Health and Tourism in the Caribbean[1]

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Health and tourism impact on each other in the Caribbean, so it is both appropriate and necessary that those concerned with tourism in the region should consider health issues. The health and environment of the Caribbean can have good or bad effects upon the health of visitors, and tourism has health consequences for local residents. Tourism for health purposes also needs to be considered. This article points out the major issues related to these interactions, indicates where more data are needed, and suggests lines of future action.

Tourism, one of the world's leading trade commodities, continues to grow at least as fast as the rest of global trade. And even though the lion's share of tourist earnings are generated and captured by the developed countries, there is every reason to believe that tourism will continue being important to economic development of the Caribbean (*1–3*).

Recently, McIntyre (*4*) analyzed some of the issues relevant to development of tourism in Trinidad and Tobago and found reason for optimism about the role the industry could play. As he pointed out, the Caribbean as a whole constitutes the largest regional supplier of tourism among the developing countries. Indeed, in 1985 the Caribbean Commonwealth (CARICOM) countries received about 1% of all world arrivals. McIntyre also noted rapidly growing components of the tourism market (such as business/conference travel and education travel) and cited services providing transport, telecommunications, finance, marketing education, and medical care as entities with which tourism should be linked.

In this same vein, Nicholls (*5*) recently asserted that tourism is a "potential engine of growth" in the Caribbean and pointed out that during the 1970s the regional economies in which the tourism sector played a major role performed consistently better than those in which it had lesser significance.

A few examples serve to illustrate tourism's importance. The tourism sector accounted for 16% of Antigua's gross domestic product (GDP) in 1986 and as much as 33% of the Bahamas' (*6*). Likewise, the tourism sector has been contributing about 10% of the GDP in Barbados, and it has been estimated that during the 1990s this share can be expected to rise to over 13% (*7*). Hence, it is not surprising that, despite fears of monosectoral development, every effort is being made to vigorously promote tourism as a major contributor to the Caribbean countries' economic stability and growth.

Of course, health issues are linked with all forms of development, and any development sector that fails to consider health is not being planned appropriately (*8*). Hence, since the Caribbean clearly

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plans to promote its tourism sector, attention has to be paid to tourism's impact upon the health of the Caribbean people, as well as to the need for a health infrastructure supporting tourism's development.

Within this context, it is worth noting that the relationship between economic development or economic status and health has been well studied (*9–11*); and although poverty is not irrevocably linked to ill health, by and large the poorest nations have been found to exhibit the worst health indicators. Thus, an activity that promotes economic growth and increases a nation's wealth will generally contribute to raising its health standards.

The health of the Caribbean people is an essential goal of the whole development process, and health figures in all of the region's recent national development plans. The Caribbean governments have shown their commitment to achieving a good level of health care by devoting a significant share of public expenditures to health—with the wealthiest Caribbean countries (generally corresponding to those that earn major revenues from tourism) tending to make the highest per caput expenditure on health. In the Commonwealth of the Bahamas, for example, where the per caput GDP was $US9,068 in 1986, the per caput public expenditure on health was $2,038—by far the highest in the Caribbean.

This article will not address the ways tourism influences health in the Caribbean by stimulating economic growth. Rather, it will focus upon the reasons why health issues have to be considered by the tourism sector. Attention will be directed to visitors' health, to situations where the health of nationals is affected by tourism, and to the need for research to augment the inadequate primary data existing in this field.

HEALTH REQUIREMENTS AND CONSEQUENCES OF TOURISM

Environmental Concerns

The connection between health and tourism that development planners make most often and most easily is environmental. The concern is usually how environmental matters affect the tourist industry and vice versa—how the industry might impact negatively on the environment and thus create a hazard for the health of visitors and local citizens alike. In most Caribbean countries the Ministry of Health bears the responsibility for overseeing those environmental health matters of most concern to tourism.

More generally, concern for the Caribbean environment in all its aspects was expressed most eloquently by the Ministers Responsible for the Environment when they met in Port of Spain, Trinidad and Tobago, in June 1989 and issued the "Port of Spain Accord on the Management and Conservation of the Caribbean Environment." This accord identified priority issues and problems, proposed strategic approaches to solutions, and put in place the institutional arrangements necessary for consultation and coordination. Several of the priority issues identified—including degradation of the coastal and marine environment, solid and liquid waste management, and water quality and supply—are all of crucial importance to tourism.

