Review of Notifiable Diseases and the Process of Notification

Notifiable Diseases Sub-Committee of the Scientific Advisory Committee,
National Disease Surveillance Centre

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Mr Martin Devine and Mr Noel Shanaghy resigned from the sub-committee due to work commitments and were replaced by Ms Catherine Cosgrove and Mr Stephen Dempsey respectively.

Dr Olive Murphy resigned from the sub-committee in September 1999 due to change in work commitments.

Executive summary

In 1999, the National Disease Surveillance Centre (NDSC) was asked by the Department of Health and Children to review the list of notifiable diseases and to make recommendations regarding additions or amendments to the current list. It was also asked to review the operation of the notification system, to consider the need for case definitions, and whether laboratories should be required to notify the listed diseases.

A sub-committee of the NDSC was established to complete this task. In drawing up the report the sub-committee consulted widely with all professional groups involved in notification of infectious diseases.

The main points highlighted in the report are as follows:

- A new national system for surveillance of infectious diseases of public health importance should be established. In this system there will be four categories of notifiers, namely GPs, hospital clinicians, laboratory directors and public health doctors. Each notifier will be required to notify the Director of Public Health listed diseases or isolates that they encounter during the course of their work. As each category of notifier is likely to regularly identify only a subset of the total list of diseases, separate lists will be presented for each category, as well as one masterlist of all notifiable diseases.

- The report recommends that the term Medical Officer of Health, which was abolished in law in 1998, be reintroduced, and that the Medical Officer of Health be the Director of Public Health.

- There is little advantage in having an appropriate list of diseases for notification if there is no formal 24-hour a day, 7-days per week system for responding to urgent notifications that require public health action. The report recommends that this issue be addressed as a matter of urgency.

- The changes proposed are wide ranging. In order that the new system envisaged in the report group can be established, a significant investment of resources will be required. This need for resources will arise in primary care, public health, in laboratories and at NDSC.

- There is an urgent need to develop and support initiatives to introduce electronic communication between all partners in the system.

Finally, the sub-committee are of the opinion that establishing an implementation group would help the ordered, phased introduction of the proposed new system.

Summary of Recommendations

Amendments to the current list of notifiable diseases

It is recommended that nine diseases be removed from the current list of notifiable diseases as listed in the Schedule to the Infectious Disease Regulations (Appendix 7).

The entire list of diseases agreed at EU level for surveillance should be notifiable in Ireland.

Other diseases and organisms that were given high priority by health professionals during the consultation process should be added to the list.

Highlight certain diseases as priority diseases/organisms

It is recommended that certain diseases/organisms be highlighted as priority organisms, and that these priority organisms/diseases are notified without delay, preferably by phone, fax or other electronic means.

Use of case definitions for each notifiable disease

It is recommended that case definitions be used, and, wherever possible, internationally agreed EU case definitions be used.

Change in structure and operation of the system

It is recommended that a new national system for surveillance of infectious diseases of public health importance should be instituted.

There should be four categories of notifier:

- GPs
- Hospital clinicians, including accident and emergency physicians
- Laboratory directors
- Public health doctors

Each of these categories of notifier would be required to notify a specific subset of diseases contained in the list of notifiable diseases.

GPs should have a short list of diseases commonly encountered in primary care that they should regularly notify to the Medical Officer of Health (MOH).

Hospital clinicians will encounter many cases of notifiable diseases within their practice, and may see a wider range of diseases than GPs routinely do. They should notify these diseases to the MOH.

A designated person in laboratories usually the consultant microbiologist or pathologist, should be required to notify the MOH of any notifiable disease he/she identifies.

Environmental Health Officers should bring to the attention of the Senior Area Medical Officer (SAMO) any suspected cases of infectious diseases that come to their attention in the course of their work, and the SAMO should notify these if appropriate.

Legislation should be altered to reintroduce the term MOH and that it should state that the MOH is the Director of Public Health, in recognition of the importance of the role of regional surveillance and control of infectious diseases.

National reporting of notifiable diseases should be streamlined so that there are eight reporting MOHs, representing the DPHs in the seven health boards and the Eastern Regional Health Authority.

The National Disease Surveillance Centre should be defined in legislation as the proper authority to seek, collate, analyse and disseminate information on infectious diseases from MOHs.

The legislation should enable NDSC to receive data from MOH in a standardised format within a reasonable time.

There is a need for national mechanism for co-ordinating the control of national and international outbreaks. Consideration needs to be given as to whether NDSC should be charged with this responsibility.

Standard minimum local/regional and national dataset

It is recommended that a core minimum dataset on each notifiable disease should be used at regional level, and a standardised method of collection of this information should be developed.

The core dataset for national surveillance should be similar to that for regional surveillance but should not normally include name and address.

Electronic transfer of information

It is recommended that systems for electronic transfer of data from notifiers to the DPH and to the NDSC should be developed as soon as possible.

CIDR, the national working group that is developing national electronic reporting between Departments of Public Health, laboratories and NDSC, should be given the resources required to develop and implement the system.

The sub-committee recommends that the development of electronic GP reporting be prioritised.

Patient confidentiality and privacy

Except where the urgency of the case requires otherwise, the system should ensure that the doctor who attends the patient informs the patient of his/her diagnosis before public health action is taken.

Named patient data should not be routinely supplied to NDSC unless this is necessary for accurate epidemiological monitoring of a disease, and each such case should be assessed individually.

Reports produced from the infectious disease notification system should not allow for identification of any individual.

Reference laboratories

This Sub-Committee recommends that reference laboratories for important organisms be developed, and that other laboratories should be required to submit specimens to these reference laboratories for definitive identification.

Reference laboratories should be required to report cases from each health board region to the relevant DPH. Reference laboratories should also be required to report this information to NDSC.

Laboratories should be obliged to notify antibiotic resistance patterns in a standardised manner to the DPH, NDSC and to designated reference laboratories. Laboratories should be required to send specimens to designated reference laboratories for further typing where appropriate.

The findings of the national survey on laboratory practices and procedures should be used as a blueprint to guide standardisation of practices where appropriate.

Education and training

The Sub-Committee recommends that the new system proposed in this report would be introduced in training, and continuous professional development for public health doctors and nurses, microbiologists, other clinicians, GPs, infection control nurses, Environmental Health Officers (EHOs) and other relevant professionals.

Information leaflets should be provided for patients explaining what to expect following notification of their case to the MOH, and explaining the roles of the professionals who may interact with them e.g. EHO, Area Medical Officer (AMO), and Infection Control Nurse (ICN).

To improve the level of notification of infectious diseases an ongoing process of education about the need for reporting, and on the public health actions taken as a result of notification, should be undertaken at health board and national level.

It is recommended that the Department of health and Children consider the allocation of resources for this purpose.

Out-of-Hours cover

The NDSC, DPH, Specialist in Public Health Medicine, SAMO and AMO should be in a position to respond to urgent notifications and outbreak situations on a 24-hour 7-day basis, and take appropriate public health action. The Sub-Committee recommends that formal out-of-hours on call arrangements should be put in place for NDSC, DPH, SPHM, SAMO, AMO, laboratory staff and EHOs as a matter of urgency.

Need for enhanced surveillance of certain diseases by MOH

For diseases designated as requiring enhanced surveillance, more detailed information should be obtained and collated at health board level by the MOH and sent on a regular basis to NDSC.

Enhanced surveillance at GP level

Further development of the current sentinel surveillance for influenza should be supported. Consideration should also be given to extending such sentinel surveillance to other infectious diseases as appropriate.

Inbuilt flexibility

There should be a regular audit of the usefulness of the current list of notifiable diseases, and provision made for adding, and removing diseases, and for changing the process at relatively short notice.

HIV notification

This Sub-Committee recommends that HIV be made a notifiable disease and, as in the case of other STIs, information should be geographic based rather than clinic based, and non-named, using initials and date of birth.

Surveillance of antimicrobial resistance (AMR)

This sub-committee recommends that a national committee, as proposed in the Strategy for the control of Antimicrobial Resistance in Ireland (SARI), identify which organisms should be under surveillance for AMR and that new legislation be introduced to require laboratories to participate in AMR surveillance as set out by this national committee.

This sub-committee recommends that pending the recommendations of the proposed national committee of SARI, isolates recovered from blood, cerebrospinal fluid or other body fluid sites, of MRSA, penicillin resistant pneumococci, vancomycin resistant enterococci, and multiply resistant gram negative bacilli be notifiable for AMR surveillance.

Outbreaks of infectious diseases

Any suspected outbreak of infectious disease should immediately be notified to the MOH. The MOH should in turn notify NDSC promptly of any outbreak reported to him/her.

Reporting clusters of illness, new illnesses, and new or altering patterns of illness

Notifiers should also be required to notify unusual clusters or changing patterns of illness that may be of public health concern to the MOH, and the MOH should notify NDSC.

Resources

For GP notifiers, there is a need to provide an appropriate fee structure for notification that will encourage prompt and complete notification.

In the laboratory, the requirement to notify organisms will mean that significant investment in microbiology and administrative personnel in the laboratory for reporting diseases, and financial support for electronic communication of information via CIDR will be necessary.

At public health level, the proposed new system will increase the workload considerably. There is a need to increase the numbers of public health and environmental health staff. They will be needed so that infectious diseases requiring public health action are responded to in a timely manner, and also who to manage regional surveillance and control.

The sub-committee proposes that additional hospital-based ICNs be appointed, particularly in the areas of mental health and learning disabilities where there is an urgent need to provide infection control expertise.

Implementation

An implementation group should be set up to plan the phased introduction of these proposed changes to the notification system.

1. Introduction

In the summer of 1999 the Scientific Advisory Committee of the National Disease Surveillance Centre (NDSC) was asked by the Department of Health and Children (DoHC) to review the infectious disease legislation. The terms of reference given to the committee were as follows:

"To advise the Department of Health and Children on the following matters:

- The need to amend the diseases listed under the Schedule to the Infectious Disease Regulations, 1981. The Department requests that the NDSC make recommendations as to any diseases which it is considered should be added to the list of notifiable conditions, and whether any should be deleted or amended in any other way.
- Operational aspects of the notification system, including the question of laboratories having an obligation to notify infectious diseases.
- Case definitions for the Statutory Notifiable Diseases
- Any other aspects of the Regulations that the NDSC considers should be reviewed."

A sub-committee of the Scientific Advisory Committee, chaired by Dr Lelia Thornton, was established to undertake the review. The sub-committee met on nine occasions over a period of one year**.** Phase one of the review, preparation of a consultation document, was completed in March 2000. This document contained proposals for the diseases that should be under surveillance and also proposals for improving the process of notification. It was circulated to interested parties for consultation, and was also posted on the NDSC web site for general consultation. A second consultation document was prepared in October 2000, having taken into consideration the views obtained during the consultation process, and was open for further consultation over a two week period. The final document was prepared following this consultation process.

The development of electronic communication of information between laboratories, general practitioners, public health doctors and NDSC is considered by the sub-committee to be an urgent priority, but was not dealt with in this review as it is being addressed by another national working group, the Computerised Infectious Disease Reporting Group (CIDR).

With regard to the fourth term of reference, broader issues regarding legislation to establish NDSC as an independent statutory body, and a review of enabling legislation required for effective surveillance and control at local, regional and national level were not considered by this Sub-Committee, as these are being considered by the Department of Health and Children.

2. Background

Statutory notification of infectious diseases was introduced in Ireland in 1947. Since that time, although some changes have been made to the list of diseases that are notifiable, the operation of the system has remained largely unaltered.

The current information systems for notifiable diseases are mainly paper based and inefficient. The list of notifiable diseases has not been subject to regular review and emerging diseases such as verocytotoxin producing *E coli* that are of public health importance are not notifiable. Other diseases such as candidiasis remain notifiable though they have few public health consequences. Surveillance is recognised to be a vital tool in the fight against the major public health threat of antimicrobial resistance (AMR), yet is not covered at all in the notifiable disease legislation.

Information that is held by laboratories is not notifiable. This is seen as a deficiency in current legislation, as laboratories are potentially one of the most valuable sources of information on the infectious diseases that require public health action or that are important for national surveillance.

At a national level there have been developments over the past decade, with the establishment of Departments of Public Health in 1995, the Food Safety Authority of Ireland (FSAI) in 1997, the NDSC in November 1998 and the Food Safety Promotion Board (FSPB) in 1999. The establishment of these organisations has increased the focus and emphasis on communicable diseases and food safety. New diseases are emerging, and the epidemiology of existing diseases is changing. The introduction of new vaccines such as meningococcal C conjugate vaccine brings with it the need to monitor closely the epidemiology of vaccine preventable diseases. There is also increasing media attention and interest regarding outbreaks of disease and food safety, and public concern about vaccine safety.

Large international outbreaks of potentially lethal infectious diseases such as the legionellosis outbreak in the Netherlands in 1999[1], and recognition of the fact that infectious diseases may cross national boundaries, have led to efforts at a European

level to harmonise and standardise systems for surveillance of infectious diseases across Europe[2]. Countries have committed to sharing information on communicable diseases, which will require collection of standard data on notifiable diseases using agreed case definitions.

All of these factors highlight the need to review the current system and to develop an effective, timely and useful surveillance system for notifiable diseases that will address all these public health concerns.

3. Methodology

In order to address the terms of reference of the review adequately, the sub-committee undertook the following tasks:

3.1. A formal review of the current surveillance system using internationally accepted criteria for evaluation of a surveillance system [3].

3.2. A three-stage consultation process:

3.2.1. In September 1999, a questionnaire based on a UK-derived prioritisation process[4] was distributed to a cross-section of professionals involved in communicable diseases surveillance. A comprehensive list of potential diseases for surveillance was presented and respondents were asked to prioritise diseases for surveillance based on criteria such as public health importance of the disease, burden of illness and potential for health and social gain.

The responses to this questionnaire were used in the preparation of the list of diseases proposed for surveillance in the consultation document of March 2000.

3.2.2. A consultation document that contained proposals for the diseases for surveillance and for the process of notification was prepared and distributed in March 2000 to relevant professional organisations and to individuals for comment. It was also posted on the NDSC web site for a one-month period of consultation.

3.2.3. The submissions were reviewed and were used to inform a second consultation document. This consultation document contained revised proposals for the diseases for surveillance and for the process of notification. It was distributed to relevant professional organisations and to individuals for a

two week consultation period in November 2000, and was also posted on the NDSC web site.

