Editorial

Tuberculosis in Pakistan: A decade of progress, a future of challenge

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Tuberculosis (TB) is a major public health problem in Pakistan. TB has been prevalent in Pakistan and unfortunately it has been one of the neglected health areas in the past. Pakistan ranks 8th amongst the countries with highest burden of TB in the world. Pakistan contributes about 44% of tuberculosis burden in the Eastern Mediterranean Region. According to the World Health Organization (WHO), the incidence of sputum positive TB cases in Pakistan is 80/100,000 per year and for all types it is 177/100,000. TB is responsible for 5.1 percent of the total national disease burden in Pakistan. The impact of TB on socioeconomic status is substantial. The National TB Control Program, is responsible for developing national guidelines, framing policies and generating resources for implementation of TB control measures at Provincial and district level. The DOTS program target goals. This special supplement of the Journal of the Pakistan Medical Association presents several peer-reviewed papers originally published elsewhere in Pakistan. Thanks to the generosity of many publishers listed below, we were able to reproduce the publications of these key articles were selected, with a priority given to those with research talent and opportunity in the nation, as well as the research need.

For this special issue, only Index Medicus-referenced articles were selected, with a priority given to those with public health importance focusing on pertinent issues in Pakistan. Many Pakistani researchers have overcome obstacles, both scientific and other, to make important contributions to TB research. Many are cited here, but space and costs prohibited accommodation of all eligible references. Hence, we preferred to devote our limited budget to purchase and reproduce the publications of these key TB studies from Pakistan without cost, thereby increasing the convenience of their access to readers of the JPMA. There were a few articles which could not be included because publishers required a processing fee to reprint their articles; we preferred to devote our limited budget to purchase and distributions of additional copies of the supplement. We believe that the publishers demanding fees should reconsider these policies to permit free reproduction of articles for.
legitimate purposes in the developing country where the research was conducted.

This supplemental issue seeks to reach practicing physicians, policy makers, health care managers, senior nurses, microbiologists, medical researchers, university faculty and students, and public health staff in Pakistan. We believe that an earlier analogous supplement met a similar need in the HIV/AIDS field.

Infrastructure and Tuberculosis Management Challenges in Pakistan

The WHO directly observed therapy-short course (DOTS) strategy was implemented in Pakistan in year 2001. It took four years to bring DOTS coverage to all public health facilities (by mid-2005), and the country remains far behind the global targets of case detection rate of 70% and treatment success rate of 85%. Among the important challenges for TB control in Pakistan are a lack of community involvement, limited engagement of the private sector, increasing number of multiple drug-resistant (MDR) cases and a recent rise in HIV cases among injection drug users who are also at much higher risk of TB. We anticipate an increased burden of TB-HIV co-infection and continuing rise in the proportion of MDR-TB cases, unless there is aggressive intervention.

Pakistan spends a relatively small proportion of its gross domestic product (GDP) on health. In 2000, Pakistan spent 0.8% of GDP, lower than investments by its south Asian neighbors: India, 0.7%; Bangladesh, 1.7%; Nepal, 1.2%; Sri Lanka, 1.5%. All are far below such nations as the United States with its 9.7% GDP investment in health in 2003. Low health expenditures correlate with high military investments. Pakistan spent 22% of its total governmental budget on defense in 2000. Medical and public health research investments are exceedingly low in Pakistan. The overall low governmental commitment to the health sector results in the particular neglect of prevention, as curative services command the lion’s share of these scarce resources.

The articles in this special issue identify these specific needs of the Pakistani national TB control program:

1. ENGAGE THE PRIVATE SECTOR

A significant proportion of patients seek medical advice from private sector, including formal and informal sectors. Given the magnitude of the TB problem, the role of the private sector cannot be underestimated. The importance of private health care providers has also been recognized by the Stop TB Partnership with its emphasis on integrating private health care providers into DOTS strategy efforts. Well-organized educational efforts and logistical support to private sector health care providers can make it easier for them to follow standard TB control guidelines (both DOTS and DOTS-Plus for MDR-TB). We had success in upgrading the syndromic management of sexually transmitted diseases by private providers in the informal sector in one Karachi study, but the government did not expand (or even continue) this model program.

2. DRUG MANAGEMENT AND LOGISTICS

Proper anti-TB drug management is an essential component for success of TB DOTS strategy. Frequent stock-outs of TB drugs and diagnostic supplies at first level care facilities are major impediments to the TB case detection and treatment, fueling incidence and MDR-TB. The stock management systems at the central and district levels are weak such that distribution of TB drugs is far less reliable than distribution of most private sector products (e.g., petrol for autos and trucks, soft drinks, commercial goods). Effective drug supply systems, inventory management, methods of drug quality assurance, and proper use of anti-TB drugs by practitioners is essential.

3. SPECIAL FACILITIES

Targeted programs must engage prisons, jails, HIV/STD programs, specific high-risk occupational groups, illicit drug users, and persons living on the street. Links to community services are essential for persons leaving incarceration.

4. OPERATIONS RESEARCH

Operations research (OR) is necessary to address issues like now-uncontrolled private sector activities, poor management of defaulters, and lack of community involvement. Field-based research at the community level is essential to better identify problems from patient, provider, and policy-maker perspectives; solutions to improve program utilization can then be much better informed.

5. MDR-TB and TB/HIV

MDR-TB and TB/HIV are the emerging health issues in Pakistan and a great challenge to public health sector. In Pakistan, there is a lack of technical expertise in both areas. MDR-TB (through DOTS-Plus) and TB/HIV (via programme coordination and communication) are now identified as one of the challenges in broadening the activities of the National TB Programme beyond basic DOTS.

These issues are very familiar to experts in TB, but may not be familiar to the diverse readership of the JPMA.

Role of future research in the fight against TB in Pakistan

We are confident that research will play a vital role in the fight against TB. We need answers to many questions:
How should primary, asymptomatic TB be diagnosed and managed with high background BCG usage rates (complicating diagnosis) and INH resistance levels (complicating treatment)? Will isosoniazid preventive therapy be appropriate or are alternatives needed?

- What strategies will work to maximize DOTS coverage, given Pakistani logistical challenges? Can we succeed in rural areas, including areas of civil strife, through community engagement?

- How do we optimize HIV and TB diagnosis and care, including program integration to enable simpler care logistics from a patient’s point of view?

- Can we do better than the classic sputum examination to diagnose TB to diagnose TB? What is the most suitable resistance assay, given limitations in laboratories, especially in rural areas?

- What programs work best and why? What programs work most poorly and why?

- How can Pakistan’s politicians and powerful business leaders be influenced to invest more into health?

These and many other questions remain unanswered for Pakistan, suggesting an urgent need for research, even as we seek to improve programs. Implementation science is a term for the work needed to increase coverage of programs that we already have in place. Operations research is a component of implementation science that uses program process and outcome data in a feedback loop to improve program functioning. The guest editors are pleased that original articles have been provided for this special supplement and that publishers permitted reproduction of papers that we felt to be especially salient. We think they represent, in aggregate, a call-to-arms in the fight against TB in Pakistan.

References


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