John Lea in *Tourism and Development in the Third World* describes a model envisioning three kinds of relationships between tourism and the environment (*12*). First, there is the matter of conserving the historical culture and physical environment—in the face of frequent conflicts between modernization and maintenance of the so-called unspoilt natural environment to be enjoyed by

visitors. Second, there is the stress generated by these two sets of interests—stress felt primarily in three areas (the restructuring that leads to ecologic change through such actions as construction of new buildings, highways, airports, and so on; solid waste or sewage generation, as well as discharge of oil products by tourist ships, that may pollute the environment; and various tourist activities that can directly affect the environment, such as damage done by tourists to coral reefs and nature trails). And third, there is the relationship between the environment's carrying capacity and the multiple uses made of tourist attractions—a relationship tied to the concept that every natural or man-made attraction has a limited capacity to accommodate visitors, and that exceeding this limit will spur deterioration of the attraction.

The most relevant portion of Lea's model for our present purposes deals with generation of waste by the tourist industry and the impact that improper disposal of such waste can have on the environment. While some countries have begun to institute proper solid waste management practices, many still have difficulty establishing and maintaining the infrastructure and systems necessary for solid waste collection and disposal.

The effect of poorly treated sewage on the marine and coastal environment in the Caribbean and the need for public sewerage have been well documented (*13*). Several studies have shown that sewage treatment in the Caribbean is far from satisfactory (*14*). Some countries still use privy pits, pail closets, and failure-prone septic tanks. Regarding the tourist industry, several hotels employ package sewage disposal plants that may not be properly maintained.

In addition, a good supply of clean water is essential for tourism. One key reason is that many tourists come from countries and social sectors where the availability of abundant clean water is taken for granted. Hence, not only is the tourist sector a major water user, but water use in the tourist areas of most Caribbean countries is higher than in other areas.

Food safety and hygiene is the third of the environmental concerns that must be addressed by those involved in tourism. Supervision of food safety involves inspection of food handling in hotels and restaurants and food preparation for airlines, regular examination of food handlers, and supervision and regulation of the street vendors present at every Caribbean tourist destination. Unfortunately, the very quaintness and underdevelopment of many tourist destinations implies absence of the trained personnel and laboratory resources required to carry out the rigorous inspection and testing needed.

Breakdowns in any of the aforementioned environmental health areas usually surface in the form of gastrointestinal disorders. In this regard, it is worth noting that approximately 40% of all international travelers worldwide have some diarrhea while abroad (*15*). Also, the dense concentration of tourists present in hotels and similar establishments means that episodes of gastrointestinal disease attributable to poor food hygiene are often explosive—and a source of great embarrassment to the hotel or establishment involved.

Health of the Visitor

A great deal has been written about diseases to which the traveler is prone and measures to be taken to avoid them (*16–18*), perhaps because most of the literature on health and tourism comes from the developed countries where the tourists live. However, tourists may also

affect the health of the local population (see p. 296), and indeed health is only one of various elements that may be involved in a sociocultural relationship between the visitor and the visited.

The medical discipline dealing with travelers' health has actually been given the special name of "emporiatrics" (*19*). In general, it is recognized that travelers face three basic kinds of health risks. They are subject to disorders induced by rapid environmental changes—such as jet lag and motion sickness; they may be exposed to infectious diseases that do not exist at home or that they are not exposed to at home by reason of behavior; and finally, they may be served by health care systems very different from those with which they are familiar.

Jet lag is attributed to disturbance of the body's circadian rhythms and others most often upset by travel across time zones that are related to sleep and wakefulness, performance, hunger, and defecation. Adjustment takes longer with increasing age, and travelers simply have to appreciate that jet lag will result in some substandard performance before full adjustment takes place.

Despite the difficulties and discomforts associated with jet lag and motion sickness, most of the attention has focused on infectious diseases—especially diarrheal diseases of primarily parasitic, bacterial, and viral origins (*20, 21*). These are usually short-lived, and antibiotic treatment is generally not required. Similarly, antibiotic prophylaxis is rarely advisable, and should usually be reserved for those travelers such as athletes and entertainers who have to be fit for a specific period.

Regarding other problems, considerable attention is also paid to prophylaxis and proper immunization of travelers going to other parts of the world, and superficial skin infections secondary to insect bites are fairly common among visitors to tropical areas including the Caribbean.