The final document presented here took into consideration the views expressed in the second consultation period.

4. Evaluation of the current notifiable disease surveillance system

The MMWR criteria for evaluating surveillance systems were used to evaluate the national notifiable disease surveillance system[3]. The operation of the system has moved recently (July 2000) from the Department of Health and Children to the National Disease Surveillance Centre, and many characteristics of the system have changed recently too.

This evaluation process recommends the following steps in assessing a surveillance system:

- describe the public health importance of the event under surveillance
- describe the operation of the system
- describe the resources used to operate the system
- assess the performance of the system by estimating its usefulness and describing each system attribute (simplicity, flexibility, acceptability, sensitivity, positive predictive value, representativeness and timeliness)
- state conclusions and make recommendations. Identify if the system is meeting its objectives and address the need to modify and/or continue the system

4.1.The public health importance of the notifiable disease surveillance system

Infectious diseases have always been recognised as being a major threat to public health. Most if not all Irish people have suffered from a notifiable disease at some point in their lives. Infectious diseases are common amongst hospitalised patients. Infectious diseases are a common reason for attending primary care. Data from the Weekly Returns Service (WRS) of the Royal College of General Practitioners in the United Kingdom demonstrate that infectious diseases are a common reason for consultation and give rise to significant morbidity (Table 1). The WRS provides weekly returns, which include age specific weekly incidence of new episodes of selected

illnesses. Rates of conditions treated in primary care ascertained through the WRS sentinel surveillance network are generally higher than those obtained through statutory notifications. The difference is particularly noticeable for Infectious Intestinal Disease (IID). Table 1 shows the relative importance of infectious diseases as opposed to asthma as a reason for consultation with the GP.

Table 1. Weekly Statistics for week 31, 2000, RCGP Sentinel Surveillance Unit

Disease	Consultation rate per 100,000 population
Infectious intestinal disease	34.8
Acute tonsillitis	80.8
Acute bronchitis	84.3
Acute otitis media	32.4
Asthma	28.6

Medical advances in the 20th century, including the development of vaccines, the provision of safe drinking water, and antibiotics have reduced the threat from infectious diseases. Mortality data show however, that Irish people still die from infectious diseases. (Table 2), and that this occurs more frequently in older people. (Figure 1)

Table 2: Mortality from specific infectious diseases in Ireland, 1994-1998. (Source: Central Statistics Office)

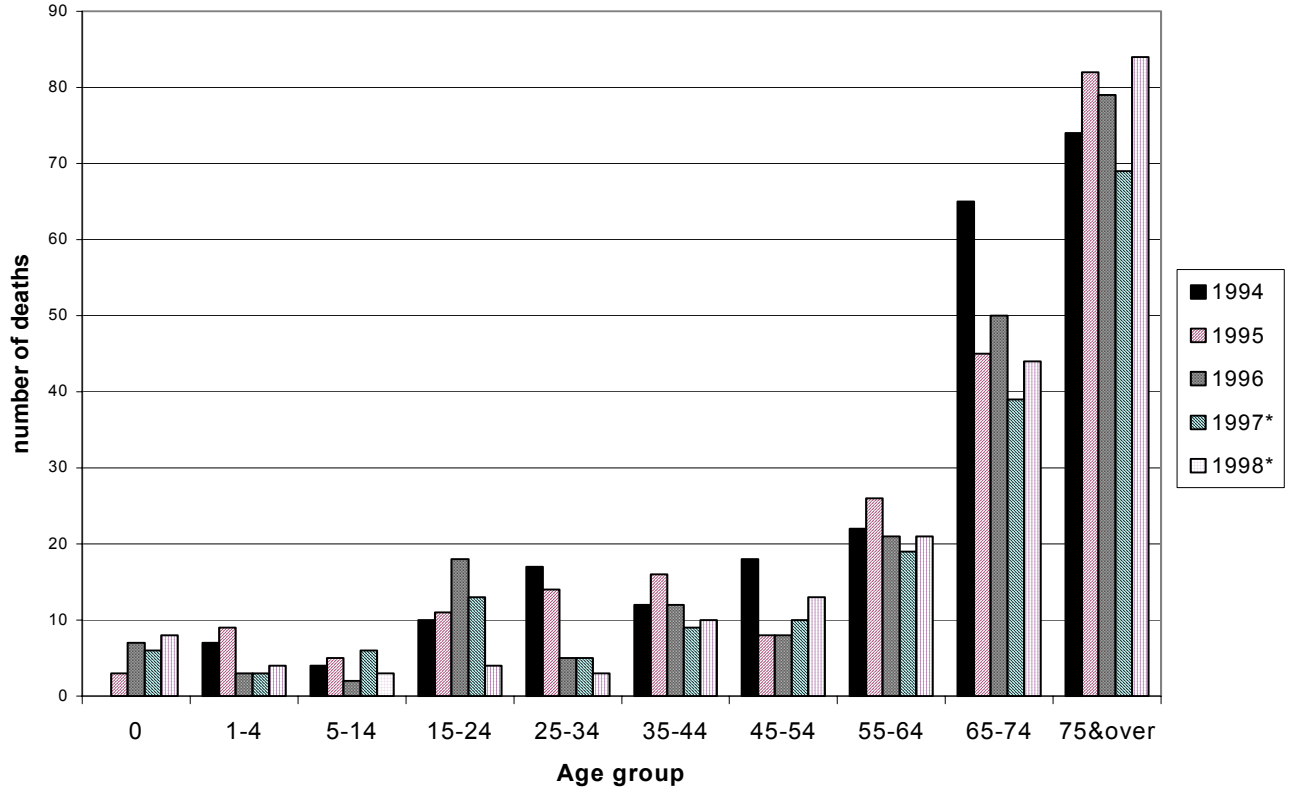
Year	Total Deaths from infectious disease	TB	Meningococcal infection	Septicaemia	Pertussis	Tetanus	Measles	Intestinal infectious diseases
1994	229	43	14	30	0	0	0	12
1995	219	36	21	48	1	0	1	16
1996	205	33	13	40	0	0	0	15
1997*	179	37	23	50	0	0	2	9
1998*	194	42	13	81	0	0	0	2

*by year of registration

Recently however, infectious diseases which were well controlled have begun to reappear and are reaching epidemic proportions in some countries. Infectious diseases can spread rapidly if action is not taken to combat them. In Ireland in 2000, a major epidemic of measles has occurred involving more than 1500 cases, leading to two measles-related deaths and hospitalisation of more than 100 children with debilitating illness.[5] Apart from mortality and morbidity, when infectious diseases are not controlled, they impose a heavy financial burden on the health services.

New and emerging diseases, such as multidrug resistant TB (MDRTB) and vCJD, show that infectious diseases will continue to remain a significant problem for years to come. The Chief Medical Officer's report, 1999 predicts that the "main challenges for the future will be to contain communicable diseases at their current low levels and also to limit the emergence of new infections" [6].

Figure 1: Deaths from infectious disease by age group (ICD codes 001-139) 1994-1998, (Source CSO)



4.2. Review of the operation of the current system

4.2.1. Objectives of the system

The objectives of the notifiable disease surveillance system are not documented but may be described as follows:

At local/regional level

- To allow timely public health intervention
- To facilitate the prevention and control of disease by
  - identifying incidence levels and trends, enabling planning, setting objectives and assessing control measures
  - identifying risk groups to enable targeted intervention
  - identifying outbreaks
- To measure the effectiveness of intervention programmes at regional/local level

At national level

- To facilitate the prevention and control of disease by
  - identifying national incidence levels and trends, enabling planning, setting objectives, and assessing control measures;
  - identifying risk groups to enable targeted intervention
  - identifying outbreaks, particularly those that are widely dispersed, involve unusual organisms, or form part of an international outbreak
- To measure the effectiveness of intervention programmes
- To inform government, health care professionals, voluntary agencies and the public about risk patterns and trends in the occurrence of communicable disease

At international level

- To collaborate with European and other international colleagues in the prevention and control of infectious diseases

4.2.2. Diseases under surveillance

The current list of notifiable diseases is shown in Appendix 1. There are no case definitions for these diseases, and all suspected and confirmed cases are notifiable.

4.2.3. Legislation governing notifiable diseases

The Health Act, 1947 entitles the Minister for Health and Children to specify by regulation the diseases that are infectious diseases and covered by legislation. This list was first specified in the Health Regulations, 1948.

The principal current regulations regarding notification of infectious diseases are contained in the 1981 Infectious Disease Regulations. The list of diseases that are notifiable have been revised in 1985, 1988 and 1996 (Appendix 1). Medical practitioners are required to notify cases of infectious diseases to medical officers (MOs) who in turn notify NDSC by the Wednesday following the week ending the previous Saturday*. They are required to submit a written notification to the medical officer in a sealed envelope, and in the case of certain diseases (meningococcal septicaemia, cholera, ornithosis, plague, smallpox, typhus, viral haemorrhagic diseases, or where there is a serious infectious disease outbreak) they also have to give immediate preliminary notification.

On becoming aware of a case of an infectious disease, MOs are required to make such enquiries or take such steps as are necessary or desirable for investigating the nature and source of such infection, for preventing the spread of such infection and for removing conditions favourable to such infection.

S.I. 151/ 2000, which took effect on 1st July, 2000, requires health boards to furnish to the Director of the NDSC, rather than to the Minister for Health and Children as previously, weekly returns of the cases of infectious diseases notified to them. It also provides for the provision by health boards to the Minister, or to the Director of the NDSC, of a detailed report on each case of such infectious diseases as may be specified from time to time.

* A Medical Officer (MO) in law means a Director of Public Health, a Public Health Specialist, a Medical Officer of Health, the Dublin Medical Officer of Health (this post no longer exists), a Senior Area Medical Officer and an Area Medical Officer of a health board.

Health boards are required to keep such records as may be directed by the Minister or as required by the Director of the NDSC from time to time in relation to the exercise of their powers and the performance of their duties under the regulations.

The 1981 regulations also require a Registrar of Births and Deaths to send to a medical officer such returns of deaths from infectious diseases as may be specified by the Minister. In addition, a medical practitioner who is a medical officer of an infectious disease hospital or infectious disease unit is required to notify any infectious disease that occurs in his/her practice.

International legislation.

The European Parliament and the Council of the European Union adopted Decision 2119/98/EC on 24th September, 1998 which entered into force on 3rd January, 1999[2]. The objective of this decision is to set up a network at European Community level to promote co-operation and co-ordination between the Member States, to be used for epidemiological surveillance of communicable diseases and as an early warning system for the prevention and control of these diseases. Commission Decision of 22nd December 1999, identified the communicable diseases to be progressively covered by the Community[7]. These are listed in Appendix 2.

International Health Regulations 1969 require each State to notify the World Health Organisation by telegram or telex within 24 hours of its being informed of a case of yellow fever, cholera, smallpox and plague.

Council Directive 92/117/EEC of December 1992 (Zoonosis Directive) requires Member States to ensure that the competent authority in the state collects information on any clinical cases in humans or animals of the following zoonoses:

- Tuberculosis due to mycobacterium bovis
- Brucellosis and the agents thereof
- Salmonellosis and the agents thereof
- Trichinosis

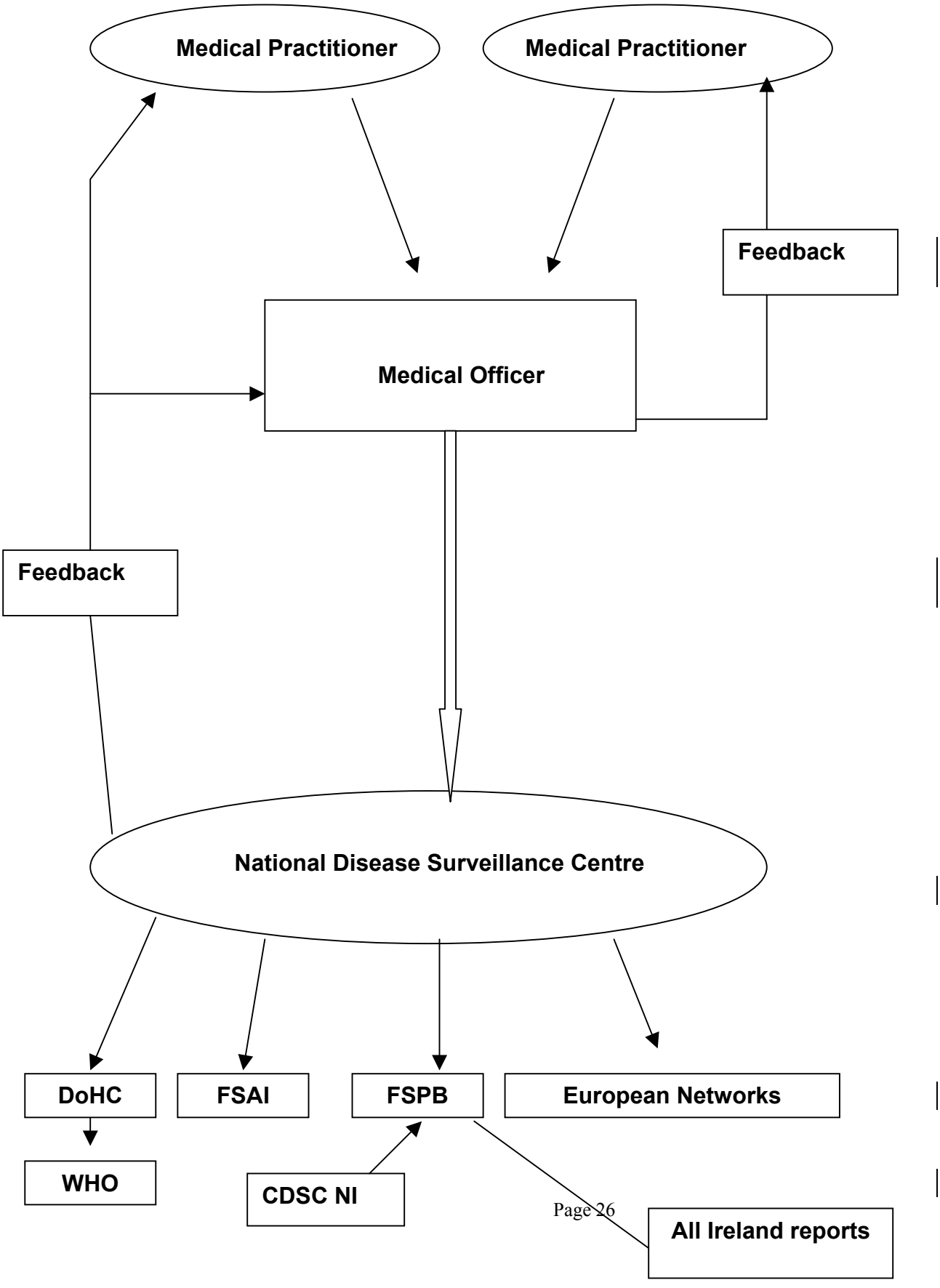
North-South Executive Body legislation

The Food Safety Promotion Board is one of six implementation bodies set up under the Belfast Agreement and established under S.I. 1 / 1999. It has a general responsibility to promote cross-border co-operation in the microbiological surveillance of food-borne diseases. It will do this by identifying priorities for surveillance, promoting collaboration in surveillance-related activity where appropriate, including training and professional development, accessing and analysing surveillance data held by the appropriate Northern Ireland and Irish authorities, publishing surveillance information and analysis, and promoting harmonisation, where appropriate, in the development of surveillance systems including methodologies, approaches to reporting, and information technology systems.

