Infection Control Policies and Practice in Pakistan

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Abstract

Objective: Infectious diseases in Pakistan are one of the main contributors to the burden of disease. The objectives of this article were to examine the various facets of the issue and suggest relatively inexpensive improvements.
Settings: The status of infections/infectious disease both in hospitals and community were considered.
Methods: Studies on infectious diseases from Pakistan published in national and international journals were reviewed and compared with those from more advanced countries. Anecdotal observation and common experience provided bases for some of the points made.
Results: The article argues for some cost-effective and readily workable infection control measures in hospital and community. Government department and other organizations that can be mobilized to develop policies on the relevant issues have been identified.
Conclusion: The article highlights the need for establishing surveillance system for infections and antibiotics on which to base further policies. As with some other development in the country, a culture of accountability in healthcare might provide sound basis for future developments (JPMA 51 ; 292:2001).

Introduction

Infectious diseases in Pakistan are believed to be one of the most pressing medical problem and the major cause of morbidity and premature death. Relevant data is, however, scare. Health authorities in Pakistan are not sufficiently prepared, or have the sources, to take on newly emerging infectious diseases, such as AIDS, New-variants CJD and E. coli 0157. Viral hepatitis is believed to have a high incidence and the carrier rates are likely to be even worse[1-3]. Even in the West, where infection control measures are effectively applied, ten percent of hospitalized patients suffer from nosocomical infection[4]. We believe that the incidence of nosocomical infection in Pakistan could be much greater and that some simple measures could significantly reduce this.
Recent advances in the West, in the knowledge and application of infection control denote a paradigm shift in health-care practice. Infection control is a politically sensitive issue because it is effective in improving public health, is cost-effective[5,6] and significant failure attract much media attention. In addition, litigation and clinical governance are a possible influence. Hospital infection rates are now used as performance indicators[7,8] and have been shown to have influence on the hospital budget allocations, patient stay and hospital waiting lists[9-11].
Unfortunately, authorities in Pakistan cannot utilize very much of the Western experience owing to the high costs involved and local factors such as climate, socioeconomic and demographic conditions, antibiotic prescription habits and bacterial resistance patterns. Currently overhauling the health care system may not be on the top of the government agenda but initiatives taken by medical professionals might prompt the policy makers towards re-appraisal of resources, which are presently at their bare minimum.

Why policies on infection control are important

The benefits of implementing infection control policies, to individual patients and society and in saving

in expenditure cannot be overstated. The costs of drugs and other consumables in healthcare in Pakistan, are largely borne by individual patients and their families, with the government providing mainly the infrastructure. In recent decades, the hospitals run by the private sector have been opened in the cities, providing a service to the prosperous strata. Funds saved by preventing infections would perhaps not show directly as saving in the Government expenditure in healthcare but there might be reduction in the import bills spent on antibiotics Figure.

