

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



TB LAB NETWORK

- Establishing
- Strengthening
- Validation
- Quality improvement
- Achievements

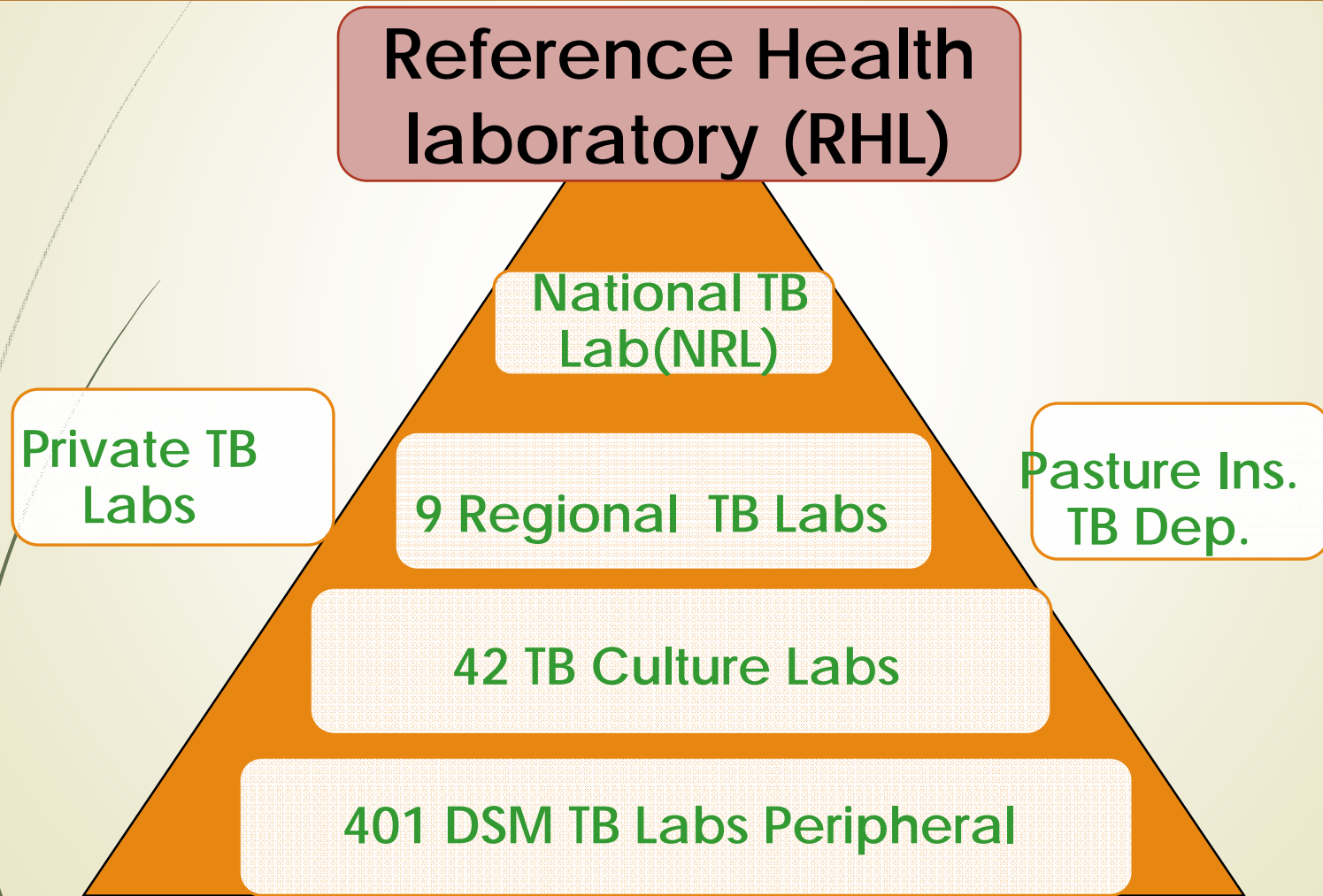
نقشه کشور بر حسب دانشگاه ها/دانشکده های علوم پزشکی و خدمات بهداشتی و درمانی



Components of a Strategy for Regional Networks



Overview of the components of TB Labs Net work



Scheme of TB Lab Net Work In Iran

Primary health center



Sampling

District health center



DSM Lab.

Province health center



Culture Lab.

➤ Sampling

➤ DSM lab in each city

➤ Culture Lab in province health center

➤ Regional labs (Culture and DST)

➤ National Reference TB Lab

Direct Smear Microscopy Labs

The most important & high number of TB lab in the country (401 Labs)

Duties:

- Direct Smear
- Send all positive and 10% of negative smears for revision and confirmation to province health lab
- Send the samples for culture to province health lab

DSM Labs



CULTURE LABS

- At least one in each province
- At now culture lab implement in 42 universities
- Implementation bio safety level 2+
- Cover the other peripheral health Lab in the province
- Send the Positive cultures to regional labs for identification & Drug susceptibility testing

Culture Labs



Regional TB Labs

■ Establishment 9 regional lab in country :

Tabriz , Mashhad , Zahedan , Kermanshah , Esfahan, Shiraz ,
Gorgan , Ahvaz & Tehran

Responsibilities:

- ✓ Microscopy , Culture , Identification & Drug susceptibility testing for First line Anti TB Drugs, setup molecular methods
- ✓ Holding training workshop in diagnosis and Confirmation procedures
- ✓ Improvement Quality performance of Tb labs in universities
- ✓ relationship with national centers



Regional TB Labs

- ❖ Zahedan , Kermanshah , Gorgan & Tehran DST labs have a RIF/GenXpert machine to coverage all DSM , Culture & and other DST Labs Samples to achieve Rapid results for Rifampicin Resistant M.TB
- ❖ Shiraz & Mashad setup molecular methods for identify & susceptibility testing of Mycobacterium Tuberculosis.

