

Analysis of Network Report of Tuberculosis Cases in Non -designated Tuberculosis Hospitals

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Abstract:

To use the national network direct reporting system to analyze the reporting, referral, diagnosis and tracking of tuberculosis in Liuhe People's Hospital in Taicang City from 2007 to 2016, so as to improve the detection rate of tuberculosis patients. Export Excel tables of browsing information reported in the "China Disease Prevention and Control Information System" from 2007 to 2016, and analyze the materials after checking for duplicates. Summarize the Registration Forms of Pulmonary Tuberculosis Patients filled in during the period, and analyze the diagnostic coincidence rate of referral in place. A total of 442 suspected pulmonary tuberculosis patients were reported during the decade, 392 cases were reported through outpatient service, and 50 cases were reported through physical examination. Physical examination is also an important way to find tuberculosis patients. 86 smear positive patients were confirmed after being transferred to the designated hospital, including 61 cases with local registered residence registration, accounting for 13.80% (61/442) of the total number of reported patients. 70 cases were diagnosed as bacterial negative, including 51 cases with local registered residence, accounting for 11.54% (51/442) of the total number of reported cases. 252 cases were diagnosed as other diseases but not tuberculosis. The diagnostic coincidence rate of referral in place was 35.29% (156/442), and the exclusion rate was 50.01% (252/442). In the network report, 34 cases did not go to the designated hospital for medical treatment and diagnosis of tuberculosis, accounting for 7.69% (34/442) of the total number of reported cases. Only one case was local registered residence aged 82 years. All the other suspected tuberculosis patients who did not go to the designated hospital were from other places of registered residence. The reason why patients were not tracked in this study was that they went back to their hometown and the patient's residence was not fixed and could not be contacted.

Keywords:

Non-Designated Hospitals, Tuberculosis Report, Discovery Rate

1. Introduction

To investigate the contribution of Liuhe People's Hospital in Taicang city to the detection of tuberculosis, 442 cases of tuberculosis reported online from 2007 to 2016 were analyzed. The report is as follows.

2. Data Sources and Methods

Export the Excel spreadsheet containing browsing information reported by the China Disease Prevention and Control Information System from 2007 to 2016, remove any duplicates, and conduct a thorough data analysis. Summarize and analyze the registration forms filled out during the period to calculate the rate of diagnosis compliance for referred patients.

3. Results

3.1. Basic Information of Online Reports and General Cases

3.1.1. Distribution of residence

A total of 254 cases of suspected pulmonary tuberculosis patients with registered residence in the district and county were reported, accounting for 57.47% (254/442) of the total reported number.

3.1.2. Gender distribution

A total of 308 male patients were reported, accounting for 69.68% of the total reported cases (308/442).

3.1.3. Age distribution

The number of patients in the 70 year old age group is the highest in this district, while the number of patients in the 40 year old group is the highest in non local districts. (Figure 1)

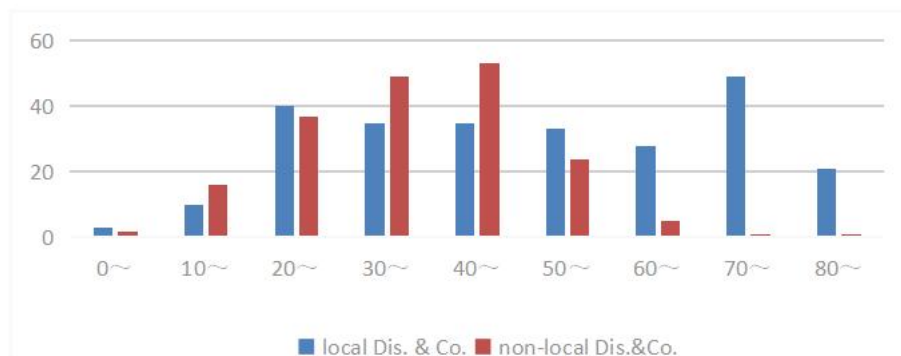


Figure 1. Age distribution of suspected tuberculosis cases.

3.1.4. Occupational distribution

The majority of patients are farmers. (Figure 2)

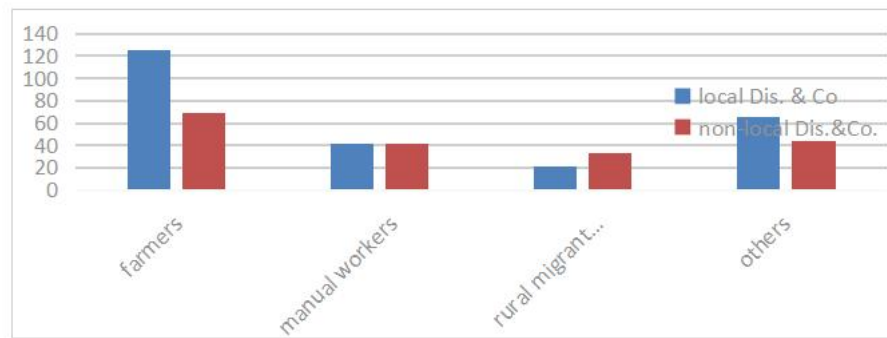


Figure 2. Occupational distribution of suspected tuberculosis cases.

3.2. Basic probability of tuberculosis detection

A total of 442 cases of suspected pulmonary tuberculosis patients were reported, and finally confirmed by the designated hospital. There were 156 cases of tuberculosis patients, accounting for 35.29% (35.29%) of the total reported number. 86 cases of smear positive patients accounted for 19.46% (86/442) of the total reported cases. 70 cases of bacterial negative patients. 15.84% (70/442) of the total reported population.

