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Short Communication

Ecological public health, primary care and environmental issues: unused medicines and health community agent intervention in the south of Brazil

Andre Preissler Loureiro Chaves

Independent Researcher, Brazil

ABSTRACT

The overall goal of our current studies is to understand how the Health Sector can promote healthy urban environments (SDGs-UN) through an integrated model of Sustainable Healthcare System. With the system looking outwards, promoting Environmental Health in Primary Care to coping, prevention and control of local environmental problems that may cause harm to health. With the system looking inwards, outlining sustainable strategies for "care without carbon" delivered, recognizing its role to Climate Change and other environmental risks. Current Brazilian law does not provide appropriate legislation governing waste resulting from unused medication, which presents a growing public health threat. Studies that have considered these issues are incomplete, classifying unused medication as a remnant of healthcare and ignoring the user, who has the largest role in generating this type of waste. Users do not possess sufficient knowledge regarding the issue or their responsibilities with respect to environmentally appropriate disposal. The main objective of this study was to create a reverse logistics medication channel in a model experiment involving health community agents working in Family Health Strategy teams in Vila Bras, Brazil. The community health agents were trained in the appropriate disposal of unused medication and conveyed details of the basic disposal guidelines to the residents of the area served by the teams. The community health agents activities served a proactive reverse logistics channel, which had vast potential, as the prevention of inappropriate disposal of unused medication increased exponentially.

INTRODUCTION

The long-term good health of populations depends on the continued stability and functioning of the biosphere's ecological and physical systems, often referred to as life-support systems. We ignore this long-established historical truth at our peril: yet it is all too easy to overlook this dependency, particularly at a time when the human species is becoming increasingly urbanized and distanced from these natural systems. The world's climate system is an integral part of this complex of life-supporting processes, one of many large natural systems that are now coming under pressure from the increasing weight of human numbers and economic activities. By inadvertently increasing the concentration of energy-trapping gases in the lower atmosphere, human actions have begun to amplify Earth's natural greenhouse effect. The primary challenge facing the world community is to achieve sufficient reduction in greenhouse gas emissions so as to avoid dangerous interference in the climate system. National governments, via the UN Framework Convention on Climate Change, are committed in principle to seeking this outcome. In practice, it is proving difficult to find a politically acceptable course of action often because of apprehensions about possible short-term economic consequences. This volume seeks to describe the context and process of global climate change, its actual or likely impacts on health, and how human societies should respond, via both adaptation strategies to lessen impacts and collective action to reduce greenhouse gas emissions. As shown later, much of the resultant risk to human populations and the ecosystems upon which they depend comes from the projected extremely rapid rate of change in climatic conditions. Indeed, the prospect of such change has stimulated a great deal of new scientific research over the past decade, much of which is elucidating the complex ecological disturbances that can impact on human well-being and health as in the following example. The US Global Change Research Program recently documented how the various effects of climate change on aquatic ecosystems can interact and ripple through trophic levels in unpredictable ways. For example, warming in the Arctic region has reduced the amount of sea ice, impairing survival rates for walrus and seal pups that spend part of their life cycle on the ice. With fewer seal pups, sea otters have become the alternative food source for whales. Sea otters feed on sea urchins, and with fewer sea otters sea.

Global climate change is thus a significant addition to the spectrum of environmental health hazards faced by humankind. The global scale makes for unfamiliarity although most of its health impacts comprise increases or decreases in familiar effects of climatic variation on human biology and health. Traditional environmental health concerns long have been focused on toxicological or microbiological risks to health from local environmental exposures. However, in the early years of the twenty-first century, as the burgeoning human impact on the environment continues to alter the planet's geological, biological and ecological systems, a range of larger-scale environmental hazards to human health has emerged. In addition to global climate change, these include: the health

risks posed by stratospheric ozone depletion; loss of biodiversity; stresses on terrestrial and ocean food-producing systems; changes in hydrological systems and the supplies of freshwater; and the global dissemination of persistent organic pollutants. Climate change and stratospheric ozone depletion are the best known of these various global environmental changes. Human societies, however, have had long experience of the vicissitudes of climate: climatic cycles have left great imprints and scars on the history of humankind. Civilizations such as those of ancient Egypt, Mesopotamia, the Mayans, the Vikings in Greenland and European populations during the four centuries of Little Ice Age, all have both benefited and suffered from nature's great climatic cycles. Historical analyses also reveal widespread disasters, social disruption and disease outbreaks in response to the more acute, inter-annual, quasi-periodic El Niño Southern Oscillation cycle. The depletion of soil fertility and freshwater supplies, and the mismanagement of water catchment basins via excessive deforestation, also have contributed to the decline of various regional populations over the millennia.

Conclusion:

Effective primary care systems are essential for the delivery of sound public health interventions. However, the Family Health Programme delivers sound public health interventions embedded within the primary care system. This interface is embodied in lay CHWs serving each and every household on a regular basis, providing a broad package of activities that supports the healthcare needs of individuals and the population at the same time. Attending to the little and the big 'big pictures' in this way is an innovation the NHS and other health systems would do well to learn from. If the NHS is to save money then providing an integrated, universal package of services similar to that in the Family Health Programme seems to be a good place to start. While it is difficult to quantify the total impact of resistance on health, published data clearly indicate that morbidity and mortality are increased by delays in administering effective treatment for infections caused by resistant pathogens. The pro-longed illness and hospitalization of patients with resistant infections and the additional procedures and drugs that they may require carry financial implications. There may also be economic implications for the patient in terms of lost productivity. Antimicrobial-resistant infections in food-producing animals may have major financial implications for both farmers and consumers. In addition, antimicrobial resistance diverts financial resources that could otherwise be used for improving health and threatens the success of global efforts to combat the major infectious diseases of poverty. In this light, implementation of the WHO Global Strategy can be considered appropriate risk management to protect current health care initiatives and the availability of treatment for future generations.