4.2.4. System of notification

Since July 1st 2000 NDSC has taken over responsibility nationally for operation of the infectious disease notification system from the DoHC.

Current notifiable diseases surveillance system



4.2.5. Components of the system

The population under surveillance is the population of the State and comprises 3.6 million persons. Data on notifiable diseases are collected by the MO for each week ending on Saturday, and sent by the Wednesday of the following week to the NDSC. NDSC provides weekly feedback on the surveillance information obtained to MOs and others involved in infectious disease control.

Medical practitioners/notifiers

Under the Infectious Disease Regulations, a medical practitioner is required to notify a MO in writing as soon as he/she becomes aware of, or suspects that a person on whom he or she is in professional attendance is suffering from or is the carrier of an infectious disease.

For a subset of diseases, namely

- bacterial meningitis, including meningococcal septicaemia,
- cholera,
- ornithosis,
- plague,
- smallpox,
- typhus,
- viral haemorrhagic diseases
- yellow fever,

or where a serious outbreak of infectious disease is suspected, a medical practitioner is also required to give immediate preliminary notification to the MO. This is usually done by phone.

There is no standard form used by medical practitioners to notify cases of infectious diseases that is used throughout Ireland. Within most health boards there is a standard form for completion by the notifying medical practitioner. In some health boards one form is used throughout the region but in others different forms are used in different counties within the region.

Medical Officer

The Medical Officer (MO) takes public health action as appropriate based on the information submitted. For routine day-to-day matters, the Senior Area Medical Officer (SAMO) is usually the person who initiates public health action. This action is taken to prevent spread of infection in the community and may involve contact tracing, providing chemoprophylaxis, immunisation, public education and reassurance, and outbreak investigation in conjunction with the relevant Director of Public Health (DPH) and Specialist in Public Health Medicine (SPHM).

The extent of public health action that the MO can take is disease-specific within the legislation; in other words, there are stricter regulations and powers for some notifiable diseases than for others. For example, if the MO is of the opinion that a person is a probable source of infection and that his/her isolation is necessary as a safeguard against the spread of infection, he/she may order the detention and isolation of the person in a specified hospital in cases of diseases such as tuberculosis or viral haemorrhagic fevers, but may not do so in the case of diseases such as measles. Experience to date has been that such powers have rarely been used.

Appendix 4 shows the geographical areas covered by MOs reporting to the Director of the NDSC as of October 2000.

There is no requirement to collate notification information at health board level prior to reporting it to NDSC. In many health boards this information is not collated weekly.

Since 1st July 2000, MOs provide a minimum dataset to NDSC each week on each case of notifiable disease (excluding sexually transmitted infections). This dataset comprises

- identifier,
- county/reporting area,
- age/date of birth,
- sex,
- diagnosis,

- date of onset of illness/date of diagnosis/date of report,
- date of notification.

Four health boards send paper returns, and six health boards send in information in Excel, Access or EpiInfo computer files.

System for surveillance of sexually transmitted infections

Up to July 2000, MOs returned aggregate reports on sexually transmitted infections every three months to DoHC. For each notifiable disease the number of cases, their gender, age group and occupation was reported.

From the third quarter in 2000, this information will be reported to NDSC.

Medical Officer versus Medical Officer of Health

In the 1981 Infectious Disease Regulations, the term Medical Officer of Health (MOH) was introduced. This meant as appropriate a Director of Community Care and Medical Officer of Health, the Dublin Medical Officer of Health, and Senior Area Medical Officer or Area Medical Officer of a health board.

In 1998, regulations were introduced to provide for the assignment of functions vested in the Director of Community Care and Medical Officer of Health (DCC/MOH) consequent on the abolition of that post. Under SI 251 /1998, medical functions previously vested in or subject to the direction and control of the DCC/MOH were assigned to “such medical officers as the CEO of each health board may determine”.

A Medical Officer (MO) in law now means a Director of Public Health, a Public Health Specialist, a Medical Officer of Health, the Dublin Medical Officer of Health (this post no longer exists), a Senior Area Medical Officer and an Area Medical Officer of a health board.

In July 1998, the Chief Executive Officers in all health boards assigned the MO duties to the relevant DPH, but also requiring that he/she delegate day-to-day activities to SAMOs.

Management of notification at NDSC

Infectious disease notifications are dually entered onto an EpiInfo database at NDSC to maximise accuracy. This database is password protected. Data are maintained on the server and backed up nightly. The data are edited and reviewed by a doctor and/or surveillance scientist. Weekly reports are generated each Friday providing information on the number of cases in each county, reporting region and health board, the age and gender breakdown, and a comparison with the previous year's notifiable diseases. (Appendix 5)

This information is sent to the reporting MOs and also to microbiologists and paediatricians. It is hoped to widen the distribution of this information and to make summary information available on the NDSC web site in the near future.

Laboratory Notification

There is no specific requirement for laboratories to report notifiable diseases to MOs. In some health board regions, a voluntary system of reporting infectious diseases has been initiated, which includes some notifiable diseases and other diseases of public health concern. Where laboratories have reported these diseases, they have been included in the returns of notifiable diseases reported nationally. It is therefore difficult to interpret regional trends in notifiable diseases because the inclusion of laboratory notifications affects the observed incidence rates in these health board regions. To date, the source of the notification has not been recorded nationally, preventing separation of clinical from laboratory notifications**.**

4.3. Resources used to operate the system

4.3.1. Funding sources

Medical practitioners are paid £2 per notification by the local health board. Health boards fund surveillance of infectious diseases at local and regional level. The Department of Health and Children provided a specific allocation of £30,000 for the year 2000 to each health board to be spent on facilitating the development of liaison arrangements between Departments of Public Health, hospital laboratories and

NDSC. NDSC receives funding from the Department of Health and Children for surveillance of notifiable diseases at national level.

4.3.2. Personnel requirements

At local and regional level, the human resources currently committed to surveillance of infectious diseases are not well documented. A multidisciplinary committee formed to examine the resource requirements for surveillance reported in 1999 that there was a need for four additional whole time equivalent (WTE) Specialists in Public Health Medicine, 25 WTE clinical officers, 8 WTE clerical officers and 20 WTE laboratory surveillance scientists. It was recommended that flexibility be allowed in each region as to the type of clinical officer in each Community Care Area who would be recruited. In some areas strengthening and/or re-organisation of the Area Medical Officer duties was required. In other areas Clinical Surveillance Officers with a nursing background were recommended.

At NDSC one clerical staff member inputs data and generates the report weekly, under supervision of a doctor/surveillance scientist. This takes three days' clerical officer work and 2.5 days' medical officer/surveillance scientist work per week.

4.3.3. Enhanced surveillance of certain notifiable diseases

An enhanced surveillance system is in place nationally for meningococcal disease and for TB. Health boards are requested to supply more detailed information to NDSC on these diseases, in line with recommendations of national working groups set up by the DoHC. Details on suspected cases of bacterial meningitis, including meningococcal disease, are faxed by the MO to NDSC as they arise, and in addition, quarterly returns are also sent. For TB, detailed information is sent quarterly.

4.4. Performance of the system

4.4.1. Usefulness of the system

The current system is useful in that it does detect trends in the occurrence of notifiable diseases, and can provide an estimate of the magnitude of morbidity related to notifiable diseases. It may detect outbreaks of infectious diseases and can be used to assess the effectiveness of prevention and control strategies. The system will be used to monitor the effectiveness of the new meningococcal group C vaccine following its introduction in Autumn 2000. Because the current agreed national dataset is limited, it does not identify risk factors associated with occurrence of these diseases.

4.4.2. Attributes of the system

- **Simplicity**

  The current system is not simple, in that there are many layers between notification by the medical practitioner and dissemination and use of this information. It is not always clear to the medical practitioner when notifying, to whom the disease should be notified. As the MO may be the DPH, the SPHM, or the SAMO, there is scope for confusion to arise. The geography of Community Care Areas is familiar to those in health boards but it is difficult for hospital doctors to correctly ascribe a Community Care Area, and hence the appropriate MO to any given address, particularly in urban areas. When notifications of urgent cases are made directly to the Department of Public Health, there may be delays in communicating the information to the relevant SAMO. This can happen because of local difficulties that impair effective communication between the Department of Public Health and the local Community Care Area.

  Medical practitioners do not routinely receive clear information on the consequences to them or their patients of the notification of infectious diseases.

  The information required for effective and efficient public health action is often missing, for example the patient's phone number may not be on the form used for notification.

Information from MOs is sent to NDSC in differing formats, both paper-based and computerised. This requires manipulation of differing data types within NDSC, which is very labour intensive.

- **Flexibility**

A flexible surveillance system can adapt to changing information needs or operating conditions with little additional cost in time, personnel or allocated funds. Flexible systems can accommodate new diseases, changes in case definitions or technology, or reporting sources. This attribute has been tested recently with the change to collection of a standard minimum dataset on each case in non-aggregate format when operation of the system moved to NDSC. This change was implemented smoothly and so the system has been found to be flexible.

- **Acceptability**

This attribute concerns the willingness of individuals and organisations to participate in the surveillance system. Reviews of GP notifications show that under-reporting of notifiable diseases is widespread. In a review of the clinical notification system in the Eastern Health Board, notifications over one year were received from 11% of all GPs registered in the region, with 89% not notifying a single case in 1995[8]. One locum contractor was responsible for 15% of all notifications during the year. In a similar review in the Southern Health Board in 1996, 29 of a total of 133 GPs notified any infectious diseases, and one GP alone notified 52% of all GP notifications[9].

The current system is not user friendly from the information provider's viewpoint. At present there are perceived difficulties in contacting the relevant MO by phone during working hours, and at present there is no formal arrangement for MOs to respond to urgent notifications outside normal working hours.

Up to very recently, there was very limited feedback to providers of information. Since July 2000, regular feedback has been initiated, initially to information providers, and latterly to others interested in the surveillance of infectious diseases.

Many general practitioners and other medical practitioners are not fully aware of the system and of its public health importance. Medical practitioners have been given no financial incentive to notify. The payment of £2 per notification is small, and it is time-consuming to complete the form.

All of these factors have affected the acceptability of the system, which remains low.

- **Sensitivity**

Sensitivity refers to the proportion of cases of a disease detected by the surveillance system. Given the documented lack of reporting by GPs and hospitals, it is likely that the current system is not sensitive. In addition, there are no case definitions for the current list of notifiable diseases, making it difficult to interpret differences in observed rates of disease. Without another external source of information on notifiable diseases, it is impossible to assess this attribute correctly.

- **Positive predictive value**

This is the proportion of persons identified as cases who actually have the disease under surveillance. This is affected by the sensitivity and specificity of the case definitions used for notifiable diseases. In this case, there are no case definitions, so relevant proportions cannot be assessed.

- **Representativeness**

A representative system accurately describes the occurrence of a disease over time and its distribution in the population by place and person. Some health boards report as notifiable diseases cases that are notified to them by laboratories, whereas others do not, and this may affect the representativeness of the system. The representativeness of the system is also affected by under-notification by GPs and clinicians. The date of notification is used rather than date of onset of illness, and this may lead to bias if cases are not reported promptly, but notified every few months.

- **Timeliness**

This reflects the speed or delay between steps in the system. The timeliness of the system has been affected by the lack of national electronic reporting of infectious diseases from medical practitioner to MO, from MO to NDSC, and of timely feedback. The timeliness of reporting from medical practitioner to MO is poor. Timeliness of reporting from MO to NDSC since 1st July 2000 is very good, with a minimum of 83% of MOs reporting each week on time.

4.5. Conclusions of evaluation

The current system has changed considerably over the past six months, with an improvement in the acceptability, reporting rate and feedback provided to MOs. Acceptability, reporting rate and feedback for medical practitioners has not changed. The following problems remain:

- Under-reporting
- A complex reporting structure in which participants do not always understand:
  - to whom they should report,
  - why it is important to do so
  - what happens once a case is reported
- The current list of notifiable diseases is not widely recognised, and may need to be amended
- There are no case definitions, which limits the interpretation of surveillance findings
- There is no obligatory laboratory reporting, and no resources for voluntary reporting.
- There is no incentive to notify, in terms of feedback provided to GPs or in terms of appropriate payment
- There is no nationally agreed form for medical practitioners to complete
- In urgent cases, there can be difficulty in contacting the relevant MO
- There is no formal out-of-hours arrangement for transmission of information on urgent cases and for action.

- The system suffers from a lack of timeliness
- There is no facility for electronic notification from medical practitioners to public health doctors and to NDSC
- There is no facility for electronic notification from MO to NDSC

6. Prioritisation exercise

In September 1999, a questionnaire was sent to a sample of microbiologists, DPHs, SPHMs, microbiologists, GPs, SAMOs, infectious disease clinicians, physicians, EHOs, and ICNs, asking them to prioritise diseases or organisms that were important for surveillance. Respondents were telephoned informing them of the survey, its aims, and seeking their support prior to sending them the questionnaire. Completed questionnaires were collated and analysed.

The questionnaire asked the respondent to consider diseases that are currently notifiable by law, as well as other diseases that could be considered for notification and to assess their overall importance for notification and surveillance. The importance of a disease was measured using criteria such as the burden of ill health caused by the disease, the social and economic impact of the disease, health gain opportunity, public concern and confidence and interest of national and international bodies such as FSAI, WHO. (Appendix 3).

