

**Rwanda Epidemiological Review – needs assessment for Program Review**  
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Following a key recommendation from the Joint Assessment of the National TB Strategic Plan (JANS) conducted in June 2014 Rwanda conducted a full “Epidemiological review and impact assessment” following the standardized terms of reference developed by the World Health in July 2014 before submission of the joint TB-HIV Concept note to the Global Fund in August 2014. Currently, Rwanda is planning a Mid Term Review of the Strategic Plan (2014-2018) and as part of that the question arose whether there is need for a full new epidemiological review as the last one was done just 2 years ago.

Full epidemiological review are useful about every 5 years unless major changes are anticipated or a TB Prevalence survey has been recently completed and surveillance data need to be placed in perspective of (new) findings of this survey.

In Rwanda neither of these situations have occurred although the Rwanda program started implementing the new NSP with more focus on targeted groups using new technologies to find the missing cases based on the prevalence survey findings.

Bases on the annual reports of the last 2 year (2014-2015 and 2015-2016) it was assessed whether any unexpected changes in trends had occurred that would warrant a more detailed assessment.

Looking at the last 2 annual reports data it can be seen that in 2014 and 2015<sup>1</sup> the reported number of TB cases has gone up, both the case notification rate (CNR) and the absolute numbers (Figure 1 & 2). This is not unexpected with a new strategy targeted to find the ‘missing’ cases in key population and high risk groups while sustaining routine case finding efforts.



Figure 1 Trend in Case Notification Rate (CNR) of new cases of TB between 1995 and 2015 (source: National Surveillance data Rwanda NTP)

<sup>1</sup> The points are referred to as 2014 & 2015 although the 2014 point covers 2014-2105 and the 2015 point covers 2015-2016

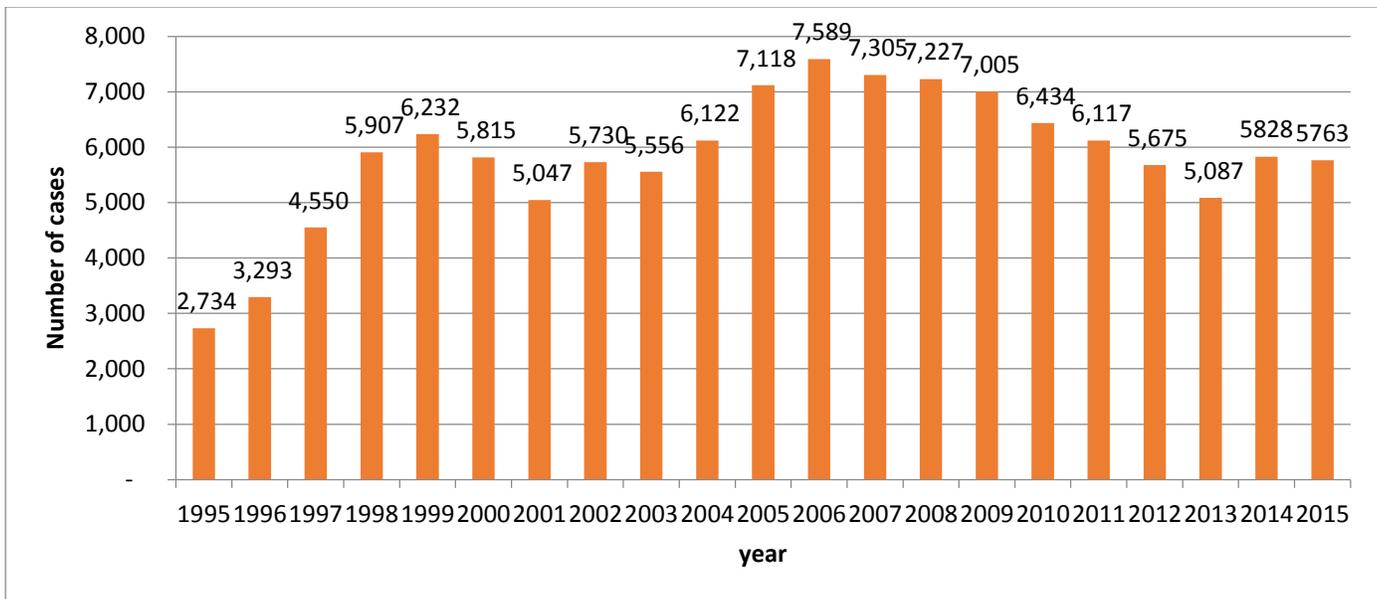


Figure 2 Absolute number of notified new TB cases (all forms) in Rwanda from 1995 to 2015 (source: National Surveillance data Rwanda NTP)

This increased trend can be explained by the increased effort to find cases through different strategies for targeted active and intensified case finding as outlined below.