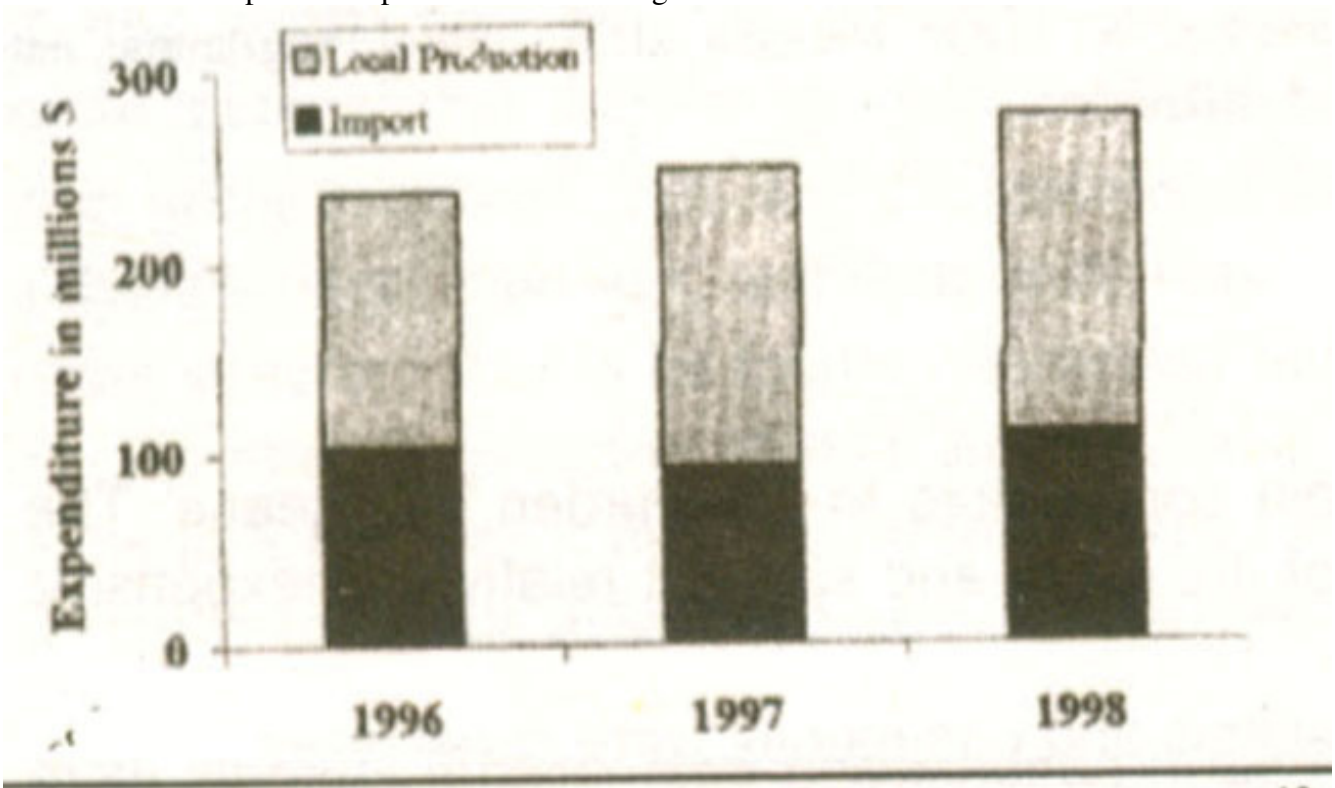

Figure. Expenditure in million $ on antibiotics in Pakistan during 1996-1998[12]

Risk of infections are not limited to the patients; healthcare workers would also benefit from infection control policies. Infection control will limit the non-financial cost of preventable disease to individuals and families.

Some simple infection control measures

Development of infection control policies depends on the study of behaviour of infectious agents in terms of their selection of hosts and models of transmission and the latent periods. incidence, prevalence and mortality rates of disease they cause. seroepidemiology and identification of high risk factors and groups. The infection control measures encompass early identification of the principle and secondary cases of disease and their appropriate treatment, elimination of infectious agents or limiting their spread, and protection of those at risk from acquiring infection.

As is obvious, infection control is a complicated task but significant results can be obtained from some simple measures, provided their application is ensured by education, training and publicity campaigns. Some of simple measures, which could be introduced throughout Pakistan, are as follows.

1. In community

• Supply of clean water for domestic use is a national issue, which will take time and huge resources to resolve. The communities are regularly hit by epidemics of waterborne enteric diseases. Use of boiled water in the affected areas will be a practical and effective preventive measure[12].

• Patients presenting to general practitioners and quacks usually expect treatment that include drugs in injectable form. Use of shared glass or disposable syringes in medical practice, sometimes not properly

disinfected, is still practiced[1,13]. While it would take time to change the public perception of good medical practice, the practitioners can be regularly reminded about the dangers of sharing needles and syringes.

- Appointment of communicable disease control consultants in different areas/institutions with specific responsibilities will enhance the profile of infection control activity.
- Efforts in improving health care seeking behaviour of the people can be made through targeting the attitudes using recommended and pre-tested methods.

2. In hospitals

- Frequent hand washing between patient contacts and after invasive procedures is the single most important infection control measure in hospitals[14]. Installation of more wash basins at convenient places in wards and outpatient departments and frequent reminder campaigns are crucial for this measure to be successful.

The hospitals in Pakistan are not equipped with many isolation facilities. Separate rooms wherever available are reserved for private patients rather than for isolation. Positive and negative pressure rooms are rarely constructed owing to the climate and high costs of air-conditioning. Cohort and barrier nursing might be possible without involving major additional costs.

- Crowding of surgical theatres by surgical staff, trainees and students is an important issue, along with design and ventilation problems and overuse of theatres. Local policies controlling the number of personnel in theatre and the exclusion of those with skin conditions, and the compulsory wearing of theatre uniform, could be put into practice.
- An enabling, more autonomous environment in the hospitals and service delivery outlets might, promote observation and enforcement of good practice.
- There is an urgent need to legislate and provide for upgrading blood transfusion services, towards safer practice, in the use of blood and blood products.
- Training of medical and paramedical staff and students may include, curricula on infection control issues and efforts to build up attitudes and awareness of the existing problems in the country.
- Input from infection control should be mandatory in the design of new hospitals and while repairing or improvising old hospital buildings. This may be reinforced by some statutory provisions for the private sector hospital buildings.

Antibiotic use

National data on multiple drug resistant bacteria are not available. Undoubtedly, drug resistance is a problem both in the community and hospitals, and unjustified use of antibiotics on enormous scales is the main cause of emergence of resistant bacteria. At present, mechanisms to limit the non-judicial use of antibiotics are not in place. Further complications are caused by unapt promotions by drug companies trying to meet sale targets. Various pressure groups favour the sale of virtually all kinds of antibiotics without prescription, and any effort to root out this practice cannot be successful due to shortage of doctors and resources. An effective realistic policy on this issue can be developed with the following considerations:

The authorities may recognize the need to use sonic antibiotics without a valid prescription and allow their sale over-the counter. This will give them the power over the choice of these antibiotics and their use.