It was recognised that the questionnaire was complex and time-consuming to complete. From this questionnaire it was however possible to identify a list of diseases that would be prioritised by health professionals for surveillance, and which could form part of the list of diseases to be proposed for surveillance in the consultation document. Individuals were also given the opportunity to comment on the current system.

Table 3: Number of respondents to prioritisation questionnaire by professional category, first consultation exercise, September 1999.

Category	Number of respondents
Public health doctors	15
Microbiology / Infection control nursing	8
Hospital clinicians	8
General practice	6
Environmental Health	3

Environmental health responses dealt with a subset of the proposed list of diseases, as many on the list would not be relevant to environmental health officers. As a consequence of this, it was not appropriate to directly compare their responses with the other professional categories. The responses were considered however when preparing the first consultation document. The top twenty diseases, prioritised by each professional category, are shown in order below:

6.1. Public Health

- Bacterial meningitis (including meningococcal septicaemia)
- Invasive meningococcal disease
- Food poisoning (other than salmonella)
- Salmonellosis
- AIDS
- Influenza
- Verocytotoxin producing E coli O157
- Hepatitis C
- Tuberculosis
- HIV
- Measles
- Hepatitis B
- MRSA (Blood and CSF)
- Whooping cough

- Congenital rubella
- Hepatitis A
- Influenzal pneumonia
- Rubella
- Campylobacteriosis
- Gastroenteritis in children under 2

6.2. General practice

- Bacterial meningitis (including meningococcal meningitis)
- Invasive meningococcal disease
- Acute viral meningitis
- HIV
- Rubella
- Food poisoning (bacterial other than salmonella)
- Influenzal pneumonia
- Influenza
- Acute anterior poliomyelitis
- Acute encephalitis
- Gastroenteritis in children under 2
- Tuberculosis
- Whooping cough
- Hepatitis B
- Measles
- Infectious parotitis
- Diphtheria
- Malaria
- Salmonellosis (other than typhoid or paratyphoid)
- Bacillary dysentery

6.3. Microbiology

- Bacterial meningitis

- Food poisoning
- AIDS
- HIV
- Gastroenteritis in children under 2
- Tuberculosis
- Acute anterior poliomyelitis
- Invasive meningococcal disease
- Verocytotoxin producing e coli
- Influenza
- MRSA (blood and csf)
- Whooping cough
- Clostridium difficile
- Influenzal pneumonia
- Streptococcal pneumonia (invasive)
- Hepatitis B
- Campylobacter
- Non-O157 VTEC
- Rotavirus
- Diphtheria

6.4. Clinicians

- Bacterial meningitis
- AIDS
- HIV
- Invasive meningococcal disease
- Tuberculosis
- Food poisoning
- Hepatitis B
- MRSA (blood and CSF)
- Whooping cough
- Congenital rubella
- Salmonellosis

- Influenzal pneumonia
- Hepatitis A
- Influenza
- VTEC O157
- Chlamydia trachomatis
- Rubella
- Measles
- Vancomycin resistant enterococci
- Gastroenteritis in children under 2

6.5. Infection Control Nursing

- Bacterial meningitis
- Invasive meningococcal disease
- Tuberculosis
- HIV
- Gastroenteritis in children under 2
- Food poisoning
- Hepatitis B
- AIDS
- VTEC O157
- Salmonellosis
- Hepatitis C
- CJD
- MRSA (blood and csf)
- Clostridium difficile
- Acute anterior poliomyelitis
- Non O157 VTEC
- Listeriosis
- Bacillary dysentery
- Hepatitis A
- Influenza

The responses were reviewed by the Sub-Committee and used to inform the process of selecting a list of diseases that would be proposed for surveillance in the consultation document of March 2000.

7. Consultation

7.1. First Consultation Period

In March 2000 a consultation document was prepared, based in part on the results of the prioritisation exercise. This document described the current notification system and the problems identified with it. It proposed changes to both the process of notification and the diseases that should be notifiable.

It was sent to representative bodies and groups in Ireland and was also posted on the NDSC web site for a one-month period of open consultation.

Submissions were received from the organisations/individuals listed in Appendix 6.

7.2. Second Consultation period

In November 2000 a second consultation document was prepared. This was also sent to representative bodies and groups in Ireland and posted on the NDSC web site for a two-week period of open consultation

Submissions were received from the organisations/individuals listed in Appendix 6.

8. Recommendations for a new national infectious disease notification system

The evaluation of the surveillance system for notifiable diseases, the results of the pilot questionnaire, and submissions received on the first and second consultation document all aided the sub-committee in agreeing the following recommendations for surveillance of infectious diseases.

8.1. Amendments to the current list of notifiable diseases

It is recommended that nine diseases be removed from the current list of notifiable diseases as listed in the Schedule to the Infectious Disease Regulations (Appendix 7). Infectious mononucleosis and ornithosis should be removed, as they do not require public health intervention. Bacterial food poisoning should be removed because the individual organisms causing food poisoning should be notified instead. Gastroenteritis in children under 2 years of age should be changed to require the reporting of all infectious gastroenteritis. Influenzal pneumonia should be notifiable as influenza. Smallpox has been eradicated and so there is no need to notify this disease. Three sexually transmitted infections should also be removed as they do not require public health intervention, namely, candidiasis, molluscum contagiosum and pediculosis pubis.

It is recommended that the entire list of diseases agreed at EU level for surveillance should be notifiable in Ireland.

This means that, in addition to those listed above, the following should be included on the list of notifiable diseases:

- Haemophilus influenzae Group b infection
- HIV
- Botulism
- Campylobacteriosis
- Cryptosporidiosis
- Giardiasis
- Infection with enterohaemorrhagic E coli

- Listeriosis
- Toxoplasmosis
- Trichinosis
- Yersiniosis
- Pneumococcal infections
- Echinococcosis
- Nosocomial infections
- Antimicrobial resistance

Other diseases and organisms that were given high priority by health professionals during the consultation process should be added to the list.

8.2. Highlight priority organisms/diseases requiring urgent public health action

Certain organisms/diseases require urgent public health action to be taken and these organisms are marked as priority diseases/organisms in the table. Other diseases are important for surveillance, but immediate notification is not as urgent. **It is recommended that certain diseases/organisms be highlighted as priorities, and that these be notified without delay, preferably by phone, fax or electronically.** Depending on the context in which the disease occurs, some diseases that are not highlighted as priorities may also require urgent action and in these circumstances should also be notified without delay. For example acute infectious gastroenteritis should be notified without delay if it is suspected that the case forms part of an outbreak.

The total list of diseases/organisms that this sub-committee recommend for notification, and their priority status, is given in Appendix 8.

8.3. Use of case definitions for each notifiable disease

Each disease that is notifiable should have a standard case definition that is used by all. In general, case definitions should be used in line with those being developed in the EU as part of implementation of Decision 2119/98/EC[2]. These case definitions are subdivided into probable cases and confirmed cases, with probable cases being

clinically defined, and with confirmed cases requiring laboratory diagnosis in addition to clinical symptoms. **It is recommended that case definitions be used and, wherever possible, internationally agreed EU case definitions be used**, particularly in light of the need to report to EU networks on infectious diseases. It is envisaged that work on development and introduction of case definitions shall be carried out by NDSC, in collaboration with other surveillance partners.

8.4. Change in structure and operation of the system

It is recommended that a new national system for surveillance of infectious diseases of public health importance should be instituted with the roles and responsibilities of each partner clearly defined as follows: There should be three main partners:

- Notifiers
- Directors of Public Health
- National Disease Surveillance Centre

8.4.1. Notifiers

The current situation in which the notifier is the medical practitioner who is in professional attendance on a person with an infectious disease needs to be changed.

It is recommended that there should be four categories of notifier:

- **GPs**
- **Hospital clinicians, including accident and emergency physicians**
- **Laboratory directors**
- **Public health doctors**

Each of these categories of notifier would be required to notify a specific subset of diseases contained in the list of notifiable diseases. If a notifier has identified a notifiable disease that is ordinarily reported by another category of reporter, yet he/she knows that it has not been notified from that source, then the notifier should notify this case.

- **GP notifiers**

It is recommended that GPs should have a short list of diseases commonly encountered in primary care that they should regularly notify to the MOH.

GP Notification list

Acute infectious gastroenteritis	Sexually transmitted infections:
Chickenpox	Urethritis
Hepatitis A	➢ Gonococcal
Influenza	➢ Chlamydial
Meningitis	➢ Non specific
Meningococcal disease	Anogenital warts
Measles	Herpes
Mumps	Syphilis
Pertussis	Trichomonas vaginalis
Rubella	Tropical STI
Tuberculosis	➢ Lymphogranuloma venereum
	➢ Chancroid
	➢ Granuloma inguinale

Any suspected outbreak of infectious disease should be notified immediately.

If any other notifiable disease is identified, and not known to have been notified by another source, the GP should notify the case.

- **Hospital clinicians, including A and E physicians**

Hospital clinicians will encounter many cases of notifiable diseases within their practice, and may see a wider range of diseases than GPs routinely do. They should notify these diseases. In some hospitals it may be appropriate for the infection control nurse to notify on behalf of the clinician by mutual agreement.

Hospital clinician notification list

Acute anterior poliomyelitis
Acute Flaccid Paralysis (<15 years)
Acute Infectious gastroenteritis
Ano-genital warts
Anthrax
Bacterial meningitis
Botulism
Brucellosis
Chancroid
Chickenpox
Cholera
Congenital herpes
Congenital rubella
Congenital toxoplasmosis
Creutzfeldt Jacob Disease
Variant Creutzfeldt Jacob Disease
Diphtheria
Genital herpes simplex
Gonorrhoea
Granuloma inguinale
HIV
Influenza
Invasive Hib disease
Invasive pneumococcal disease
Legionnaires disease
Leptospirosis
Lymphogranuloma venereum
Malaria
Measles
Meningococcal disease
Mumps
Neonatal CMV infection
Non-specific urethritis
Paratyphoid
Pertussis
Plague
Rabies
Rubella
Syphilis
Tetanus
Trichomonas vaginalis
Tuberculosis
Typhoid
Typhus
Viral encephalitis
Viral haemorrhagic fevers
Yellow fever

Any suspected outbreak of infectious disease should be notified immediately.

If any other notifiable disease not listed above is identified, (i.e. not already notified by other source), it should be notified.

- **Laboratory directors**

  It is recommended that a designated person in laboratories usually the consultant microbiologist or pathologist should be required to notify the Medical Officer of Health of any notifiable disease he/she identifies.

List of organisms notifiable by consultant microbiologist/pathologist

Organism	
Adenovirus	Mycoplasma pneumoniae
Bacillus anthracis	Neisseria gonorrhoeae
Bacillus cereus	Neisseria meningitidis
Borrelia burgdorferi	Norwalk virus
Brucella sp	Parvovirus B19
Campylobacter sp	Penicillin resistant pneumococci**
Chlamydia pneumoniae	Pertussis
Chlamydia trachomatis	Polio virus
Clostridium botulinum	Plasmodium falciparum, vivax, ovale, malariae
Clostridium difficile	Rabies
Clostridium novyii	Respiratory syncytial virus
Clostridium perfringens	Rickettsia prowazekii
Corynebacterium diphtheriae	Rotavirus
Creutzfeldt Jakob Disease	Rubella
Cryptosporidium parvum	Salmonella enterica
Delta hepatitis	Salmonella paratyphi
E coli of serogroup known to be toxin producing	Salmonella typhi
Echinococcosis	Schistosoma
Giardia lamblia	Shigella
Haemophilus ducreyi	Small round structured virus
Hepatitis A	Staphylococcus enterotoxin
Hepatitis B	Streptococcus (invasive) Group A
Hepatitis C	Streptococcus (invasive) Group B
Hepatitis E	Streptococcus pneumoniae**
Hepatitis other viral	Treponemum pallidum
HIV	Toxoplasma gondii
Influenza A virus	Trichinella
Influenza B virus	Trichomonas vaginalis
Invasive Haemophilus influenzae b disease**	Vancomycin resistant enterococci**
Legionella sp	Variant Creutzfeldt Jacob disease
Leptospira sp	Vibrio cholerae
Listeria monocytogenes	Vibrio parahaemolyticus
Measles	Viral encephalitis
MRSA**	Viral haemorrhagic fevers
Multiply resistant gram negative bacilli**	Yellow fever virus
Mumps	Yersinia enterocolitica
Mycobacterium leprae	Yersinia pestis
Mycobacterium tuberculosis complex	Yersinia pseudotuberculosis

** Blood, CSF or other sterile site

Apparently clinically significant isolates in blood/CSF of:

- coagulase negative staphylococcus
- corynebacterium species
- Bacillus species

Any suspected outbreak of infectious disease should be notified immediately.

- **Public health doctors**

A public health doctor should notify any notifiable disease that comes to his/her attention during the course of investigation or by any other means. In addition, **it is recommended that EHOs should bring to the attention of the SAMO any suspected cases of infectious diseases that come to their attention in the course of their work, and the SAMO should notify these if appropriate.**

8.4.2. Directors of Public Health

Under SI 251/ 1998, medical functions previously vested in or subject to the direction and control of the Director of Community Care and Medical Officer of Health, were assigned to such MOs as the CEO of each health board may determine. DPHs have been assigned the MO function by the Chief Executive Officers of the health boards. **It is recommended that legislation should be altered to reintroduce the term Medical Officer of Health (MOH) and that it should state that the MOH is the DPH, in recognition of the importance of the role of regional surveillance and control of infectious diseases**. Specialists in Public Health Medicine (SPHM), SAMOs and AMOs, when carrying out functions relating to infectious disease surveillance and control, would work on behalf of the MOH, that is, the DPH.

This proposal will include clinical and laboratory notifications in one new surveillance system. It is likely that notifications on the same illness will be received from more than one source. This will require a regional overview to remove duplicates, and to correctly link clinical and laboratory notifications within each health board. The DPH can best provide this regional overview.

Hospitals and laboratories should notify all infectious diseases diagnosed in their hospital to the DPH of the health board where the hospital is located. The DPH should then pass this information to the relevant DPH of the region where the cases resides.

All notifiers should notify the DPH/MOH of any cases that they identify. In some areas, notification will go directly to the SAMO and public health action will be taken

as appropriate at this level. The SAMO is working on behalf of the DPH/MOH in this regard. The SAMO should forward the notification to the DPH in a timely fashion. The Director of Public Health should identify the potential notifiers in his/her region, and maintain a list of them for feedback and to encourage compliance with their legal obligations to notify.