The screening effort has been sustained in the last 2 years (figure 3).

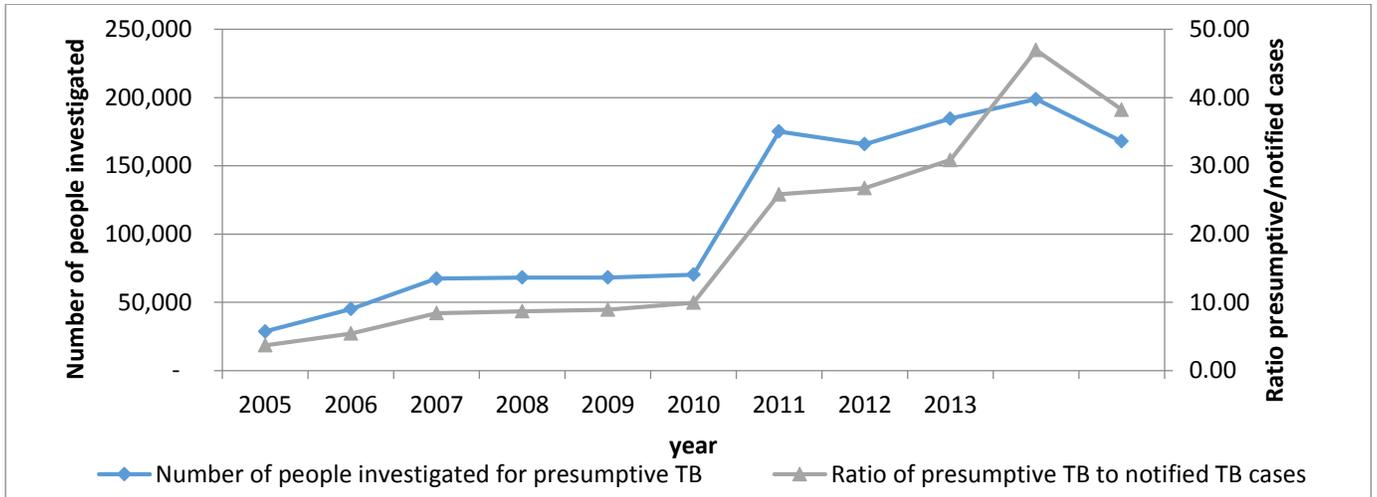


Figure 3 Number of people investigated for presumptive tuberculosis and ratio of presumptive TB to notified TB cases between 2005 and 2015.

The different pattern in the last 2 years has been explained in the last annual report by “The total number of presumptive TB cases is **167,941** with a positivity rate of **2.6%**. This positivity rate increased from 2.1% of the 2014-2015 FY. Potential explanations are that the number of confirmed cases compared to the previous year increased, possibly following improvement in the sample transportation system, as proven by the increase in the proportion of Genexpert tests done (31% versus 17% as compared to 2014-2015 FY) and the proportion of High risk groups who benefited from Genexpert test

(31%), compared to previous year (15%). The **16%** decrease in number of presumptive (as compared to 2014-2015 FY), may be due to improvement in quality definition of presumptive TB by health facilities. CHWs brought 44.5% of all Presumptive TB cases and **25.4%** of all sputum smear positive (SS+) TB cases detected.”

The equipment from the TB prevalence survey is being used for ACF in high risk population like prisoners and PLHIV contributing to finding more cases. The addition of CXR results in more cases being found as illustrated by the following results (adapted from the annual report 2015-2016):

In the last 6 months of 2015, ACF was started among PLHIV in 6 selected health facilities with high prevalence of HIV, using symptoms and CXR as screening tools. All PLHIV with any cough and /or abnormal CXR were considered a presumptive TB case. For diagnosis, all presumptive TB cases were requested to provide two sputum samples for microscopy and Genexpert examination. Those with at least one positive microscopy and/or MTB+ on Genexpert were considered a TB case. A total of 11,091 /15,186 PLHIV (73%) were screened for at the six sites using Symptomatic and Chest X-ray screening. There were a total of 1823 presumptive cases with 92 + cases being diagnoses and 3 MDR-TB cases. All of them had CXR abnormalities while only 52/95 (54%) reported symptoms.

