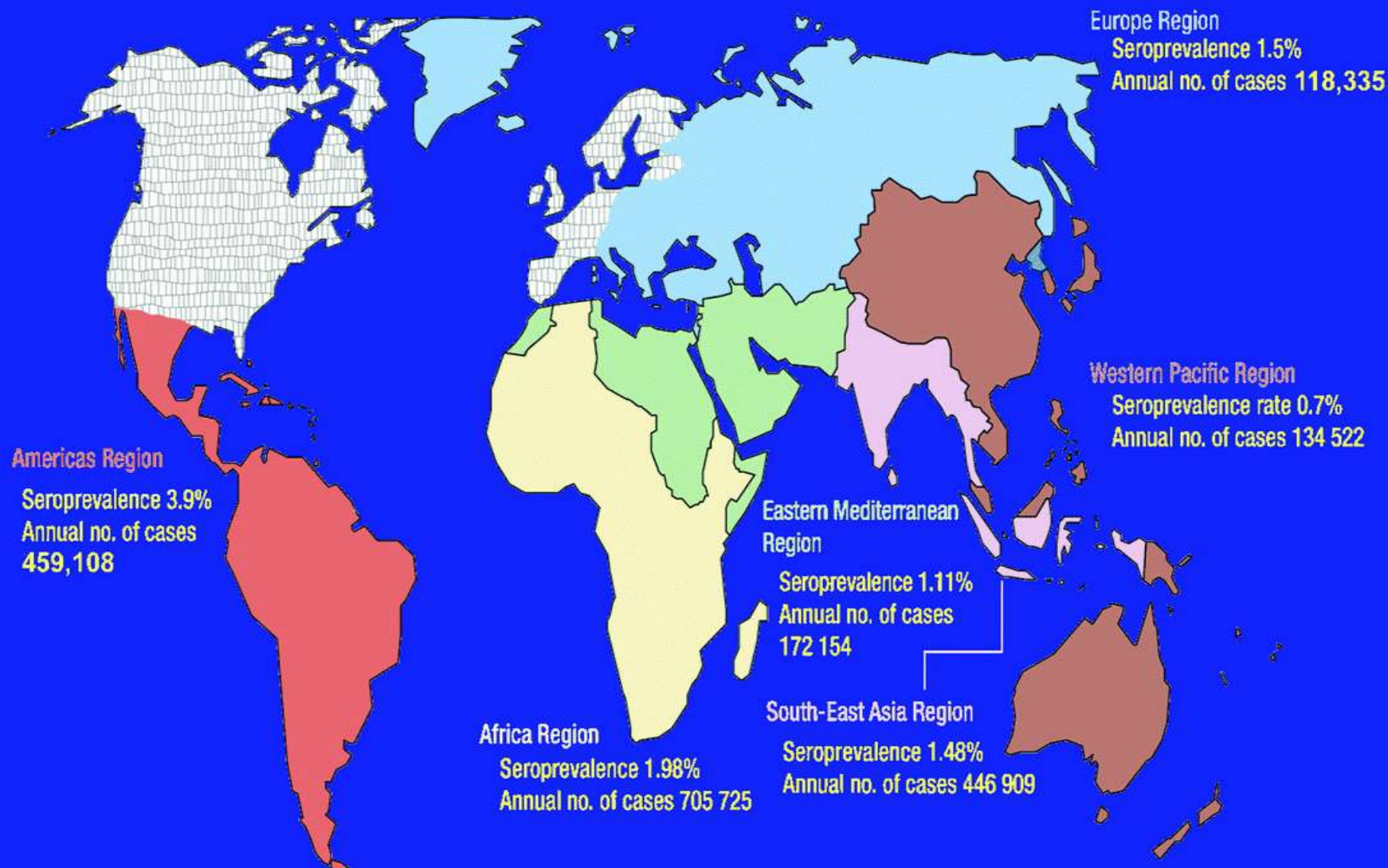
Limited testing laboratories

People live far from the service

A shortage of syphilis tests

Lack of knowledge and late ANC

Global Burden of Congenital Syphilis



Total global number of cases of congenital syphilis: Method 1 (728,547); Method 2 (1,323,889); Method 3 (1,527,565)