The DPH, SPHM, SAMO and AMO should be in a position to respond to urgent notifications on a 24-hour 7-day basis, and take appropriate public health action. The current situation, where no formal out-of-hours cover is provided, should be remedied.

It is recommended that national reporting of notifiable diseases should be streamlined so that there are eight reporting MOHs, representing the DPHs in the seven health boards and the Eastern Regional Health Authority. These should notify NDSC of all cases of notifiable diseases identified in a timely fashion - weekly, or sooner if there is a national public health requirement.

8.4.3. National Disease Surveillance Centre

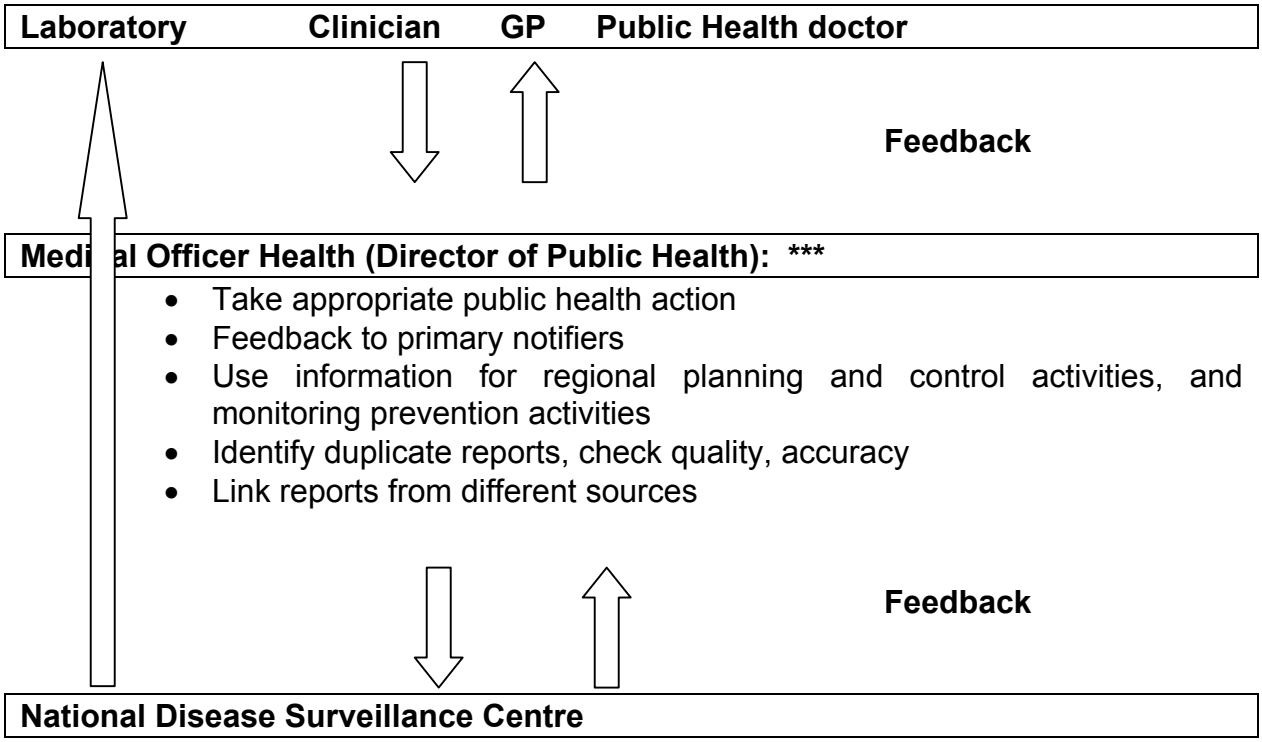
It is recommended that NDSC be defined in legislation as the proper authority to seek, collate, analyse and disseminate information on infectious diseases. SI 151/ 2000 is an interim measure and has allowed NDSC to take over surveillance of notifiable diseases from the DoHC in the short term. However it is inadequate to address the longer term needs for surveillance of infectious diseases.

The legislation should enable NDSC to receive data from the MOH in a standardised format within a reasonable time. NDSC should collate, analyse and interpret information concerning notifiable infectious diseases at national level. It should collaborate with FSPB to provide all-Ireland information on food borne diseases. It should publish information on infectious diseases regularly on its web site and on paper, and in reports to the MOH. NDSC should have a quality assurance system, and should regularly audit data quality.

There is currently no agency with the remit of control of infectious diseases at national level. In addition to the need for surveillance and control at regional level, **there is a**

need for national mechanism for co-ordinating the control of national and international outbreaks. This would be important in the case of a large national or international outbreak, requiring a national response. **Consideration needs to be given as to whether NDSC should be charged with the responsibility for co-ordinating the response.**

Flow chart of the proposed structure, operation and information flows



*** In some health boards, notifications go directly to the SAMO and public health action is taken as a result. The SAMO is acting on behalf of the DPH/MOH in this regard. The SAMO should forward the notifications in a timely fashion to the DPH who has overall responsibility

8.5. Standard minimum local/regional and national dataset

It is recommended that a core regional minimum dataset on each notifiable disease should be used, and a standardised method of collection of this information should be developed.

A proposed core dataset for regional public health action is as follows:

Name
Address
Telephone
Identifier
County
Health Board
Country of birth
Disease
Date of birth/year of birth
Sex
Date of onset. If unknown, date of diagnosis. If unknown, date of report
Case classification (as per case definitions)
Outcome: alive or dead
Notifier name
Date of notification
Notification source(s)
In addition, the following may also be notified
Immunisation status
Specification of aetiological agent
Country of infection

This sub-committee recognises that this information is not always available to notifiers. This is particularly the case with regard to laboratories, where there is often limited information submitted with a clinical sample. Notifiers should endeavour to provide whatever information is available to them when notifying a case, and where

additional information is required for public health action, it will be sought by the Director of Public Health, SPHM, SAMO or AMO as appropriate.

The core dataset for national surveillance should be similar to that for regional surveillance but should not normally include name and address.

Identifier
County
Health Board
Country of birth
Disease
Date of birth/year of birth
Sex
Date of onset. If unknown, date of diagnosis. If unknown, date of report
Case classification (as per case definitions)
Outcome: alive or dead
Date of notification
Notification source(s)
In addition, the following may also be notified
Immunisation status
Specification of aetiological agent
Country of infection

Enhanced surveillance i.e. the collection of more than the minimum data set and/or an active process for data collection will be required for some of the notifiable diseases. For example, occupation will be required for some diseases. Over time and with appropriate investment in resources for surveillance, there should be revision of the minimum standard dataset to maximise the benefit from the system.

8.6. Electronic transfer of information

It is recommended that systems for electronic transfer of data from notifiers to the Director of Public Health and to the NDSC should be developed as soon as

possible. Electronic notification from GPs, clinicians and laboratories to the Director of Public Health, and from Directors of Public Health to the NDSC, is urgently required.

The Computerised Infectious Disease Reporting Group (CIDR) is a national working group that is developing national electronic reporting between Departments of Public Health, laboratories and NDSC. This is a large complex project that will take a minimum of two years to test and implement. It will require significant resources to implement. **This sub-committee recommends that the resources required to implement this system be provided.**

Electronic GP reporting to the Director of Public Health does not form part of the brief of the CIDR group. **The sub-committee recommends that the development of electronic GP reporting be prioritised**, particularly as the acceptability and effectiveness of the current paper based system is very poor.

The successful introduction of electronic reporting will lead to rapid identification of diseases that require public health action**. Except where the urgency of the case requires otherwise, the system should ensure that before public health action is taken, patients are informed of their diagnosis by the doctor who ordered the test.**

8.7. Patient confidentiality and privacy

Issues concerning privacy and confidentiality of patient-identifiable information need to be addressed adequately in any such system. Named patient data are required at regional public health level in order that appropriate action can be taken. **Nationally, it is recommended that named patient data should not be routinely available unless this is necessary for accurate epidemiological monitoring of the disease, and each case should be argued on its merits**.

Reporting of infectious diseases should not allow for identification of any individual in reports produced. The DPH and NDSC should have written policies

concerning who may have access to such information and in what format information is released.

Electronic transfer of patient identifiable information is not well developed in Ireland. The health service does not have a secure Wide Area Network. Security issues concerning notification of patient-identifiable information over the Internet will need to be addressed. **It is possible that infectious disease legislation may have to deal specifically with the method of transfer of information.**

8.8. Reference laboratories

To adequately respond to the challenges posed by infectious diseases, there is a need to develop standardised methods of identification of organisms and antimicrobial resistance patterns. **This sub-committee recommends that reference laboratories for important organisms be developed and that laboratories be required to submit specimens to these reference laboratories for definitive identification.** The reference laboratories should set standards for identification and should participate in auditing their implementation.

Reference laboratories should be required to report cases from each health board region to the relevant Director of Public Health. Reference laboratories should also be required to report this information to NDSC.

Laboratories should be obliged to notify antibiotic resistance patterns in a standardised manner to the Department of Public Health, NDSC and to designated reference laboratories. Laboratories should be required to send specimens to designated reference laboratories for further typing where appropriate.

In order to interpret surveillance information accurately, Directors of Public Health and NDSC need information on the criteria used for taking specimens. In addition, standard protocols for what specimens to examine for what pathogens, and standard diagnostic methods in all laboratories will be essential in order to be able to interpret observed differences. A survey of laboratory practices and procedures is underway

as part of the CIDR working group. This survey will help inform what the current national situation is. **This sub-committee recommends that the findings of this survey be used as a catalyst for standardisation of practices where appropriate.**

The FSPB has a role in the development of specialised laboratory services with regard to food safety and food-borne disease in particular.

8.9. Education and training

If the recommendations of this report are implemented, there will be a requirement for a structured training and education programme throughout the country to introduce this change. This will require a large investment in time and expertise to implement. The changes proposed are radical in that, for the first time, laboratories will be required to notify. The proposals are also designed to be more user friendly, with GPs being asked to notify a smaller list of regularly encountered diseases, with the aim of improving notification rates. For these changes to have their intended effect, considerable effort will have to be made to ensure that health professionals receive adequate education and training about the changes. **The Sub-Committee recommend that the educational requirements of introduction of changes to the legislation be considered when planning undergraduate training, and continuous professional development for public health, microbiology, clinicians, GPs, infection control nursing and others.**

Information leaflets should be provided for patients explaining what to expect following notification, and the roles of the professionals who may interact with them e.g. Environmental Health Officer, Area Medical Officer, and Infection Control Nurse.

To improve notification of infectious diseases on a continuing basis, an ongoing process of education about the need for reporting, and on the public health actions taken as a result of notification, should be undertaken at health board and national level.

Education and training of health professionals and the development of public information leaflets will require the allocation of appropriate resources. **It is recommended that the DoHC consider the allocation of resources for this purpose.**

8.10. Out of Hours cover

At present there is no formal out-of-hours on-call or weekend cover for surveillance and control of infectious diseases. This situation prevents appropriate management of urgent public health issues and needs to be changed as a matter of urgency. **The NDSC, DPH, SPHM, SAMO and AMO should be in a position to respond to urgent notifications and outbreak situations on a 24-hour 7-day basis, and take appropriate public health action. The subcommittee recommends that formal out-of-hours on-call arrangements are put in place for NDSC, DPH, SAMO, AMO, laboratory staff and EHOs as a matter of extreme urgency.**

8.11. Need for enhanced surveillance of certain diseases by MOH

Enhanced surveillance of key diseases should be accepted as necessary e.g. for meningococcal disease, VTEC and TB. **For diseases designated as requiring enhanced surveillance, more detailed information should be obtained and collated at health board level by the MO and sent regularly to NDSC.** NDSC should report quarterly on national information from this enhanced surveillance system. The proposed standing committee should make decisions regarding which diseases will be chosen for enhanced surveillance.

8.12. Enhanced surveillance at GP level

L1. Sentinel surveillance at primary care level has been shown internationally to be successful for influenza surveillance. A sentinel surveillance system for influenza was piloted in Dublin in the winter of 1999/2000 and continues to develop in 2000/2001. **Further development of sentinel surveillance for influenza should be supported. Consideration should also be given to extending such sentinel surveillance to other infectious diseases as appropriate.**

8.13. Inbuilt flexibility

M1. The proposed new system must be flexible with regard to new and emerging infectious disease threats. **There should be a regular audit of usefulness of the current list of notifiable diseases and provision for adding, and removing diseases, and for changing the process at relatively short notice.** This might be carried out by a standing committee that would include representation from NDSC, DPH, consultant microbiology, SAMO, GP, DoHC and FSPB, for food-borne diseases.

8.14. Sexually Transmitted Infection (STI) surveillance

It has been practice for STIs to be notified on an anonymous basis, and in aggregate format on a three monthly basis. This system should change to the collection of more timely non-aggregate geographic-based data using initials and date of birth. A sub-committee of the Scientific Advisory Committee of the NDSC will review surveillance of sexually transmitted infections in detail.

8.15. HIV notification

O1. All professional groups who were consulted during the preparation of this document rated HIV high on the list of priority diseases that should be notifiable. **This sub-committee recommends that HIV be made a notifiable disease and similar to other STIs, information should be geographic-based and non-named, using initials and date of birth.**

8.16. Surveillance of antimicrobial resistance

A Strategy for the Control of Antimicrobial Resistance in Ireland (SARI), was completed by a Subgroup of the Scientific Advisory Committee of NDSC this year[10]. This strategy document recommends that an infrastructure for surveillance be established. It recommends that surveillance and prescribing data be collated by each Board/Authority and sent to the NDSC. An identified person (microbiologist or SPHM) at local/regional level should oversee collation, analysis and interpretation of

the data. A designated person(s) is also recommended at national level. This sub-committee recommends that this infrastructure be underpinned by legislation.

SARI does not provide a list of organisms that should be under surveillance for antimicrobial resistance. **This sub-committee recommends that a national committee, as proposed in SARI, identify which organisms should be under surveillance for AMR and that new legislation should require laboratories to participate in AMR surveillance as set out by this committee**. There may be a need to alter the organisms under surveillance over time or region, and the legislation should require laboratories to co-operate with whatever is agreed as national policy for surveillance. Surveillance of AMR should be case-based.