Available evidence indicates that visitors to the Caribbean have little to fear from infectious diseases. Outbreaks of diarrheal disease in tourist establishments have been reported very infrequently, and there is no threat of malaria, hepatitis, or most other "tropical" diseases.

However, the Caribbean tourist industry should take note of the threat of dengue—which is endemic in the Caribbean and reaches epidemic proportions on various islands from time to time (*22*). One good reason for attempting to eradicate the *Aedes aegypti* mosquito that carries the dengue virus is the simple fact that a serious dengue epidemic could devastate the tourist industry in any Caribbean country. Virtually everyone in the Caribbean knows about Cuba's 1981 dengue epidemic that caused 24,000 severe cases and 158 deaths (*23*). While all the Caribbean countries have *A. aegypti* control programs, without exception these need to be strengthened and perhaps reorganized to stress rational control measures based on source reduction while de-emphasizing the use of insecticides that are potential ecologic hazards.

By and large, the tourist coming from North America or Europe to the Caribbean will find a health profile very similar to that of his or her home country. The infectious diseases do not figure prominently as causes of death, severe childhood malnutrition is a thing of the past, and life expectancy at birth is over 65 years in all the Caribbean Commonwealth (CARICOM) countries. Poliomyelitis has not been reported from the Caribbean since 1982, and rates of childhood immunization are gratifyingly high—especially in the smaller islands. At the same time, the chronic noncommunicable diseases associated with specific life-styles are figuring more prominently as causes of death in all countries,

and motor vehicle accidents are increasing (24).

The diseases or disorders of more concern to the Caribbean tourist originate in types of behavior that are often out of character for the visitor. Tourism is a form of leisure behavior, of "time out" from the normal demands of daily living, and there are three major problems associated with such behavior.

The first relates to excess alcohol consumption and its consequences. In one American study, tourism was found to be positively associated with fatal single-vehicle motor accidents—a class of accidents associated with alcohol abuse (25). Similarly, a study of nearly-drowned patients admitted to the Queen Elizabeth Hospital in Barbados found that 60% were visitors, that the tourist season was the peak period for near drownings, and that alcohol had been ingested before the accident by one-third of the visitors (26). Hence, tourists should be warned not only about drinking and driving but also about drinking and swimming.

The second group of disorders in this category are the sexually transmitted diseases, and there is some evidence that increased travel is one of the important factors in the transmission of these diseases. The dangers of casual sex have been heightened by the AIDS epidemic, since it is known that sexual intercourse is the prime method of transmitting the human immunodeficiency virus (HIV).

There has been considerable international debate over the relationship between HIV infection and travel, and serious consideration has been given to screening international travelers as a means of preventing entry of the disease into a country. Since almost every country in the world has reported HIV infection, this mechanism of preventing entry is hardly relevant. Indeed, a meeting of experts convened by the World Health Organization some time ago came to the conclusion that no screening program for international travelers could prevent the introduction and spread of HIV infection (27). The World Health Assembly therefore adopted a Resolution in 1988 which urged Member States "to protect the human rights and dignity of HIV infected people and people with AIDS and members of population groups, and to avoid discriminatory action against, and stigmatization of them in the provision of services, employment and travel."

The third behavior-related health problem associated with tourism is drug abuse. There is ubiquitous evidence of a global increase in drug use and in attendant social, economic, and health problems. Because possession and use of drugs are illegal in the Caribbean, there are no good data on the frequency with which tourists indulge. However, it is widely accepted that there is a considerable trade in drugs with tourists, and marijuana is readily available at most tourist destinations.

Tourists visiting the Caribbean generally come from countries where people of means have ready access to health services. These services may be paid for directly by the patient or indirectly through some form of health care insurance. In any event, the tourist expects to pay for the services received.

The medical services in the Caribbean are usually either private, with the physician being reimbursed directly by the patient or indirectly by insurance, or public with minimal charge to the patient. It is often a source of frustration and embarrassment to the tourist not to be able to pay realistic fees when he or she comes into contact with the public medical services. In most countries, the fees charged bear little relationship to the cost of the service.

Tourism also has an impact on the health care services of the countries visited—in the sense that tourists use

these services, which constitute a necessary part of the tourist industry infrastructure. Many hotels have physicians visiting or on call, who perform excellent service attending common ailments. Furthermore, travel to the Caribbean by more elderly people has become a growing trend (the United States Travel and Tourism Administration reports that while 230,000 people over the age of 55 visited the Caribbean in 1983, 453,000 did so in 1988—*28*). These people are naturally prone to medical problems of their age group—e.g., myocardial infarctions, strokes, falls and fractures—all of which require tertiary care, at least on an emergency basis.