Figure 3 shows the distribution of confirmed tuberculosis cases according to the location of registered residence.

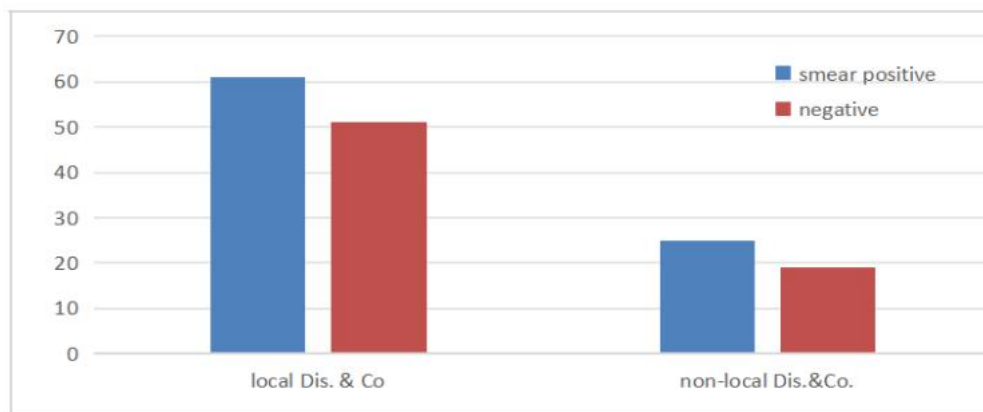


Figure 3. Distribution of confirmed tuberculosis cases according to the location registered residence.

3.3. The proportion of patients diagnosed with other diseases in all reports after double checking in designated hospitals

A total of 252 people were confirmed not to be tuberculosis patients after being transferred to designated hospitals, accounting for 57.07% (252/442) of the total reported cases. The detailed specifications are presented in Table 1.

Table 1. The proportion of reported cases diagnosed with other diseases in different years.

Year	Number of cases diagnosed with other diseases	Total number of cases	Proportion (%)
2007	1	29	3.45
2008	0	31	0.00
2009	4	27	14.81
2010	0	24	0.00
2011	52	78	66.67

2012	43	54	79.63
2013	41	55	74.55
2014	35	44	79.55
2015	44	52	84.62
2016	32	48	66.67

4. Discussions

4.1. Patient discovery

Tuberculosis is a Class B infectious disease, which needs to be reported online within 24 hours according to the Law on the Prevention and Treatment of Infectious Diseases. The patient usually goes to a non-designated medical institution to see a doctor first. After chest radiography in the radiology department is found, the outpatient doctor confirms that it is suspected of tuberculosis, fills in the Infectious Disease Report Card and the tuberculosis referral form, and then the patient goes to the tuberculosis designated hospital in the city to see a doctor for further confirmation. Liuhe People's Hospital in Taicang City Jiangsu Province, is not a designated tuberculosis hospital. However, in the past ten years, 442 suspected tuberculosis patients have been reported. Outpatient doctors can actively find and timely fill in infectious disease cards, which plays an important role in the discovery of tuberculosis patients in the city.

4.2. Patient referral

Generally, patients do not consider themselves as tuberculosis and take the initiative to go to designated hospitals for diagnosis. Therefore, non designated hospitals are an important source of tuberculosis patients [1]. Doctors in non designated hospitals, especially radiologists, play a key role in finding tuberculosis patients. Most of the suspected tuberculosis patients will go to the designated hospital to confirm whether they are tuberculosis through the doctor's referral service, and the doctors in the designated hospital will rule out whether they are tuberculosis through further inspection such as sputum examination. Through this analysis, 252 people were confirmed not to be tuberculosis patients after being transferred to designated hospitals, accounting for 57.07% (252/442) of the total reported cases. In particular, in 2015, there were 52 suspected tuberculosis patients, 44 of whom were confirmed not to be tuberculosis, accounting for 84.62% (44/52) of the year's report. This shows that the tuberculosis epidemic reporting work of the hospital is well done, and the enthusiasm of doctors for reporting is also high. If the diagnosis level of doctors can be further improved, the superior leaders will pay more attention to it, and appropriate training for relevant medical personnel will be organized, this work will be better done.

4.3. Non tuberculosis designated medical institutions play a vital role in the detection of tuberculosis patients

It is necessary to strengthen supervision and training of designated non tuberculosis medical institutions, and enhance awareness of reporting and referral of diseases; It is crucial to establish a sound supervision, assessment and reward and punishment mechanism to standardize the referral behavior, so as to minimize the missed report, and then promote the functions of non TB designated medical institutions in the

detection of TB patients. For the reporting of infectious diseases, tuberculosis as an example, many hospitals in China have done quite well. The thorough analysis of the factors affecting the reporting of the epidemic in hospitals should be conducted and the organizational management should be improved as well. The relevant rules and regulations should be carried out effectively, legal awareness of epidemic reporting should be strengthened, and the sense of responsibility should be enhanced; At the same time, relevant activities will be carried out to ensure the quality of the epidemic report card through a strict assessment system ensuring to get the timely, accurate and complete reports of tuberculosis epidemic offered by the hospitals [2].

5. Conclusions

Outpatient report is the main way to find tuberculosis cases, and the role of non tuberculosis designated medical institutions in finding tuberculosis cases cannot be ignored. Strengthening the unified supervision and training management of non TB designated medical institutions can reduce the rate of missing reports of tuberculosis epidemic and further improve the prevention and control of tuberculosis.

Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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