The sub-committee propose a minimum dataset for AMR surveillance as follows:

- identifier,
- age,
- sex,
- whether hospitalised,
- specimen type,
- specimen date,
- organism
- microbial susceptibility test results.

In any case **this sub-committee recommends that isolates recovered from blood, cerebrospinal fluid or other normally sterile body fluid sites of MRSA, penicillin resistant pneumococci, vancomycin resistant enterococci, and multiply resistant gram negative bacilli be notifiable for AMR surveillance.**

8.13. Surveillance of hospital-acquired infection

SARI recommended that a hospital based surveillance system be established at national and local level to detect hospital-acquired infection, using internationally agreed definitions of hospital-acquired infection. This should also be supported by legislation.

8.14. Outbreaks of infectious diseases

Any suspected outbreak of infectious disease should immediately be notified to the MOH. The MOH should in turn notify NDSC promptly of any outbreak reported to him/her. NDSC should ensure that this information is sent as appropriate to FSAI and FSPB.

8.15. Reporting clusters of illness, new or altering patterns of illness

Notifiers should also be required to notify unusual clusters or changing patterns of illness that may be of public health concern to the MOH, and the MOH should notify NDSC.

8.16. Resources

The changes proposed in this consultation document will have significant resource implications. Without investment at laboratory, primary care, public health and national level, it will not be possible to implement these changes. This needs to be addressed by the DoHC.

For GP notifiers, there is a need to provide an appropriate fee structure for notification that will facilitate prompt and complete notification.

In the laboratory, the proposal to require notification will demand significant investment in microbiology and administrative personnel in the laboratory for reporting diseases, and financial support for electronic communication of information via CIDR.

At public health level, the proposals will increase the workload considerably. There is a need to increase numbers of public health and environmental health staff who will be able to respond in a timely manner to infectious diseases requiring public health action, and who will have the responsibility for regional surveillance and control. There should be an AMO on duty in each CCA specifically for dealing with infectious diseases on a priority basis, who is contactable at all times and at a specific telephone number/mobile phone.

Infection control resources will be required in order to implement the proposed changes. Without additional ICNs at hospital and particularly community level working in partnership with other health care professionals, it will not be possible to implement the proposals in the document. Currently there is one ICN working in the community in Ireland in the Southern Health Board. **The sub-committee proposes that**

additional hospital based ICNs be appointed, particularly in areas of mental health and learning disabilities where there is an urgent need to provide infection control expertise.

8.17. Implementation

U1. An implementation group should be set up to help plan the introduction of these proposed changes to the legislation on a phased basis.

Glossary of Terms

AIDS	Acquired Immunodeficiency Syndrome
AMO	Area Medical Officer
AMR	Antimicrobial Resistance
CIDR	Computerised Infectious Disease Reporting
DoHC	Department of Health and Children
DPH	Director of Public Health
FSPB	Food Safety Promotion Board
FSAI	Food Safety Authority of Ireland
GP	General Practitioner
HIV	Human Immunodeficiency Virus
IID	Infectious Intestinal Disease
MO	Medical Officer
MOH	Medical Officer of Health
MRSA	Methicillin Resistant Staphylococcus Aureus
NDSC	National Disease Surveillance Centre
SAMO	Senior Area Medical Officer
SPHM	Specialist in Public Health Medicine
SARI	Strategy for the control of Antimicrobial Resistance in Ireland
WRS	Weekly Returns Service
WTE	Whole Time Equivalent

References

1. Van Steenbergen JE, Slijkerman FAN, Speelman P. The first 48 hours of investigation and intervention of an outbreak of Legionellosis in the Netherlands. Eurosurveillance 1999; 4(11): 111-5.

2. Decision of the European Parliament and Council 2119/98/EC OJ L268, 3.10.1998, p.1.

3. Klaucke DN, Buehler JW, Thacker SB, et al, Guidelines for Evaluating Surveillance Systems. MMWR 1988; 37:Suppl-5

4. Rushdy A, O'Mahoney, M, on behalf of PHLS Overview of Communicable Diseases Committee. PHLS overview of communicable diseases 1997: results of a priority setting exercise. CDR 1998; Suppl 5: S1-11.

5. Cronin M. Measles Outbreak, Dublin 2000. Epi Insight 2000; 1(2):2-3.

6. Kiely J. Annual Report of the Chief Medical Officer, 1999. Government Publications Office.

7. European Commission Decision 2000/96/EC OJ L28, 03.02.2000, p.50.

8. Grein T. The Eastern Health Board Notifiable Diseases Surveillance System Evaluation Report. Dept Public Health, EHB 1996

9.Collins G. Notification of Infectious Diseases (SHB) Infoscan 1997; 7(4).

10. NDSC SAC. Strategy for the Control of Antimicrobial resistance in Ireland. 2000

Appendix 1: Diseases currently notifiable under the Infectious Disease Regulations 1981, and amended in 1985, 1988 and 1996.

Acute anterior poliomyelitis	Sexually transmitted diseases (1985)
Acute encephalitis	Syphilis
Acute viral meningitis	Gonorrhoea
Anthrax	Chancroid
Bacillary Dysentery	Lymphogranuloma venereum
Bacterial Meningitis (including meningococcal septicaemia)	Granuloma inguinale Non specific urethritis
Brucellosis	Chlamydia trachomatis
Cholera	Trichomoniasis
Diphtheria	Candidiasis
Creutzfeldt Jakob Disease (1996)*	Pediculosis pubis
nv Creutzfeldt Jakob Disease (1996)*	Ano-genital warts
Food Poisoning (bacterial other than salmonella)	Molluscum contagiosum Genital herpes simplex
Gastro enteritis (when contracted by children under 2 years)	Tetanus Tuberculosis
Infectious mononucleosis	Typhoid and paratyphoid
Infectious parotitis (mumps) (1988)	Typhus
Influenzal pneumonia Legionnaires disease	Viral haemorrhagic diseases (including lassa fever and marburg disease)
Leptospirosis	Viral hepatitis
Malaria	Type A
Measles	Type B
Ornithosis	Type unspecified
Plague	Whooping cough
Rabies	Yellow fever
Rubella	
Salmonellosis (other than typhoid or paratyphoid)	
Smallpox	
*Definitively diagnosed	

Appendix 2: Commission Decision of 22 December 1999

ANNEX I

1. **COMMUNICABLE DISEASES AND SPECIAL HEALTH ISSUES TO BE PROGRESSIVELY COVERED BY THE COMMUNITY NETWORK**

1.1. **For the diseases/health issues listed below, surveillance within the Community network will be performed by standardised collection and analysis of data in a way that will be determined for each disease/health issue when specific Community surveillance networks are put in place.**

2. **DISEASES**

2.1. **Diseases preventable by vaccination**

Diphtheria
Infections with haemophilus influenza group B
Influenza
Measles
Mumps
Pertussis
Poliomyelitis
Rubella

2.2. **Sexually transmitted diseases**

Chlamydia infections
Gonococcal infections
HIV-infection
Syphilis

2.3. **Viral hepatitis**

Hepatitis A
Hepatitis B
Hepatitis C

2.4. **Food- and water-borne diseases and diseases of environmental origin**

Botulism
Campylobacteriosis
Cryptosporidiosis
Giardiasis
Infection with Enterohaemorrhagic E.coli
Leptospirosis
Listeriosis
Salmonellosis
Shigellosis
Toxoplasmosis
Trichinosis
Yersinosis

2.5. **Other diseases**

2.5.1. *Diseases transmitted by non-conventional agents*

Transmissible spongiform encephalopathies variant (CJD)

2.5.2. *Air-borne diseases*

Legionellosis
Meningococcal disease
Pneumococcal infections
Tuberculosis

2.5.3. *Zoonoses (other than in 2.4)*

Brucellosis

Echinococcosis

Rabies

2.5.4. *Serious imported diseases*

Cholera

Malaria

Plague

Viral haemorrhagic fevers

3. **SPRECIAL HEALTH ISSUES**

3.1. **Nosocomial infections**

3.2. **Antimicrobial resistance**

ANNEX II

Criteria for selection of communicable diseases of special areas to be covered by epidemiological surveillance within the network.

1. Dieseases that cause, or have the potential to cause, significant morbidity and/or mortality across the Community, especially where the prevention of the diseases requires a global approach to coordination.
2. Diseases where the exchange of information may provide early warning of threats to public health.
3. Rare and serious diseases which would not be recognised at national level and where the pooling of data would allow hypothesis generation from a wider knowledge base.
4. Diseases for which effective preventive measures are available with a protective health gain.
5. Diseases for which a comparison by Member States would contribute to the evaluation of national and Community programmes.

Appendix 3: Priority setting exercise questionnaire

National Disease Surveillance Centre Ireland

Surveillance of Communicable Diseases

Priority setting exercise

The Scientific Advisory Committee of the National Disease Surveillance Centre has been asked by the Department of Health and children to review the current list of notifiable diseases under the infectious disease regulations, to make recommendations regarding proposed additions and deletions to the list, and to make recommendations regarding the process of notification in respect of each disease.

This questionnaire forms part of a consultation exercise to obtain the views of experts working in the field who are providing and using this information for public health intervention and policy formation. It is vitally important that these views are represented when the list of diseases for notification is being reviewed.

The questionnaire is structured so that each disease is considered in terms of its overall importance. Its importance has been broken down into several categories such as the burden of ill health caused by the disease, the social and economic impact of the disease etc. All currently notifiable diseases are included in the questionnaire as well as others that either are under surveillance in other countries or could be considered. If other diseases that should be notifiable are not included from the list please add them in the blank sections at the end of the questionnaire.

Each disease will be ranked in order of importance as assessed by respondents using these criteria and the review group in their deliberations will use this information. **The committee is anxious to obtain everyone's view even if for some diseases in the absence of good evidence it is only a "gut feeling". It is very important that you do your best to answer this questionnaire completely.**

For each disease included in the new notification list case definitions will be developed.

In addition to the questionnaire as designed, the sub committee would welcome any additional submission on infectious disease notification, particularly regarding the process of notification that you would wish to make.

Please send the completed questionnaire to Dr Derval Igoe at the National Disease Surveillance Centre. Please direct any queries or comments to Dr Igoe also.

Section 1 Demographic details

Firstname: _____ **Surname**: _____

Position:

- Director of Public Health ☐
- Medical Microbiologist ☐
- Laboratory Technologist ☐
- General Practitioner ☐
- Specialist in Public Health Medicine ☐
- Medical Officer, Department of Health and Children ☐
- Senior Area Medical Officer ☐
- Principal Environmental Health Officer ☐
- Consultant in Clinical Infectious Diseases ☐
- Consultant Physician ☐
- Paediatrician ☐
- Virologist ☐
- Academic Department of Public Health ☐
- NDSC/FSA ☐
- Other ☐
  Please specify _____

Year of appointment to present position: _____

County of work: _____

Approximately how much of your work involves infectious diseases?

Full-time	☐	1-2days per week	☐	1-3days per month	☐
Half-time	☐	<1day per week	☐	rarely	☐

Please read the explanations of the criteria on the opposite page. Then **for each disease**, please grade your response one to five in each column (1=low importance, 5=high importance)

	Criteria						
	Burden of ill-health	Social and economic impact	Potential threats (5-10yrs)	Health gain opportunity	Public Concern and confidence	National/FSA/EU /WHO interest	Your profession key notifier
Current notifiable diseases							
Acute anterior poliomyelitis							
Acute encephalitis							
Acute viral meningitis							
Anthrax							
Bacillary dysentery							
Bacterial meningitis (including meningococcal meningitis)							
Brucellosis							
Cholera							
Diphtheria							
Food poisoning (bacterial other than salmonella)							
Gastro-enteritis (in children under 2 years)							
Infectious mononucleosis							
Infectious parotitis							
Influenzal pneumonia							
Legionnaires disease							
Leptospirosis							
Malaria							
Measles							
Ornithosis							
Plague							
Rabies							
Rubella							
Salmonellosis (other than typhoid or paratyphoid)							
Smallpox							
Sexually transmissable diseases							
Syphilis							
Gonorrhoea							
Chancroid							
Lymphogranuloma venereum							
Granuloma inguinale							
Non-specific urethritis							
Chlamydia trachomatis							

Please read the explanations of the criteria the opposite page. Then **for each disease**, please grade your response one to five in each column (1=low importance, 5=high importance)

	Criteria						
	Burden of ill-health	**Social and economic impact**	**Potential threats (5-10yrs)**	**Health gain opportunity**	**Public Concern and confidence**	**National/FSA /EU /WHO interest**	**Your profession key notifier**
Candidiasis							
Pediculosis pubis							
Ano-genital warts							
Molluscum contagiosum							
Gential herpes simplex							
Tetanus							
Tuberculosis							
Typhoid and paratyphoid							
Typhus							
Viral haemorrhagic diseases(including lassa fever and Marburg disease)							
Viral hepatitis							
Type A							
Type B							
Type unspecified							
Whooping cough							
Yellow fever							
CJD							
Other diseases not currently notifiable							
AIDS							
Botulism							
Campylobacter							
Chlamydia pneumoniae							
Chlamydia psittaci							
Clostridium difficile							
CMV infection - neonatal							
Congenital infections							
Congenital herpes							
Congenital rubella							
Congenital toxoplasmosis							
Cryptosporidiosis							
Flu like illness							
Giardiasis							
Gp A β haemolytic strep (invasive)							
Haemophilus influenzae type b (invasive, not meningitis)							
Headlice							
Helicobacter pylori							
Hepatitis C							

		Criteria					
	Burden of ill-health	**Social and economic impact**	**Potential threats (5-10yrs)**	**Health gain opportunity**	**Public Concern and confidence**	**National/FSA /EU /WHO interest**	**Your profession key notifier**
HIV							
Influenza							
Invasive meningococcal disease							
Listeriosis							
MRSA (blood and CSF)							
Non O157 verocytotoxin producing E coli							
Parvovirus B19							
Q fever							
Respiratory Syncytial virus							
Staphylococcus aureus							
Scabies							
Streptococcus pneumoniae(invasive)							
Trichinosis							
Viral gastro-enteritis							
Rotavirus							
SRSV							
Varicella zoster							
Vancomycin resistant enterococci							
Verocytotoxin producing E coli O157							
Other disease omitted above that are important							

Do you agree that there should be flexibility in the notification system to allow for rapid surveillance of an emerging public health problem Yes/No

Do you think that for some diseases, compulsory laboratory notification should be introduced Yes/No

Comments: _____

_____

_____

_____

_____

Do you wish to make a submission to the review group: Yes/No

If yes, please enclose with this questionnaire

Submission enclosed Yes/No

Signed: _____ Date: __/__/__

Thank you for completing this questionnaire.