Also, some visitors have special health needs. Tourists on chronic hemodialysis now visit the Caribbean and receive their therapy at one of several dialysis units offering this service; and it is becoming routine to cater to visitors with various kinds of disabilities.

It is necessary in planning for tourism in the Caribbean to take account of the physical plant and trained personnel that will be needed for this care. Although it is known that tourists use the local services, there are no published data on the extent of such use. Preliminary data from Barbados (H. S. Fraser, personal communication) show that over the winters of 1987 and 1988, visitors accounted for 25% of the admissions to the intensive care unit of the Queen Elizabeth Hospital.

Health of the Visited

Information about the effects of tourism upon the health of local populations is almost all anecdotal. In essence, there are two theoretical concerns: transmission of infectious disease from tourists to locals and changes in local life-styles that can cause increased disease and that arise as a direct or indirect result of tourism.

Because of the rapidity of air travel, there is always the possibility that a visitor may arrive while in the incubation stage of some illness and thereafter transmit that illness. This does not appear to have occurred to any significant degree, due partly to vigilance and partly to absence of many of the disease vectors involved.

The most feared of the infectious diseases are those transmitted by direct contact, the principal ones in this class being the sexually transmitted diseases. There is little information in the Caribbean on the relationship between tourism and the spread of sexually transmitted diseases, although it is widely believed that the beach culture that is the feature of tourism encourages sexual contact between visitors and nationals.

However, one study from Jamaica has found that the biomolecular, serologic, and genetic characteristics of gonococci isolated from Jamaicans were those of strains from developed countries, particularly Canada and the United States (*29*). The authors speculated that these nonnative strains were imported, probably by tourists from North America, and transmitted to local residents.

There are good data on AIDS, which must have been "imported," although the role of tourism has not been established. According to data published by the Caribbean Epidemiology Center (*30*), the first confirmed case of AIDS in the Caribbean occurred in Jamaica in 1982, and was followed by a report of eight cases from Trinidad and Tobago in 1983. As of December 1988 all the English-speaking Caribbean countries except Montserrat had reported AIDS cases, the total reported number of such cases being 1,013.

It should also be noted that over the past five years there has been a shift from the predominantly homosexual spread seen earlier in the epidemic to a pattern

of predominantly heterosexual transmission, and that the proportion of AIDS cases reported in females has increased every year.

Regarding behavior-related problems, alcoholism and drug abuse are the principal disorders to be considered.

Alcohol use appears higher in areas with the highest tourist densities, but it is impossible to impute cause. The latest data from the Addiction Research Foundation in Canada show that 1980 per caput alcohol consumption was higher in the Bahamas than in any other Caribbean country (*31*). It is possible that most of the alcohol involved was consumed by visitors, but high mortality among locals from cirrhosis of the liver makes it likely that much of the alcohol was consumed by native residents.

Also, cocaine use has certainly increased in the Caribbean, and crack addiction in epidemic form has been reported (*32*). The patients involved in the study reporting this information were all locals, and there was no indication that tourists or tourism was responsible.

HEALTH TOURISM

Health tourism is defined as tourism in locales deliberately promoting health care and health facilities as an attraction (*33*).

Such tourism has a long history. Indeed, modern tourism may have had its origins in the development of resorts associated with the spas of the seventeenth and eighteenth centuries (*34*). The waters of these spas were believed to have medicinal properties, but those who visited for the cures soon came to require additional entertainment for themselves and their companions. By the middle of the eighteenth century, it was being suggested that sea water and sea bathing had therapeutic properties equivalent to the spas, and seaside resorts had begun to attract visitors. The practice of traveling for relaxation or leisure, which came later, was favored by social changes following the Industrial Revolution and the increasing ease of travel after World War I.

Health tourism thus involves recapturing some of the pristine motives of tourism related to physical well-being. There are still cities in Europe and the United States that promote their thermal springs or health facilities, such as Baden and Interlaken in Switzerland and Hot Springs in Arkansas, U.S.A. Some of the health facilities involved offer medical examinations, special diets, supervised exercise programs, and nontraditional medical therapies—and we can expect that drug rehabilitation will soon be added.