During 2016 the second round of ACF in prisons started. Similarly, in 2 prisons, 8,004/ 8,493 prisoners (94.2%) were screened for Pulmonary Tuberculosis using Symptomatic and Chest X-ray screening. Among a total of 1046 presumptive cases, 26 TB cases were detected all with abnormalities on the CXR and 14/26 were also symptomatic.

TB in children was put high on the agenda with surveillance data showing a significant increase after IMCI tools that integrate TB screening were distributed in all health facilities and following an improved use of the childhood TB algorithm by availing Tuberculin test at health facilities.

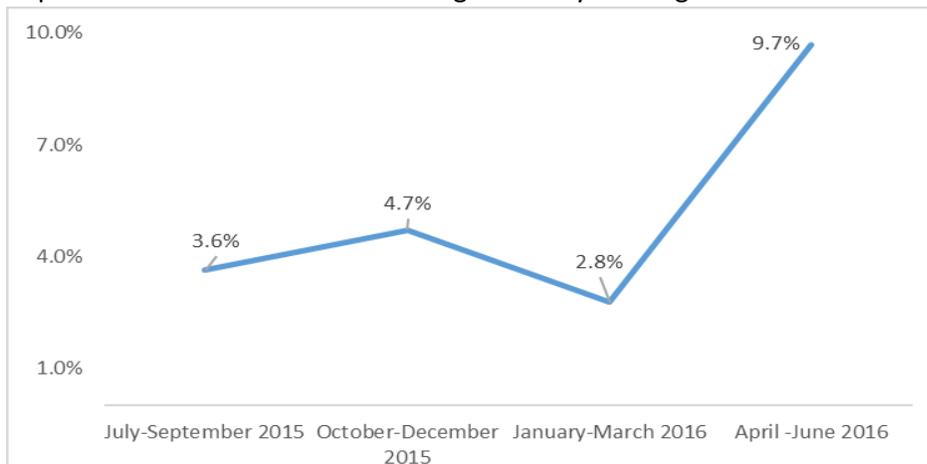


Figure 4 Proportion children detected with TB disease among all-forms TB in July 2015 – June 2016, by quarters.

The prevalence survey showed that patient diagnostic rate was lower in elderly and man, increased attention for this group is showing some results with increasing trend in case notification among men and the elderly with specifically men in this age group in the last few years (see figure 5 & 6).

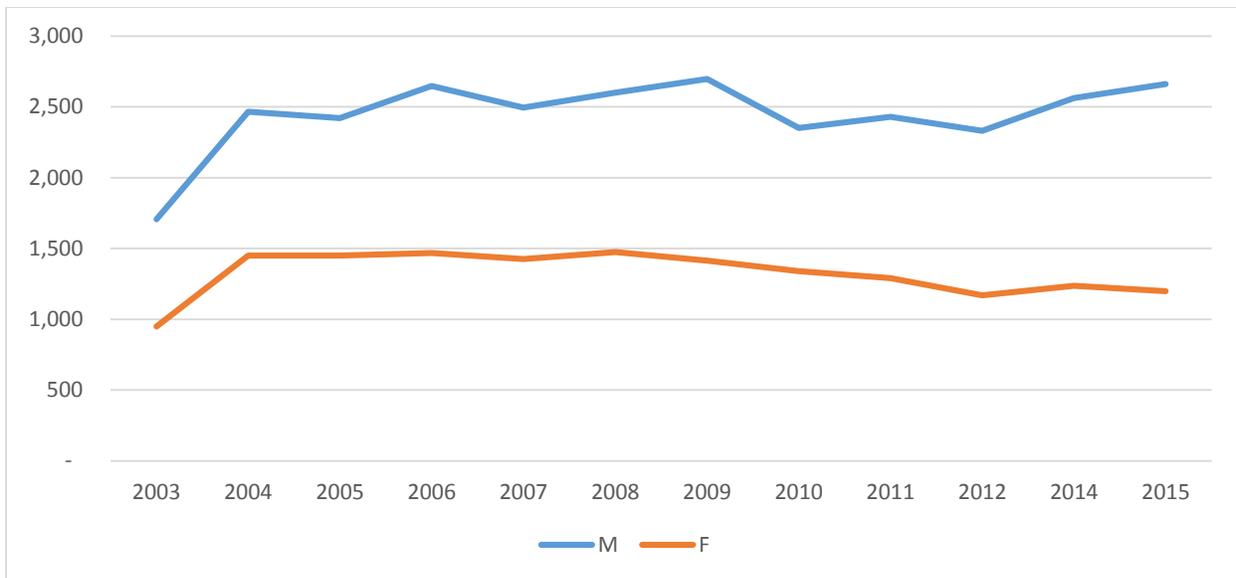


Figure 5 Trend in absolute number of notified cases by gender (male and female) between 2003 and 2015