Congenital Syphilis

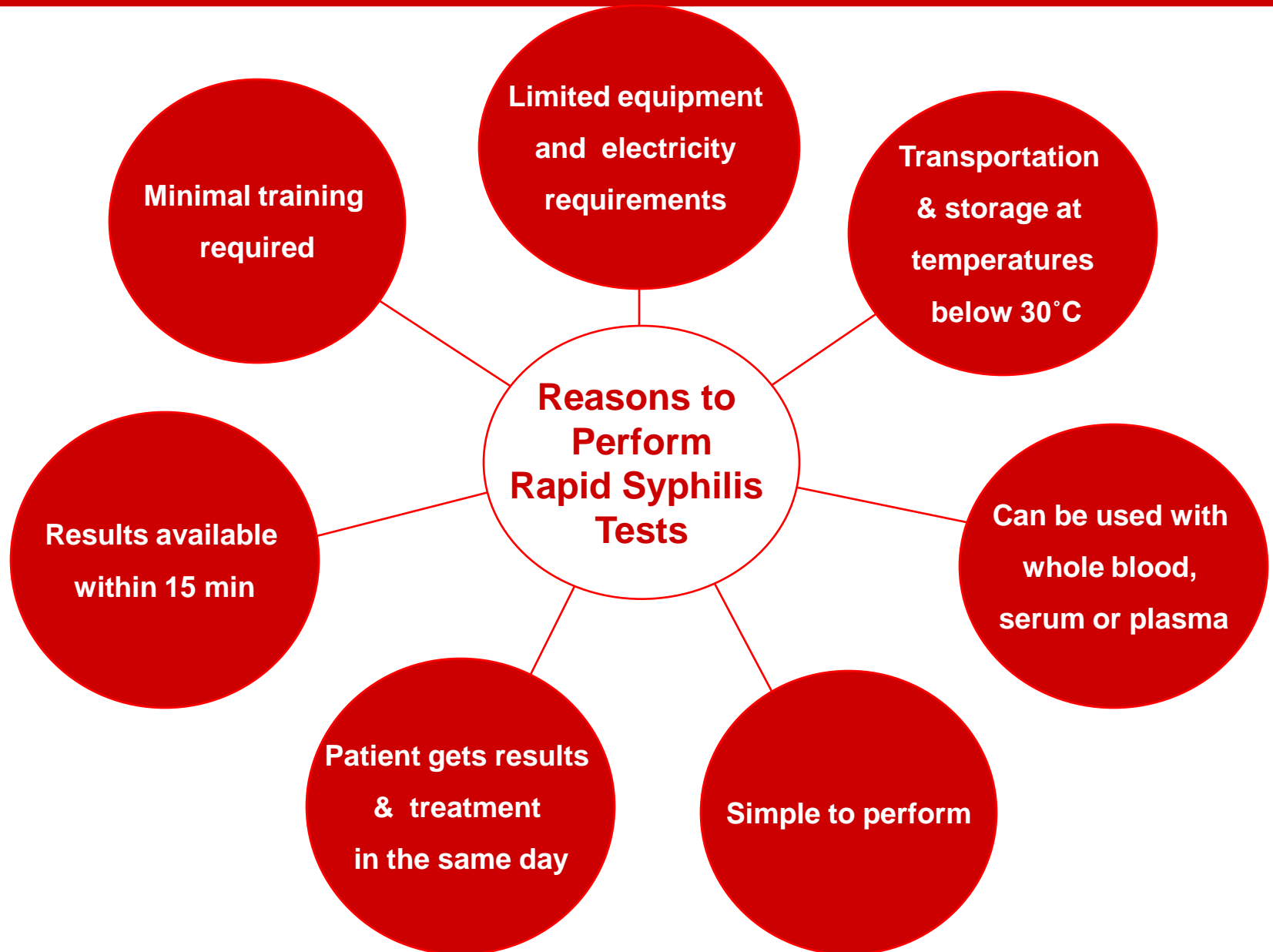


- Pregnant women with syphilis delivered babies with congenital syphilis.