Historically, there are some famous examples of distinguished persons visiting the Caribbean for their health. George Washington brought his brother to Barbados for that reason, and in 1848 the famous historian Robert Schomburgh strongly recommended a visit to Barbados as a health cure. However, despite its venerable status, health tourism in the Caribbean has been poorly developed.

There is a notable exception—that of Cuba, which has successfully promoted health tourism by offering medical services to North American, Latin American, and Western European nationals at costs far below those pertaining in their own countries (*35*). Cuba has also reported cures for some diseases, and the demand for some of these has been so great that special facilities have been developed to accommodate foreign patients.

Developing this brand of tourism elsewhere in the Caribbean would require very careful market segmentation, and the size of the potential market would have to be determined. Another requirement would be very careful supervision of the health facilities and therapies being offered—since there can be abuse, with the gullible being offered therapies bor-

dering on the unethical. The area of most concern involves provision of treatments for cancer patients that are of dubious or unproven efficacy.

The Caribbean in general can offer good health care to visitors at a fraction of the costs charged in most developed countries, but no systematic effort has been made to market these services or the skills of the Caribbean health professionals who provide them.

Similarly, no attempt has been made to market the fact that the Caribbean is on the whole a healthy place. The climate and available labor should make retirement homes, hospices, and long-stay medical facilities for foreigners attractive propositions. Obviously, this should in no way detract from the governments' primary aim of ensuring access to health care for the Caribbean people—the aims of advancing the resident population's health and promoting health tourism can be complementary.

HEALTH INFORMATION FOR VISITORS

One responsibility of companies transporting travelers is to provide those travelers with accurate health information. Unfortunately, no systematic effort has been made to provide specific information of this kind about the Caribbean. One of the most authoritative publications from the World Health Organization, *Vaccination Certificate Requirements and Health Advice for International Travel* (*36*), is aimed primarily at national health authorities and is necessarily so general that the needs and advantages of areas like the Caribbean do not stand out. Therefore, potential visitors often have to follow a long trail of inquiry before they get information, often inaccurate, about the major health problems they may face, the medical facilities available, and specific precautions (if any) that they should take.

FUTURE DEVELOPMENTS

As the foregoing suggests, there is a most pressing need for more data on health and tourism in the Caribbean. In particular:

- Demographic data on visitors are needed, together with information about the health problems with which they arrive and any problems acquired in the Caribbean. These data have implications for the types of facilities that need to be provided as well as for the training of health personnel. In addition, Caribbean training institutions need to make more formal recognition of emporiatrics and its local expression.
- Data on tourism's cost to the health sector and the extent to which the health infrastructure supports tourism are also needed. As a minimum, it is necessary to know what use tourists are making of public health services and how the governments can establish a simple system to recover the cost of those services.

It is important that the Caribbean governments pay attention to developments in this field. Tourist health is becoming accepted as an important branch of public health, with many advances in the discipline occurring in the Mediterranean Basin—an area that accounts for approximately a third of all the world's tourists.

The Italian Association for Touristic Medicine was founded in 1983 to promote research and training and to develop information programs on all aspects of health relating to tourism. Since then the World Health Organization and the World Tourism Organization have

joined forces with the Italian Association to sponsor a series of meetings promoting this new area of public health (37). The major initial emphasis has been on infectious diseases that tourists may contract and analysis of strategies for prevention and control of such diseases. (As noted above, the interests of the Caribbean obviously extend beyond the infectious disease aspect of tourism.)

Tourism is yet another area where health considerations have an important bearing on countries' major development strategies. Also, many of the approaches and studies needed can be carried out on a regional basis, thus contributing to functional Caribbean integration. Specific areas of opportunity for regional collaboration in this field include publication of material providing health information for visitors, provision of training in such areas as food safety and hygiene, adoption of common approaches to obtaining simple technologic solutions to pollution avoidance and appropriate waste disposal, marketing of health tourism, and sharing of tertiary care facilities that may not and perhaps should not be available in every Caribbean country.

Already-existing institutions can collaborate in giving some direction to this field. Such institutions include the Caribbean Tourism Organization, the CARICOM Secretariat, the University of the West Indies, and the Pan American Health Organization. Of these, the latter seems especially well suited to act in this field, since it offers technical cooperation to all the Caribbean countries in all of the various health areas involved.

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