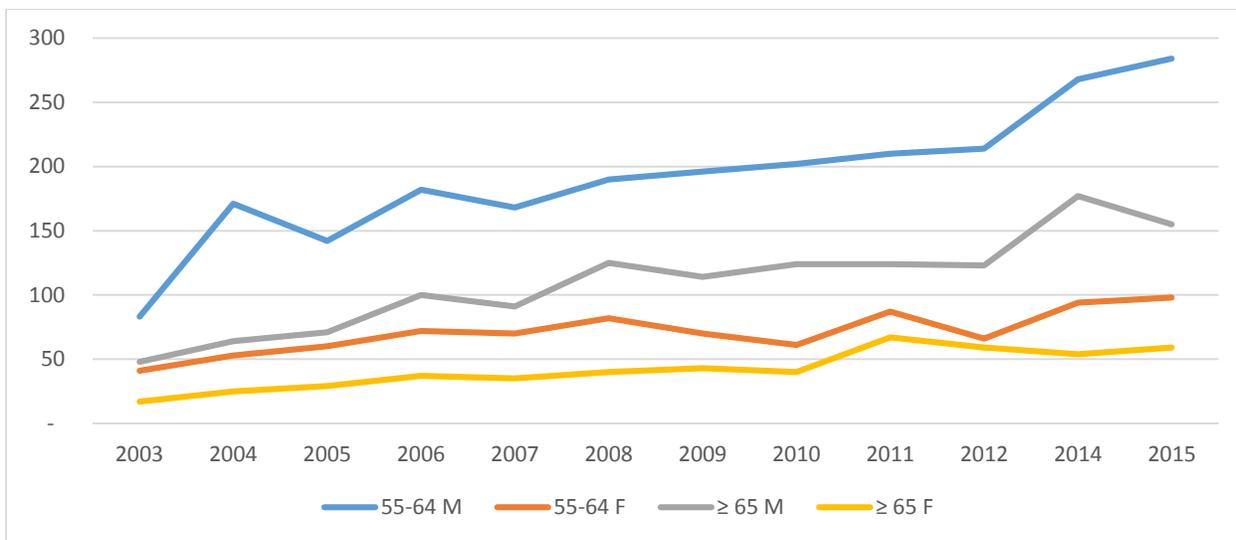


Figure 6 Trend in absolute number of notified cases in the elderly (55 years and above ) between 2003 and 2015

Apart from the upwards trend in case notification other trends like treatment success rates, TB-HIV collaborative activities show an expected trend of being similar or slightly improved.

The last annual report for 2015-2016 outlines clearly the achievements of the last year with reference to the year before and can be used as addendum to the 2014 epi assessment report. There is no need to redo a full epi assessment at this stage and the current epi review should be updated at the end of this strategic plan with the end term program review before the new NSP is written (2018?). At that time also the Standard and Benchmarks should be redone to determine the status of the surveillance system as by then Rwanda has fully moved to electronic surveillance already for a few years so an assessment

thereof should be conducted and detailed analysis of the available data conducted. The status of the following recommendations with regards to the surveillance system and the status thereof should be verified during the currently planned MTR.

Key recommendations made (in October 2013) for the strategic plan were:

**Recommendations (Oct 2013)**

**Current status (July 2014)**

- |   |                        |
|---|------------------------|
| a) Develop a scale-up plan for the electronic patient-based system  | Being finalized        |
| b) Update the M&E plan to include task-shifting as a result of shifting to an electronic system   | Under development      |
| c) Develop OR plan outlining key research questions to be answered (initial analysis using patient based data, prospective studies to be integrated etc.) | Included in the NSP    |
| d) Consider developing a scoring system for supportive supervision to better quantify results   | Being tested           |
| e) Conduct in-depth analysis of the surveillance data over the last 5-10 years  | conducted, this report |
| f) Every 5 years, evaluate the surveillance system and the data it generated linked to the external TB Programme Review                                   | Planned in the new NSP |