INTRODUCTION

New *JFP* series on timely clinical issues

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The 20th century offered hope that man could triumph over microbes. Public health interventions, such as massive vaccination campaigns, coupled with improved nutrition and living conditions have radically reduced the leading cause of death—infectious disease—at least in developed countries. Chronic diseases and injuries now cause most deaths in the US.

Yet influenza and pneumonia stubbornly persist; together, they are the 7th leading cause of death.[1] New infectious diseases have emerged: legionella, hantavirus, and ebola hemorrhagic fever. AIDS took less than 2 decades to become the most common killer of African American men aged 35 to 44 and women aged 25 to 35.[2] Existing diseases have migrated to new geographic areas (West Nile virus) or evolved new pathologic manifestations (severe acute respiratory syndrome, or SARS). And microbes continue to develop resistance against old and new antibiotics at an alarming rate.

We now face the very real threat of intentional production and release of microorganisms as a weapon of war and terror. Throughout history, mankind has tried, and at times succeeded, in weakening political adversaries by infecting them with microbes. Today, new technologies for DNA manipulation to enhance virulence and infectiousness considerably increase the potential for mischief and new global epidemics. Ironically, despite one of the greatest public health achievements of all time—eradication of history's leading killer, smallpox—we find ourselves vulnerable to this organism's reemergence due to worldwide cessation of mass immunization.

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WE KNOW WHAT TO DO

Although this picture is disturbing, we have the ability to hold our own. Vaccines, sanitation, potable water, and food safety technologies remain effective as long as we are willing to pay for and use them. Other measures include disease surveillance, laboratory analysis, public education, and, when needed, isolation and quarantine of individuals.

The public health infrastructure necessary to wield these tools effectively has eroded substantially over the past 40 years. It is now being strengthened through increased federal funding and national attention. However, implementation of public health measures remains largely a state and local responsibility.

NEW *JFP* SERIES ADVISES ON CRUCIAL CLINICAL ISSUES

An unfortunate part of history is the separate development of medicine and public health, which has led to misunderstandings and lack of appreciation for the mutual benefits of cooperation. It is now apparent the 2 systems must work more closely.

This desirable interdependence is the basis for a new type of article in THE JOURNAL OF FAMILY PRACTICE that will focus on developments that are linking the practice of medicine with the practice of public health. The inaugural article, on page 528 of this issue, is on SARS.

We aim to advise family physicians on developments in medicine that apply so broadly that they can decisively affect the overall public health, such as

- effective office-based and community-based prevention interventions
- practical application of new recommendations, such as those on sexually transmitted disease diagnosis and treatment, immunization practices, and chronic disease control.

Articles in this series will assist family physicians improve the health of the nation as they

- stay informed of local and national disease trends
- use antibiotics judiciously
- remain alert for suspicious disease presentations and report contagious diseases and other reportable conditions
- participate in sentinel disease detection
- cooperate with and support local and state health departments
- help plan and participate in emergency preparedness systems
- serve on boards of health or as consultants or medical directors to local health departments.

The importance of these activities cannot be overestimated. When the Centers for Disease Control and Prevention examined outbreaks that might have involved intentional use of infectious agents, it cited reporting by front-line health professionals as the *most critical* component in the detection of suspicious events.[3]

PATIENT-BY-PATIENT, PHYSICIAN-BY-PHYSICIAN

A strong public health infrastructure supported by public health–conscious physicians will not only strengthen protection against infectious diseases but also address other community-wide concerns, such as chronic and environmentally caused diseases, injuries, and substance abuse. Family medicine predoctoral and residency programs must be sure they are preparing trainees to fulfill these roles. Training requirements should include more than token mention of public health.

Appropriate roles for the American Academy of Family Physicians include leadership in testing and developing information systems that link local family physicians to state and local health departments and provide easy access to public health information, and training practicing physicians to be more involved in the public health system.

But nothing can substitute for the concern and involvement of the local physician caring for the individual patient, who sees beyond the individual patient encounter and works to ensure that their daily actions also contribute to better health for all.

REFERENCES

1. Centers for Disease Control and Prevention. Deaths; preliminary data for 2000. *National Vital Statistics Reports* 2001; 49(12). Available at: http://www.cdc.gov/nchs/data/nvsr/nvsr49/nvsr49_12.pdf. Accessed on June 17, 2003.
2. Centers for Disease Control and Prevention. Deaths: leading causes for 1999. *National Vital Statistics Reports* 2001; 49(1). Available at: http://www.cdc.gov/nchs/data/nvsr/nvsr49/nvsr49_11.pdf. Accessed on June 17, 2003.
3. Ashford DA, Kaiser RM, Bales ME, et al. Planning against biological terrorism: lessons from outbreak investigations. *Emerg Infect Dis* 2003; 9:515–519.