

450 daily cases of Infectious

by **Charmaine Gauci** MD PhD MSc Dip(Fit & Nut) FRSH
 Head – Disease Surveillance Unit
 Department of Public Health

Infectious intestinal disease refers to gastrointestinal symptoms due to micro-organisms or their toxins. The main symptoms include diarrhea, vomiting, fever, abdominal pain and nausea. Many persons refer to this illness as food poisoning or gastric flu, however infectious intestinal disease is a term which encompasses a variety of illnesses. These illnesses are caused by the transmission of micro-organisms through food, water, environment or from an infected person to another. These micro-organisms include viruses, bacteria and parasites.

An improvement of hygiene methods and sanitation as well as early management, have greatly reduced the deaths caused by this illness in developed countries like Malta, however not the same can be said for developing countries. In these countries we are still seeing a number of deaths especially in children. Furthermore although the number of deaths have been radically reduced in developed countries, the burden of illness from sickness remains high.

Most of the information on the number of cases of infectious diseases in many countries comes from notifications from doctors and laboratories. However this does not include those persons who develop the illness and do not go to a doctor, and cases where the doctor does not suspect that food is implicated. Hence information on the number of cases occurring in many countries is not known. An estimate of the frequency of this illness is important to be able to control this illness.

This promoted the author, who is the head of the Disease Surveillance Unit within the Ministry of Health, to initiate a series of research studies to identify the gaps in the epidemiology of this disease. This doctoral study estimated the frequency and defined the distribution of infectious intestinal disease in Malta. 3,504 randomly selected persons participated in this study which was carried out over a period of 16 months. From this study it was estimated that 3.18% of the population experienced an episode of infectious intestinal illness at any point in time in a year. This can be extrapolated to the general population giving an average rate of 0.421 episodes per person per year which is equivalent to 450 episodes of illness occurring in the Maltese Islands per day. This was the first estimate of the frequency of this condition to be



estimated in Malta. Knowing that there may be about 450 persons suffering from gastrointestinal illness due to microbiological agents puts everyone on their toes to see what we can do to minimize this burden. Usually some have the impression that this illness is of short duration however this study revealed that the duration of illness can vary from 4 to 9 days with an average of 3 days. The study also dwelled on what infectious intestinal illness at community level is costing us from a societal aspect. The largest proportion of cost is due to provision of health-care services costing Lm 4,558,970 per year; followed by Lm 2,209,393 in lost productivity; Lm 561,078 in medicines; Lm 66,452 in stool culture testing and Lm 31,183 in personal costs, giving a total cost of illness of over 7 million Maltese liri per year. The burden and cost of infectious intestinal disease are high enough to justify efforts to control the illness since most cases of this illness can be prevented.

The results of this study have been published in local and international scientific peer-reviewed journals by the author, who obtained a doctorate

in epidemiology in 2006.

What is the health division doing in terms of minimizing the risk of illness? The Disease Surveillance Unit investigates all notified cases and undertakes action where food operations are implicated, advises the persons involved on safe food handling practices and advises on measures to prevent transmission from one person to another. The Public Health Department ensures that all food operations are registered with the Food Safety Commission in terms of Legal Notice 180/2001, which guarantees that regular inspections are performed to ensure compliance with all food safety regulations in terms of the Food Safety Act (2002). It is the responsibility of the food operators to ensure compatibility – they should not allow food handlers who are suffering from gastroenteritis to work during the period of time in which they are symptomatic.

In addition, food handlers need to follow a course in food hygiene in order to be registered. The course includes measures to be taken to prevent food-borne illness and lectures

s Intestinal Disease in Malta

1. Cook raw foods thoroughly. Under normal circumstances raw foodstuffs and water may become contaminated with pathogens. Thorough cooking will kill the pathogens, which means the temperature of all parts of the food must reach at least 70 °C.

2. Eat cooked food immediately. When cooked foods cool to room temperature, bacteria begin to grow. The longer the wait, the greater the risk. To be on the safe side, eat cooked foods as soon as they come off the heat.

3. Prepare food for only one meal. Foods should be prepared freshly and for one meal only, as far as possible.

4. Store cooked food properly. If foods have to be prepared in advance, or if there are leftovers, they should be stored cold, i.e. below 5 °C (in a refrigerator), or hot, i.e. above 60 °C. This rule is vitally important when it is planned to store food for more than 4–5 hours.

5. Reheat stored food thoroughly. Cooked foods that have been stored must be thoroughly reheated before eating, i.e. all parts reheated to at least 70 °C.

6. Avoid contact between raw foods and cooked foods. Safely cooked food can become contaminated through even the slightest contact with raw food. This cross-contamination can be direct, e.g. when raw fish comes into contact with cooked foods. It can also be indirect. For example, preparing raw fish and then using

the same unwashed cutting surface and knife to slice cooked food should be avoided, or all the potential risks of illness that were present before cooking may be reintroduced. Cross-contamination may also occur in a freezer when the power has been off for some time and this should be checked for. The juice of raw meat and poultry may drip onto other foods.

7. Choose foods processed for safety. Many foods, such as fruits and vegetables, are best in their natural state.

8. Wash hands repeatedly. Hands should be washed thoroughly before preparing, serving or eating food and after every interruption, especially after use of the toilet or latrine, changing a baby or touching animals. After preparing raw foods, especially those of animal origin, hands should be washed again before handling cooked or ready-to-eat foods.

9. Keep all food preparation premises meticulously clean. Since foods are so easily contaminated, any surface used for food preparation must be kept absolutely clean. Scraps of food and crumbs are potential reservoirs of germs and can attract insects and animals. Food should be stored in closed containers to protect it from insects, rodents and other animals.

10. Use safe water. Safe water is just as important for food preparation as for drinking.

Figure 1: Golden rules for safe food preparation (Source WHO – http://www.paho.org/english/ped/te_gold.htm)

on the nature of symptoms which may indicate gastroenteritis and hence their obligation to refrain from work whilst symptomatic. In instances where there is a serious violation in breach of the Food Safety Act various legal actions are contemplated including the possibility of closure of premises.

What can the general public do to minimize the risk that he/she or the family can fall ill? Taking up safe food handling practices in their home is the best measures to avoid infectious intestinal disease that is transmitted through food. By following the ten World Health Organization golden rules (Figure 1), the risk can be greatly reduced. Another important measure is to avoid transmission of infection from one person to another by proper cleaning of areas where persons who are sick are staying with proper disinfectant agents, and personal protection during cleaning of material from infected persons e.g. vomitus.

The role of hand washing cannot be over-emphasized.

Health care professionals including doctors and pharmacists who have the first encounter with the patient, are in a position to offer advice on preventive measures to reduce the burden of this illness.

More information can be obtained from the Disease Surveillance Unit website at <http://www.health.gov.mt/dsu> and by contacting the Unit on 21332235 /21324086 or email Dr Gauci on charmaine.gauci@gov.mt. ☐

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