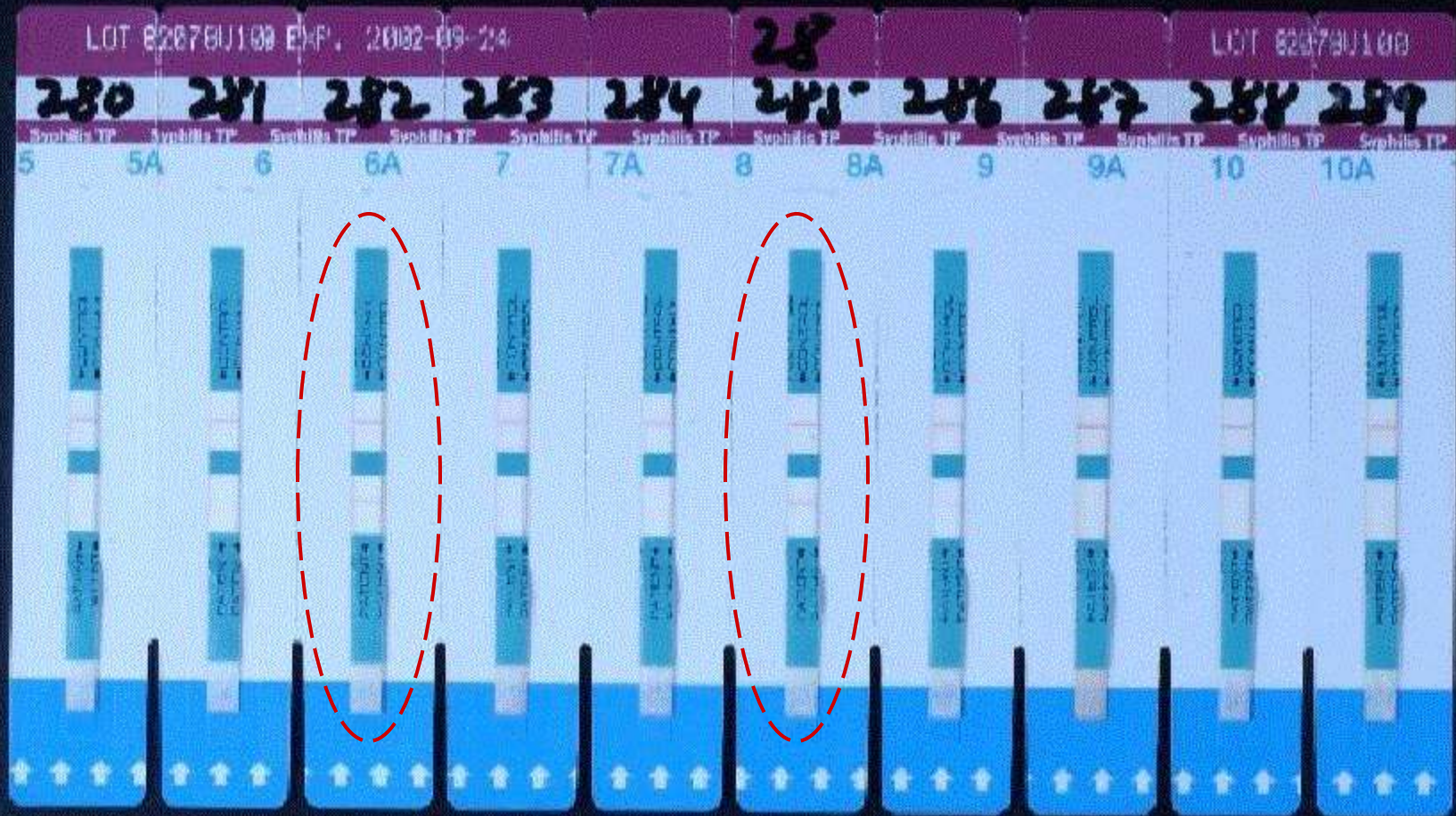


- Out of a sample of 5 babies, born from 5 women, 4 had hepatomegaly and 1 showed osteochondritis. All 5 had + FTA-ABS-19-sIgM*

Why Conduct Rapid Syphilis Tests



Immuno-chromatographic test image



Objectives

Outcome

Reduce the prevalence of syphilis, especially congenital syphilis

Intensify control activities against syphilis

Reduction of syphilis in rural Mongolia

Process

Evaluate the feasibility of using rapid syphilis test for antenatal screening among pregnant rural women of Mongolia

Identify the prevalence of maternal syphilis in the aimags that have been documented as aimags with highest syphilis cases in general population

Increase number of pregnant women tested for syphilis

Project Methodology

Determine Intervention type

- Prospective, interventional multi-center.

Selection of Provinces

- Rural provinces selected on the high prevalence of syphilis in general population.