Please send completed form (+/- submission) in the stamped addressed envelope to:

Dr Derval Igoe
National Disease Surveillance Centre,
Sir Patrick Dun's Hospital,
Lower Grand Canal Street,
Dublin 2.

Criteria for inclusion on list of notifiable Diseases

Present Burden of Ill health

Assessed according to age and sex-related mortality and morbidity and data on quality adjusted life years. (Please see enclosed notification and mortality data).

Social and economic impact

Assessed by considering the costs of infection to individuals and organisations and to health care providers. For example the cost of vaccination, non-hospital health care, long term disability etc. Assessment will have to be relatively subjective given lack of economic impact analyses.

Potential Threats (over next 5 to 10 years)
Assessed by considering extrapolations of current trends including antibiotic resistance; known suspected or predicted gaps in vaccination coverage, changes in animal husbandry and food/water provision, changes in environment, development overseas and demographic changes and population movements. The communicability of the disease and its potential for outbreaks should be considered under this criterion.

Health gain opportunity

Assessed by preventability including vaccine availability and efficacy or probability of availability. Necessity for immediate public health response as measured by effectiveness of immediate case and contact management measures

Public Concern and confidence

Assessed by Parliamentary Questions, media and public enquiries, newspaper and magazine articles, special interest groups such as the Meningitis Research Foundation.

WHO/EU interest/Networks/Food Safety Authority interest
Collation of information on certain diseases such as cholera and yellow fever is required under international health regulations. The EU is strengthening its networks for surveillance of communicable diseases eg EuroTB and enter-net and participation in these networks requires relevant information to be collected at national level. The FSAI needs good information on food borne illness.

Your profession as key notifier

This criterion assesses which diseases your professional group would have a key interest in notifying.

Appendix 4.

Health Board	Reporting Area	Medical Officer	Address	Tel	Fax
ERHA	CCA1-8	Specialist in Public Health Medicine	Eastern Regional Health Authority, Dr. Steeven's Hospital, Dublin 8.	01-6352145	
	CCA9	SAMO	South Western Area Health Board, Popular House, Popular Square, Naas, Co. Kildare.	045-876001	045-879225
	CCA10	SAMO	East Coast Area Health Board, Glenside Rd., Wicklow.	0404-68400	
MHB	Laois	Specialist in Public Health Medicine	Midland Health Board, Arden Road, Tullamore, Co. Offaly.	0506-46105	0506-46223
	Offaly				
	Longford				
	Westmeath				
MWHB	Clare	SAMO	Mid-Western Health Board, Sandfield Centre, Ennis, Co. Clare	065-6828525	065-6820060
	Limerick	SAMO	Community Care Offices, Unit 3, St. Camillus Hospital, Limerick	061-483712	061-483757
	Tipperary NR	SAMO	Mid-Western Health Board, Kenyon Street, Nenagh, Co. Tipperary	067-31212	067-41368
NEHB	Meath	SAMO	Meath Community Care, County Clinic, Navan, Co. Meath.	046-21595	046-22818
	Louth	SAMO	Meath Community Care, County Clinic, Navan, Co. Meath.	046-21595	046-22818
	Cavan	SAMO	Cavan/Monaghan Community Care, Community Service Centre, Lisdarn, Cavan.	049-4361822	049-4361877
	Monaghan	SAMO	Cavan/Monaghan Community Care, Community Service Centre, Lisdarn, Cavan.	049-4361822	049-4361877
NWHB	Donegal	SAMO	Donegal Community Care, Isaac Butt Building, Ballybofey, Co. Donegal.	074-31391	074-31982

	Sligo/Leitrim	SAMO	Sligo Community Care, Markievicz House, Sligo.	071-55122	071-55131
SEHB	Carlow	Specialist in Public Health Medicine	South Eastern Health Board, Lacken, Dublin Road, Kilkenny.	056-20442	056-70842
	Kilkenny				
	Tipperary SR				
	Waterford				
	Wexford				
SHB	North/South Lee	SAMO	Southern Health Board, Abbeycourt House, George's Quay, Cork	021-965511	021-963822
	North Cork	SAMO	Southern Health Board, Gouldshill House, Mallow, Co. Cork	022-21484	022-42504
	West Cork	SAMO	Southern Health Board, West Cork Community Care, Hospital Grounds, Skibbereen, Co. Cork	028-21722	028-22382
	Kerry	SAMO	Southern Health Board, 18/20 Denny Street, Tralee, Co. Kerry	066-7121566	066-7124515
WHB	Galway	SAMO	Galway Community Care Department, Newcastle Rd., Galway.	091-523122	091-524653
	Mayo	SAMO	Community Care Offices., County Clinic, Castlebar, Co. Mayo	094-22333	094-24535
	Roscommon	SAMO	Community Care Dept., Roscommon, Co. Roscommon	0903-26518	0903-26284

Appendix 5: Weekly NDSC ID report

Weekly Infectious Disease Report by National Disease Surveillance Centre

Week 44

Report Produced: 10/11/2000

Note: The data in this report is provisional and will not be regarded as final until all returns are received and data has been validated

Table 1

Infectious Diseases Notified to NDSC Week ended Saturday 04/11/2000 Week 44				
Infectious Disease	**w/e 04/11/2000**	**Week 1 to 44 2000**	**Week 1 to 44 1999***	**Increase/ Decrease**
Acute Anterior Poliomyelitis	0	0	0	0
Acute Encephalitis	0	1	1	0
Acute Viral Meningitis	3	76	16	60
Anthrax	0	0	0	0
Bacillary Dysentery (Shigellosis)	0	20	107	-87
Bacterial Meningitis (including meningococcal septicaemia)	8	591	515	76
Brucellosis	0	12	18	-6
Cholera	0	1	0	1
Creutzfeldt Jakob Disease	0	0	0	0
nvCreutzfeldt Jakob Disease	0	0	0	0
Diphtheria	0	0	0	0
Food Poisoning (bacterial other than salmonella)	11	1382	1487	-105
Gastroenteritis (when contracted by children under 2 years)	35	2470	2673	-203
Infectious Mononucleosis	1	128	176	-48
Infectious Parotitis (Mumps)	2	46	36	10
Influenzal Pneumonia	0	20	10	10
Legionnaires Disease	0	8	2	6
Leptospirosis	0	4	4	0
Malaria	1	14	12	2
Measles	6	1566	129	1437
Ornithosis	0	0	1	-1
Plague	0	0	0	0
Rabies	0	0	0	0
Rubella	0	94	53	41
Salmonellosis (other than typhoid or paratyphoid)	9	580	811	-231
Smallpox	0	0	0	0
Tetanus	0	1	1	0
Tuberculosis**	0	**	**	**
Typhoid & Paratyphoid	0	0	0	0
Typhus	0	0	0	0
Viral Haemorrhagic Disease	0	0	0	0
Viral Hepatitis Type A	3	236	272	-36
Viral Hepatitis Type B	4	141	107	34
Viral Hepatitis Unspecified	0	62	82	-20
Whooping Cough	2	124	165	-41
Yellow Fever	0	0	1	-1
Total	**85**	**7577**	**6679**	**898**

* Data provided by Department of Health and Children

**Timely data not available, figures collated and circulated quarterly

Table 2. Infectious Disease Notified to NDSC by Health Board

Week ending Saturday 4th November 2000 (Week 44)

Infectious Diseases	Health Board								
	ERHA	MHB	MWHB*	NEHB	NWHB	SEHB	SHB**	WHB	Total
Acute Viral Meningitis	2	0	0	1	0	0	0	0	**3**
Bacterial Meningitis	1	1	0	0	0	2	3	1	**8**
Food Poisoning	6	0	1	0	1	0	2	1	**11**
Gastroenteritis<2yrs	19	2	2	0	2	3	4	3	**35**
Infectious Mononucleosis	0	0	1	0	0	0	0	0	**1**
Infectious Parotitis	1	1	0	0	0	0	0	0	**2**
Malaria	1	0	0	0	0	0	0	0	**1**
Measles	5	1	0	0	0	0	0	0	**6**
Salmonellosis	3	0	0	0	3	0	2	1	**9**
Viral Hepatitis Type A	1	0	0	0	0	2	0	0	**3**
Viral Hepatitis Type B	3	0	0	0	0	0	1	0	**4**
Whooping Cough	2	0	0	0	0	0	0	0	**2**
Total	**44**	**5**	**4**	**1**	**6**	**7**	**12**	**6**	**85**

* MWHB - No reports received from Clare by 08 November 2000.

** SHB - No reports received from North Cork by 08 November 2000.

Table 3. Infectious Disease Notified to NDSC by Reporting Area

Week ending Saturday 04th November 2000 (Week 44)

Infectious Diseases	Reporting Area *																								
	CCA1	CCA2	CCA3	CCA4	CCA5	CCA6	CCA7	CCA8	CCA9	CCA10	CN	DL	G	KK	KY	L	LM	LS	MO	NSL	OY	SO	TS	WC	WD	Total
Acute Viral Meningitis	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
Bacterial Meningitis	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2	1	0	0	0	2	**8**
Food Poisoning	2	0	1	0	2	0	0	0	0	1	0	0	0	0	0	1	0	0	1	2	0	1	0	0	0	**11**
Gastroenteritis<2yrs	1	0	1	2	0	3	8	1	2	1	0	1	2	2	0	2	1	0	1	4	2	0	1	0	0	**35**
Infectious Mononucleosis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	**1**
Infectious Parotitis	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	**2**
Malaria	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
Measles	0	1	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	**6**
Salmonellosis	1	0	0	0	1	0	0	0	0	1	0	3	0	0	1	0	0	0	1	1	0	0	0	0	0	**9**
Viral Hepatitis Type A	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	**3**
Viral Hepatitis Type B	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	**4**
Whooping Cough	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
Total	**4**	**2**	**4**	**3**	**7**	**4**	**9**	**5**	**3**	**3**	**1**	**4**	**3**	**3**	**2**	**4**	**1**	**1**	**3**	**9**	**4**	**1**	**1**	**1**	**3**	**85**

See table 6, to translate codes for reporting areas.

* Reports received, but nil notifications = LH, MH, MN, RN, TN.

Table 4. Infectious Disease Notified to NDSC by Age Group

Week ending Saturday 04th November 2000 (Week 44)

Infectious Diseases	Age Group (Years)									
	0-4	05-14	15-24	25-34	35-44	45-54	55-64	65+	Age not provided	Total
Acute Viral Meningitis	0	2	0	0	0	0	0	0	1	**3**
Bacterial Meningitis	3	1	3	0	1	0	0	0	0	**8**
Food Poisoning	2	2	3	2	1	0	1	0	0	**11**
Gastroenteritis<2yrs	35	0	0	0	0	0	0	0	0	**35**
Infectious Mononucleosis	0	1	0	0	0	0	0	0	0	**1**
Infectious Parotitis	0	0	0	2	0	0	0	0	0	**2**
Malaria	0	0	1	0	0	0	0	0	0	**1**
Measles	2	1	2	0	0	0	0	0	1	**6**
Salmonellosis	2	1	0	2	1	1	1	1	0	**9**
Viral Hepatitis Type A	1	2	0	0	0	0	0	0	0	**3**
Viral Hepatitis Type B	0	0	1	2	1	0	0	0	0	**4**
Whooping Cough	2	0	0	0	0	0	0	0	0	**2**
Total	**47**	**10**	**10**	**8**	**4**	**1**	**2**	**1**	**2**	**85**

Table 5. Infectious Disease Notified to NDSC by Sex
Week ending Saturday 04th November 2000 (Week 44)

Infectious Diseases	SEX			
	Female	Male	Sex not provided	Total
Acute Viral Meningitis	1	1	1	**3**
Bacterial Meningitis	2	6	0	**8**
Food Poisoning	7	4	0	**11**
Gastroenteritis<2yrs	15	20	0	**35**
Infectious Mononucleosis	0	1	0	**1**
Infectious Parotitis	2	0	0	**2**
Malaria	0	1	0	**1**
Measles	2	4	0	**6**
Salmonellosis	5	4	0	**9**
Viral Hepatitis Type A	2	1	0	**3**
Viral Hepatitis Type B	1	3	0	**4**
Whooping Cough	0	2	0	**2**
Total	**37**	**47**	**1**	**85**

Table 6. Codes Used for Each Reporting Area and Record of Reports Received

Code	Reporting Area	Report Received			
		Week 41	Week 42	Week 43	Week 44
CCA 1	Dublin	√	√	√	√
CCA 2	Dublin	√	√	√	√
CCA 3	Dublin	√	√	√	√
CCA 4	Dublin	√	√	√	√
CCA 5	Dublin	√	√	√	√
CCA 6	Dublin	√	√	√	√
CCA 7	Dublin	√	√	√	√
CCA 8	Dublin	√	√	√	√
CCA 9	Kildare/West Wicklow	√	√	√	√
CCA 10	Wicklow (East)	√	√	√	√
CE	Clare	√	√	√	No Data
CN	Cavan	√	√	√	√
CW	Carlow	√	√	√	√
DL	Donegal	√	√	√	√
G	Galway	√	√	√	√
KK	Kilkenny	√	√	√	√
KY	Kerry	√	√	√	√
L	Limerick	√	√	√	√
LD	Longford	√	√	√	√
LH	Louth	√	√	√	√
LM	Leitrim	√	√	√	√
LS	Laois	√	√	√	√
MH	Meath	√	√	√	√
MN	Monaghan	√	√	√	√
MO	Mayo	√	√	√	√
NC	North Cork	√	√	No Data	No Data
NSL	North/South Lee	√	√	√	√
OY	Offaly	√	√	√	√
RN	Roscommon	√	√	√	√
SO	Sligo	√	√	√	√
TN	Tipperary NR	√	√	√	√
TS	Tipperary SR	√	√	√	√
WC	West Cork	√	√	√	√
WD	Waterford	√	√	√	√
WH	Westmeath	√	√	√	√
WX	Wexford	√	√	√	√

√, indicates that reports were received by NDSC by the Wednesday.

No data, indicates that no report was received by NDSC by the Wednesday following the end of that notification week.