Regional Labs





National Reference TB Lab

Myco bacteriology Research Center in Masih Daneshvari Hospital

- ✓ Microscopy , Culture , Identification & Drug susceptibility testing for First line and Second line Anti TB Drugs, setup molecular methods
- ✓ Holding training workshop in diagnosis and Confirmation procedures
- ✓ Improvement Quality performance of TB labs in universities
- ✓ relationship with international centers (collaborating center)

National Reference TB Lab



Biosafety Programs in T.B laboratories

- ▶ **Training courses and preparing Guidelines about biosafety programs includes :**
- ▶ **Biosafety Management**
- ▶ **Standards for laboratory design and facilities**
- ▶ **General Requirements for Personal and Laboratory safety**
- ▶ **Safety and health of staff**
- ▶ **Cleaning, Decontamination, Disinfection and Sterilization**

Biosafety Programs in T.B laboratories

- **Validation & Quality control of Sterilization process**
- **Relation of risk groups to biosafety level, practice and equipment**
- **Biosafety Levels**
- **Biological safety cabinet**
- **Spill clean-up procedure**
- **transport of infectious substances**
- **Waste management**

Bio safety Workshop



External Quality Assessment

Three methods to evaluate laboratory performance:

- **On-site evaluation by Experts**
- **Panel testing by SRL for DST Labs & By NGOs (associations) for DSM Labs**
- **Blinded rechecking By Each universities Referral Lab**

Table of EQAS Results of Regional TB Labs



جدول رتبه بندی آزمایشگاه‌های مرجع منطقه ای سل کشور در پنج دوره برنامه ارزیابی خارجی کیفیت از آزمایشگاه فرا ملی سوند

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---------------|------|--------------|--------------|-----------|-----------|
| NRL | N/A | N/A | N/A | N/A | N/A |
| Tabriz | Good | Disqualified | Disqualified | Excellent | Excellent |
| Zahedan | | Excellent | Excellent | Excellent | Excellent |
| Shiraz | | Disqualified | Excellent | Excellent | Excellent |
| Mashad | | Excellent | Very Good | Good | Excellent |
| Kermanshah | | Good | Good | Very Good | Excellent |
| Esfahan | | | Very Good | Excellent | Excellent |
| Gorgan | | | Excellent | Excellent | Very Good |
| Pasture Inst. | | | Disqualified | Very Good | Very Good |
| Ahwaz | | | | Excellent | Excellent |
| Zarifi | | | | Excellent | Excellent |
| Masoud | | | | Excellent | Excellent |
| Tehran | | | | | Excellent |



آزمایشگاه مرجع سلامت

آمار کلی عملکرد آزمایشگاه‌های سل کشور در کنترل کیفی خارجی آزمایشگاه‌های بهداشتی کشور در سال ۹۳-۹۴

در این دوره کنترل کیفی که با سفارش آزمایشگاه مرجع سلامت و مدیریت انجمن متخصصین علوم آزمایشگاهی در کل کشور اجرا گردید تعداد ۴ عدد لام استاندارد خلط (ضخامت ، اندازه و تعداد باسیل تعیین شده) که دو عدد رنگ آمیزی زیل نلسون شده و دو عدد رنگ آمیزی نشده به هر آزمایشگاه ارسال گردید و نتیج کلی آن به شرح زیر ارئه می گردد.

| در صد ها | لام منفی (رنگ نشده) | لام مثبت ۱ (رنگ ZN) | لام مثبت ۲ (رنگ نشده) | لام مثبت ۳ (رنگ ZN) | |
|-----------------|----------------------------|---------------------|-----------------------|---------------------|--------|
| در صد پاسخ صحیح | 96.31% | 81.01% | 62.50% | 86.39% | |
| درصد خطا | 3.69% | 18.99% | 37.50% | 13.61% | |
| آمار خطاها | AFB Not Found | Target | 1.19% | 5.94% | 0.30% |
| | POS (1-9 AFB / 100 F) | 2.15% | 10.39% | 3.13% | 0.30% |
| | POS (10-99 AFB / 100 F)(+) | 0.62% | Target | 18.75% | 1.48% |
| | POS (1-10 AFB/ F) (++) | 0.92% | 7.42% | Target | 11.54% |
| | POS (>10 AFB/ F) (+++) | 0.00% | 0.00% | 9.69% | Target |

Achievements

| | MDR-TB% | |
|-----------------------|---------------------------|----------------------|
| | Previous DRS (1997-98) | Recent DRS (2014) |
| New | 5% | 0.84 |
| Previously treated | 48% | 12.40% |

Acknowledgments

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- **Universities of Medical Sciences**
- **GFATM**
- **UNDP**
- **WHO**
- **CDC**
- **NHRL**
- **NRL**
- **Stockholm SRL**