This should be based on bacterial resistance statistics, where possible and on consensus experience of doctors treating infections, which can be obtained by questionnaires.

The prescription-free antibiotic may be rotated after a fixed period, e.g., 6 months, in order to try to limit the development of resistance. There is evidence that this policy is effective in controlling resistance in hospitals[15,16].

Public awareness of the problem, doctor training and local bacterial sensitivity statistics are required to deal with the question in general.

Serveillance

Surveillance of infections, outbreaks and bacterial resistance is an essential part in developing any infection control policy and measuring its success. An effective surveillance system is prospective, comparative and targeted to meet specific pre-set goals. It informs infection control activities in time and predicts their outcome, and reliably identifies the population at risk. The only notable surveillance activity here is retrospective notification of[21] notifiable diseases by medical and paramedical staff in rural and urban institutions through questionnaire. These data are not complete. reliable or representative. Authorities often shy away from accepting. that they do not know what is actually happening in the cities and villages. Centres of learning and excellence, e.g., universities and teaching hospitals, have the potential and relatively better resources for research and publications but the output is negligible Table 1.

Table. Results a search on Pubmed using 'communicable' or 'infectiious' and 'Pakistan' as subject words in all fields (carried out in November 2000).

	Total	Published by Institutions in Pakistan	Published by Universities Abroad
1999	24	15	9
2000	20	11	9

According to the PubMed (an international internet Medline provided by the National Institute of Health, USA) records, only 13 publications on relevant topics were produced in Karachi, 4 in Lahore and 5 in Islamabad during 1999-2000. There might be a few more publications reported by other resources, but the performance by the institutions in Pakistan in this regard needs a definite improvement.

Who should be involved?

Infection control is a multi-facet problem needing multi-disciplinary efforts. The authorities need to mobilize the existing huge health structure to facilities synchronized efforts based on effective redistribution of responsibilities. The following institutions are directly or indirectly involved in health-care system in the country.

Federal ministry of health, and the institutions supported by it.

Medical directorate of Armed Forces, military hospitals, field hospitals and regimental medical facilities.

Medic! colleges, post-graduate medical institutes, dental colleges and nursing and paramedic schools, both in private and public sectors.

Professional associations of physicians, surgeons, pathologists and general practitioners etc.

National organizations, e.g., National Institute of Health, Pakistan Medical Research Council and Pakistan Medical and Dental Council.

Provincial directorate of health and their distric offices, their dependent hospitals and basis and rural health units.

Municipal and District health offices
Medical journals
Society for Advancement of Community Health, Education and Training ((SACHET)
National disease prevention and control programmes of the Ministry of Health, e.g., AIDS control programme, Expanded Programme on lmmunisation (EMI), Malaria and Tuberculosis Programme and National Programme for Primary Health Care, Health Management System Programme World Health Organisation (WHO) and other unilateral and bilateral donors Non-government organization (NGOs) and voluntary sector Private sector hospitals; pharmaceutical companies
All of these institutions can be involved to develop, or mediate development of, policies on relevant areas, surveillance of infection and risk assessment and management. Universities in the West. whose curricula Pakistani universities generally adapt, focus on research as much as on teaching. Medical colleges in Pakistan have huge numbers of teaching staff but generate only little research activity. Department of Community Medicine therein may serve as the center of activity for surveillance and development of infection control policies in the specified geographical area. Pharmaceutical companies can be pursued to carry out studies and support research projects involving local issues and medical professionals. Voluntary sector can also be mobilised to support research.

Conclusions

The implementation of policies can be monitored initially by standards set by the institutions themselves and later by the national standards. The system has to rely solely on people's conscience and goodwill to report the true measure of their performance. Public confidence in a hospital and its reputation, for example, might be useful parameters to measure performance in that hospital, and allocation of budget and provisions can be dependent on the numbers of patients treated and/or numbers of complaints against the hospital (rather than against the individuals working there). This would also enhance the culture of corporate accountability and teamwork.
On a general note, it is usually not clear what is expected professionally of the administrators and managers of health care institutions, who are often medical professionals. The institutions suffer from a bureaucratic hold on their performance, or its lack, and any efforts towards improvement has to overcome a system characterized by stiff inertia and apathy, lack of commitment and inadequate rewards. Clinical governance is being uniformly overridden by administrative priorities. The issues of expected service standards and quality assurance and monitoring could be included as conditions in the contracts, tightened by strict accountability.
The system needs efforts in orderly ways, by education, training and concerted undertakings, to move away from the culture of carefree attitude to this huge problem of uncontrolled infectious diseases to the one with awareness of the problem and shared responsibility.

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