NDSC Classification Categories

In reporting notifiable infectious diseases due to **Gastroenteritis (under 2 yrs)** and **Bacterial Food Poisoning**, NDSC has adopted the following classification rules:

1. Gastroenteritis (when contracted by children <u>under 2 years</u> of age)

The diseases occurring in children under 2 yrs classified under this heading, are:

- Adenovirus
- Rotavirus
- Cryptosporidium
- Giardia
- *Clostridium difficile*
- "Viral"-unspecified
- Gastroenteritis-unspecified

<u>N.B. Cryptosporidium, Giardia, *Clostridium difficile*, Adenovirus, Rotavirus, and any other viral gastroenteritis that occur in those over 2 years of age are not currently notifiable.</u>

2. <u>Bacterial</u> Food Poisoning (other than salmonella and dysentery) ~ <u>All Ages</u>

The diseases occurring at any age classified under this heading, are:

- Campylobacter
- Listeria
- *E. coli*
- *S. aureus*
- Bacillus species (e.g. *B. cereus*)
- Clostridium species (e.g. *C. perfringens, C. botulinum*)
- Yersinia species (e.g. *Y. enterocolitica*)
- Bacterial food poisoning-unspecified

3. Bacillary Dysentery

- Shigella species (i.e. *S. boydii, S. dysenteriae, S. flexneri, S. sonnei*)

Appendix 6: List of organisations and individuals who provided submissions to the Sub-Committee

First Consultation Document

Dr Declan Bedford, Chairman Public Health Doctors Committee, Irish Medical Organisation

Dr Rosaleen Corcoran, Director of Public Health, North Eastern Health Board

Professor Martin Cormican, Department of Bacteriology, National University of Ireland, and Department of Medical Microbiology, UCH, Galway

Ms Eilish Creamer Infection Control Nurses Association

Mr Seamus Dooley, Laboratory Manager, National Virus Reference Laboratory

Dr Margaret Fitzgerald, Chief Specialist, Epidemiology, Food Safety Authority of Ireland

Dr Nancy Gallagher, President, Irish Society of Travel Medicine

Dr Roisin Healy, Consultant, Accident and Emergency, Our Lady's Hospital Crumlin

Dr Mary Hynes, Director of Public Health , Western Health Board, on behalf of Dr Sheelah Ryan, CEO, WHB

Dr Phil Jennings, Specialist in Public Health Medicine, Midland Health Board

Dr Mai Mannix, Specialist in Public Health Medicine, Mid Western Health Board

Dr Declan McKeown, Specialist in Public Health Medicine, Western Health Board

Dr Fiona Mulcahy, GU physician, St James's Hospital, Dublin

Dr Dan Murphy, Director of Occupational Health Services, Health and Safety Authority

Mr Fionnan O'Coinneagain, Chief Executive, Irish College of General Practitioners

Dr Joan O'Donnell, Honorary Secretary, Research Committee, Faculty of Public Health Medicine, Royal College of Physicians of Ireland

Dr Brian O'Herlihy, Director of Public Health, Eastern Regional Health Authority

Professor Kevin O'Malley, Registrar/Chief Executive, Royal College of Surgeons

Dr Orlaith O'Reilly, Director of Public Health, South Eastern Health Board

Dr Niamh O'Sullivan, Honorary Secretary, Irish Society of Clinical Microbiologists

Dr Patricia Prendiville, President, Irish Society Public Health Medicine

Dr Thomas Quigley, on behalf of Mr Martin Higgins, Chief Executive, Food Safety Promotion Board

Dr Fiona Ryan, Specialist in Public Health Medicine, Southern Health Board

Dr Gerardine Sayers, Specialist in Public Health Medicine, Eastern Regional Health Authority

Senior Area Medical Officers of the Eastern Regional Health Authority

Specialists in Public Health Medicine, with responsibility for communicable diseases

Dr Emer Shelley, Specialist in Public Health Medicine, Eastern Regional Health Authority

Dr Delia Skan, Honorary Secretary, Faculty of Occupational Medicine
Dr Edmond Smyth, Consultant Microbiologist, Beaumont Hospital
Dr Patrick Wall, Chief Executive, Food Safety Authority of Ireland

Second Consultation Document
Dr Joe Barry, Dean, Faculty of Public Health Medicine, RCPI
Dr Rosaleen Corcoran, Director of Public Health, North Eastern Health Board
Dr Bartley Cryan, Consultant Microbiologist, Cork University Hospital
Dr Margaret Fitzgerald, Chief Specialist, Epidemiology, Food Safety Authority of Ireland
Dr Derek Freedman, GU Physician, Dublin
Dr Rosemary Hone, Consultant Microbiologist, Mater Misericordiae Hospital Dublin
Professor Hilary Humphries, Faculty of Pathology, RCPI
Dr Mary Kieran, Senior Area Medical Officer, SHB
Dr Brian O'Herlihy, Director of Public Health, ERHA
Dr Maire O'Connor, Specialist in Public Health Medicine, SEHB
Professor Kevin O'Malley, Registrar/Chief Executive, RCSI
Dr Orlaith O'Reilly, Director of Public Health, SEHB
Dr Margaret O'Sullivan, Specialist in Public Health Medicine, SHB
Dr Patricia Prendiville, President, ISPHM
Dr Thomas Quigley, Chief Consultant in Food Safety, FSPB
Dr Fiona Ryan, Specialist in Public Health Medicine, SHB
Senior Area Medical Officers in the ERHA
Specialists in Pubic Health Medicine Communicable Disease Group

Appendix 7: Proposed amendments to current notifiable disease list

Current notifiable diseases	Remain notifiable Yes/No	Amend	Required for EU surveillance
Acute anterior poliomyelitis	Yes		Yes
Acute encephalitis	Yes		No
Acute viral meningitis	Yes		No
Anthrax	Yes		No
Bacillary Dysentery	Yes		Yes
Bacterial Meningitis (including meningococcal septicaemia)	Yes		Yes
Brucellosis	Yes		Yes
Cholera	Yes		Yes
Diphtheria	Yes		Yes
Creutzfeldt Jakob Disease (1996)	Yes		No
v Creutzfeldt Jakob Disease (1996)	Yes		Yes, as TSE variant
Food Poisoning (bacterial other than salmonella)	**No**	**Notify individual cause**	**No**
Gastro enteritis (when contracted by children under 2 years)	**No**	**All infectious gastroenteritis**	**No**
Infectious mononucleosis	**No**		**No**
Infectious parotitis (mumps) (1988)	Yes		Yes
Influenzal pneumonia	**No**	**As Influenza**	**Yes, as influenza**
Legionnaires disease	Yes		Yes
Leptospirosis	Yes		Yes
Malaria	Yes		Yes
Measles	Yes		Yes
Ornithosis	**No**		**No**
Plague	Yes		Yes
Rabies	Yes		Yes
Rubella	Yes		Yes
Salmonellosis (other than typhoid or paratyphoid)	Yes		Yes
Smallpox	**No**		**No**
Sexually transmitted diseases			
Syphilis	Yes		Yes
Gonorrhoea	Yes		Yes
Chancroid	Yes		No
Lymphogranuloma venereum	Yes		No
Granuloma inguinale	Yes		No
Non specific urethritis	Yes**		No
Chlamydia trachomatis	Yes		Yes
Trichomoniasis	Yes		No
Candidiasis	**No**		**No**
Pediculosis pubis	**No**		**No**
Ano-genital warts	Yes		No
Molluscum contagiosum	**No**		**No**
Genital herpes simplex	Yes		No
Tetanus	Yes		No
Tuberculosis	Yes		Yes
Typhoid and paratyphoid	Yes		
Typhus	Yes		No
Viral haemorrhagic diseases (including lassa fever and marburg disease)	Yes		Yes
Viral hepatitis		Amend to include hepatitis C	Yes Hepatitis C
Type A	Yes		Yes
Type B	Yes		Yes
Type unspecified	Yes		No
Whooping cough	Yes		Yes
Yellow fever	Yes		No

Appendix 8 pt 1: Proposed list of notifiable diseases and organisms by main notifier type and priority status (requiring urgent pubic health action).

All diseases that form part of an outbreak should be considered as priority diseases/organisms and notified immediately to MOH

** = Blood, CSF or other sterile site

		Notifier				
Disease	**Organism**	**GP**	**Clinician**	**Laboratory**	**Public health**	**Priority**
Acute anterior poliomyelitis	Polio virus		Y	Y	Y	**Y**
Acute Infectious gastroenteritis		Y	Y		Y	**Y**
Acute flaccid paralysis			Y		Y	N
AIDS	HIV		Y		Y	N
Ano-genital warts		Y	Y		Y	N
Anthrax	Bacillus anthracis		Y	Y	Y	**Y**
Bacterial meningitis		Y	Y		Y	**Y**
Botulism	Clostridium botulinum		Y	Y	Y	**Y**
Brucellosis	Brucella sp		Y	Y	Y	N
Campylobacteriosis	Campylobacter sp			Y	Y	**Y**
Chancroid	Haemophilus ducreyi	Y	Y	Y	Y	N
Chickenpox		Y	Y		Y	N
Cholera	Vibrio cholerae		Y	Y	Y	**Y**
Congenital herpes			Y		Y	N
Congenital toxoplasmosis	Toxoplasma gondii		Y	Y	Y	N
Congential rubella			Y		Y	N
Creutzfeldt Jakob disease	BY PATHOLOGIST		Y	Y	Y	N
Diphtheria	Cornyebacterium diphtheriae		Y	Y	Y	**Y**
Genital herpes simplex		Y	Y		Y	N
Gonorrhoea	Neisseria gonorrhoeae	Y	Y	Y	Y	N
Granuloma inguinale		Y	Y		Y	N
HIV	HIV		Y	Y	Y	N
Influenza	Influenza A and B	Y	Y	Y	Y	**Y**
Invasive Hib disease	Haemophilus influenzae **		Y	Y	Y	**Y**
Invasive pneumococcal disease	Streptococcus pneumoniae**		Y	Y	Y	N
Legionnaires disease	Legionella sp		Y	Y	Y	**Y**
Leprosy	Mycobacterium leprae		Y	Y	Y	N
Leptospirosis	Leptospira		Y	Y	Y	**Y**
Lyme disease	Borrelia burgdorferii			Y		N
Lymphogranuloma venereum	Chlamydia trachomatis	Y	Y	Y	Y	N
Malaria	Plasmodium falciparum, vivax, ovale, malariae		Y	Y	Y	N
Measles	Measles virus	Y	Y	Y	Y	N
Meningococcal disease	Neisseria meningitidis	Y	Y	Y	Y	**Y**
Mumps	Mumps virus	Y	Y	Y	Y	N
Neonatal CMV infection			Y		Y	N
Variant Creutzfeldt JaKob disease	BY PATHOLOGIST		Y	Y	Y	N
Non specific urethritis		Y	Y		Y	N
Paratyphoid	Salmonella paratyphi		Y	Y	Y	**Y**

Appendix 8 pt 2: Proposed list of notifiable diseases and organisms by main notifier type and priority status (requiring urgent pubic health action).

All diseases that form part of an outbreak should be considered as priority diseases/organisms and notified immediately to MOH

** = Blood, CSF or other sterile site

Disease	Organism	GP	Clinician	Laboratory	Public Health	Priority
Pertussis	Bordetella pertussis	Y	Y	Y	Y	N
Plague	Yersinia pestis		Y	Y	Y	**Y**
Rabies	Rabies virus		Y	Y	Y	**Y**
Rubella	Rubella virus	Y	Y	Y	Y	N
Syphilis	Treponema pallidum	Y	Y	Y	Y	N
Tetanus	Clostridium tetani	Y	Y		Y	N
Toxoplasmosis	Toxoplasma gondii		Y	Y	Y	N
Trichomonas vaginalis	Trichomonas vaginalis	Y	Y	Y	Y	N
Tuberculosis	Mycobacterium tuberculosis complex	Y	Y	Y	Y	**Y**
Typhoid	Salmonella typhi		Y	Y	Y	**Y**
Typhus	Rickettzia prowazekii		Y	Y	Y	**Y**
Urethritis Non specific		Y	Y		Y	N
Viral encephalitis				Y	Y	N
Viral haemorrhagic fevers	Lassa, Marburg, Ebola, Crimean-Congo		Y	Y	Y	**Y**
Yellow fever	Yellow fever virus		Y	Y	Y	N
	Adenovirus			Y		N
	Bacillus cereus			Y		**Y**
	Borrelia burgdorferi			Y		N
	Campylobacter sp			Y		**Y**
	Chlamydia trachomatis			Y		N
	Chlamydia pneumoniae			Y		N
	Clostridium difficile			Y		N
	Clostridium novyii			Y		**Y**
	Clostridium perfringens			Y		**Y**
	Cryptosporidium parvum			Y		**Y**
	Delta hepatitis			Y		N
	E coli of serogroup known to be toxin producing			Y		**Y**
	Echinococcosis			Y		N
	Giardia lamblia			Y		N
	Hepatitis A	Y		Y		**Y**
	Hepatitis B			Y		**Y**
	Hepatitis C			Y		N
	Hepatitis E			Y		N
	Other viral hepatitis			Y		N
	Listeria monocytogenes			Y		**Y**
	Mycoplasma pneumoniae			Y		N
	MRSA**			Y		
	Multiply resistant gram negative bacilli**					
	Norwalk virus			Y		N
	Nosocomial infections					

Appendix 8 pt 3: Proposed list of notifiable diseases and organisms by main notifier type and priority status (requiring urgent pubic health action).

All diseases that form part of an outbreak should be considered as priority diseases/organisms
** = Blood, CSF or other sterile site

Disease	Organism	GP	Clinician	Laboratory	Public Health	Priority
	Parvovirus B19			Y		N
	Penicillin resistant pneumococci**			Y		N
	Respiratory syncitial virus			Y		N
	Rotavirus			Y		N
	Salmonella enterica sp			Y		N
	Schistosomiasis			Y		N
	Shigella sp			Y		N
	Small round structured virus			Y		**Y**
	Staphylococcus enterotoxin			Y		**Y**
	Streptococcus (invasive) Group A			Y		N
	Streptococcus (invasive) Group B			Y		N
	Trichinella			Y		N
	Vancomycin resistant enterococci**			Y		N
	Vibrio parahaemolyticus			Y		N
	Yersinia pseudo tuberculosis			Y		N
	Yersinia enterocolitica			Y		N

In addition to this list, apparently clinically significant blood, CSF isolates of:

- coagulase negative staphylococcus
- corynebacterium species
- bacillus species

should be notifiable.