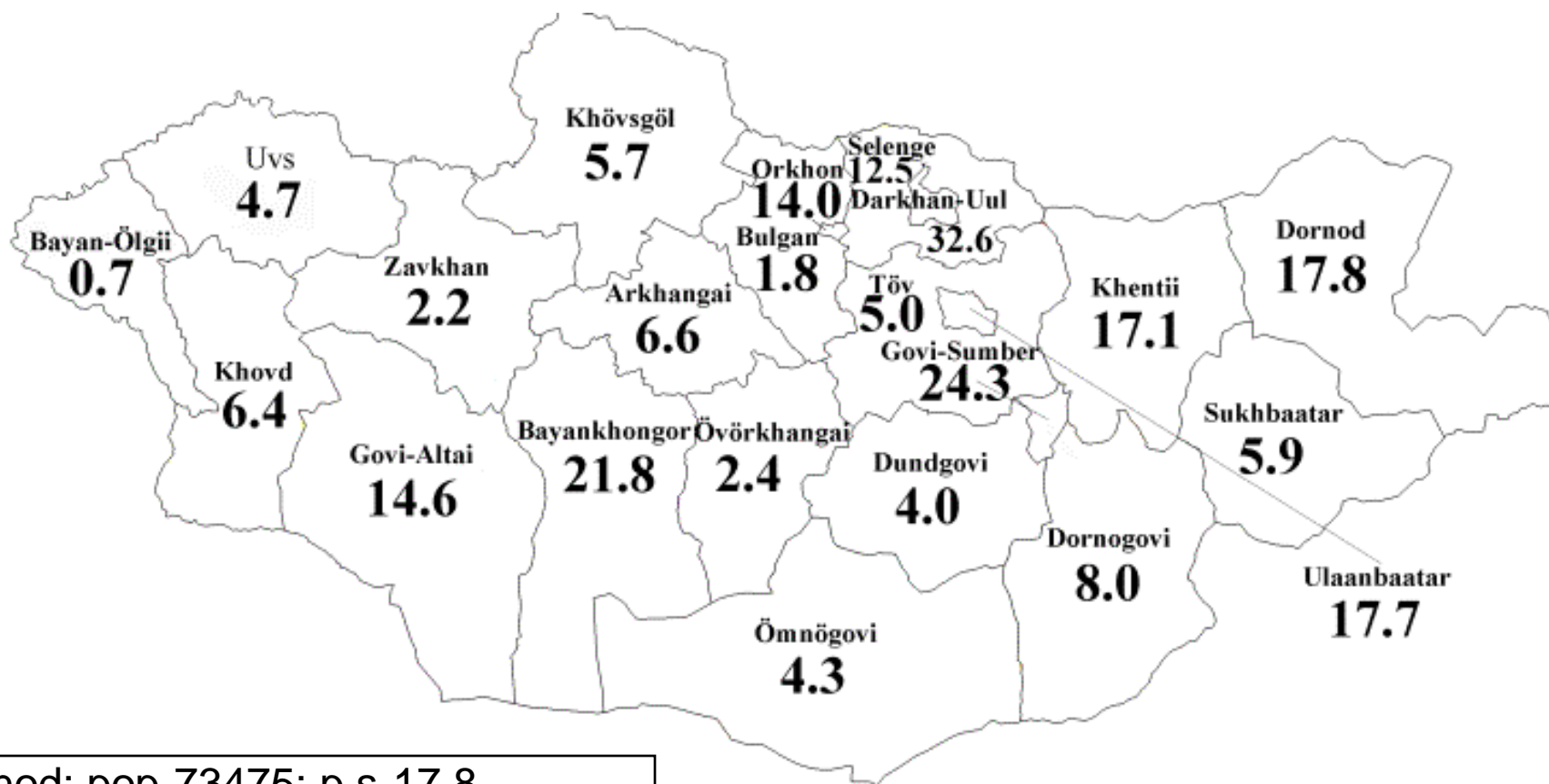
Determine Sample size

- Previous study- 2.2%
- Acceptable difference- 5/1000 ($\pm 0.5\%$)
- Assumed rate- 22/1000 (2.2%)
- Computed sample size- 3307 pregnant women (CI 95%)

Conduct Study

- Study duration 10-11 months
- Results reporting and publishing: 3 months

Prevalence of syphilis in general population / 10000 (2007)

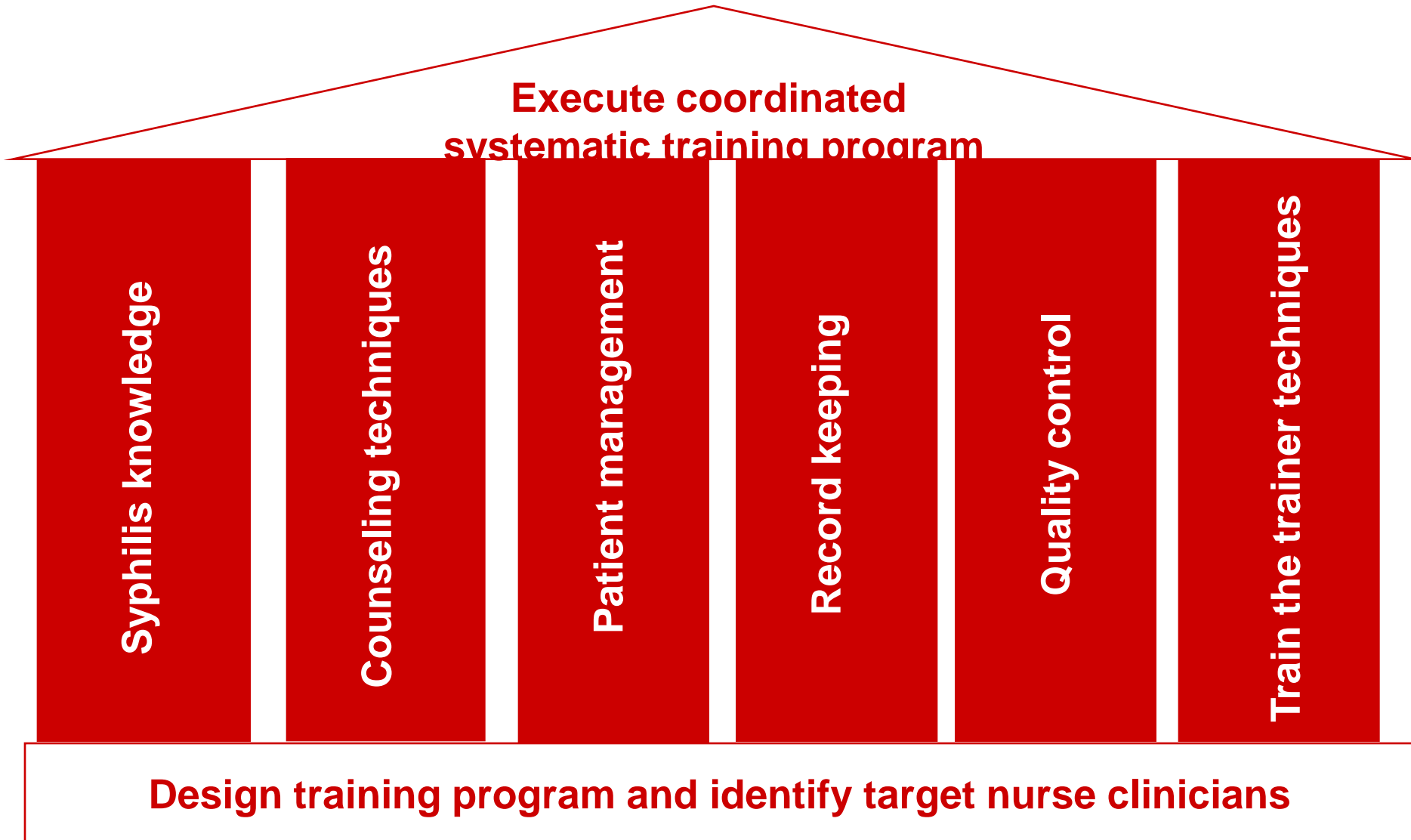


- Dornod: pop-73475; p.s-17.8
- Khentii: pop-70871; p.s-17.1
- Bayanhongor: pop-83653; p.s-21.8
- Govi-Sumber: pop-12709; p.s-24.3

Description of Intervention

ANC service providers	Aimag Central Clinics
Syphilis screening test	Rapid Syphilis Test
Place of performance	Aimag Central Clinics
Staff	Trained physicians/nurses
Gestational period of testing	Irrespective
Treatment indication	Treat all test positive cases
Partner treatment	Treat all partners of positive mothers
Management at delivery	Repeat testing at delivery regardless of test
	Test all babies delivered by test positive mothers
	Free treatment for positive mothers and infants

Proposed training for nurse clinicians



Testing procedure

- Antenatal women educated about syphilis:
 - Risk factors for syphilis transmission
 - Effects of untreated syphilis on mother and a baby
 - Possibility of false positive results
 - Importance of partner treatment and effects of untreated partner on mother and baby
 - Risk reduction method such as condom use
- Finger prick blood collected.
- Test results returned to women with counseling.

Treatment and Follow up

- Positive test result
 - Immediate treatment
 - Antenatal women given partner notification card
 - Re-test at delivery, if positive treat both
- Negative test result
 - Counseling on prevention until delivery

Expected outcome

- Feasibility (validity, cost effectiveness, acceptance and compliance) of rapid test that can be replicated to the remaining rural parts of Mongolia
- Reliable data on prevalence of syphilis in rural pregnant women and newborns
- Improve knowledge in rural pregnant women

Disseminating results

- Act as input for formulation of national policy on systematic screening of syphilis in relation to antenatal women as well as the general population.
- Plan to publish in internationally recognized journals and disseminate information using national media.

Thank you for your attention

