Chapter 5 Communicable Diseases

Introduction

Communicable diseases continue to have a significant impact on the health of our population. Table 12 in Appendix 1 details the number of people who were notified as suffering from various infections over the last 15 years. It is encouraging to see that the number of cases of meningitis has fallen. This is undoubtedly due to the introduction of vaccines against Meningococcal Group C (Men C) and haemophilus influenza (Hib) infections. The number of people with other infections such as whooping cough and measles would be much higher were it not for the comprehensive vaccination programmes currently in place. There are however many infections for which a vaccine is not available, however, their spread can be minimised by other preventive measures. For example, cases of food poisoning can be reduced by adherence to guidance on storage and cooking of food as well as proper kitchen hygiene and hand washing.

This chapter considers immunisation against influenza and mumps, measles and rubella and newer infections such as hepatitis C.

Influenza Immunisation Campaigns

For the last number of years the DHSSPS has co-ordinated an annual influenza immunisation programme at the start of each winter. The influenza immunisation campaign for 2001/2002 was the most successful to date. The uptake rate in those aged over 65 was 72%, the highest in the UK. This

commendable achievement can be attributed directly to the hard work and efforts of primary care teams, Trusts, Boards and Community Pharmacists involved in delivering the programme. For the 2002/2003 campaign additional effort is being focused on promoting uptake in those aged under 65 years of age with an 'at risk' medical condition. A target of 60% uptake has been set for this group.

WHO SHOULD GET THE FLU VACCINE

- *Everyone aged 65 and over, even if you feel fit and healthy at the moment.*
- *Whatever your age, you should get vaccinated if you have one of the following serious medical conditions:*
  - *A chronic heart or chest condition such as asthma;*
  - *Diabetes;*
  - *Chronic kidney disease;*
  - *Lowered immunity due to illness or treatment such as steroids or cancer therapy;*
  - *Any other serious medical condition – check with your doctor if you are unsure.*
- *Anyone living in a residential or nursing home should be vaccinated because 'flu' can spread rapidly.*

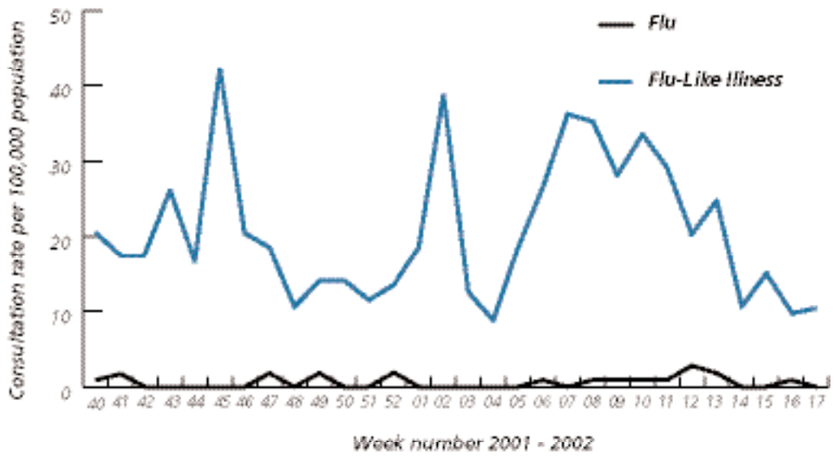
"Catch the vaccine not the flu"

der to provide early warning of a possible outbreak of luenza, levels of flu and flu-like illness are monitored ach winter. This scheme involves collating data provided by a number of GP practices and out-of-hours co-operatives across the province. The main results for 2001/2002 were:

- The level of influenza virus activity in Northern Ireland remained low during 2001/2002. Between September 2001 and May 2002 a total of 17 samples were found to be positive for influenza A.
- A new influenza A virus (H1N2) was isolated in the province in January 2002.
- GP consultation rates for 'flu' remained at low levels during the year. However consultation rates for 'flu-like illness' were higher and more variable, most likely reflecting infection with other respiratory viruses circulating in the community (Figure 5(i)).

Figure 5(i)

GP Consultation Rates for 'Flu and Flu-Like' Illness 2001 - 2002



Source: CDSC(NI)

Changes to Pneumococcal Immunisation Policy during 2002

Pneumococcal infection is the most common cause of pneumonia acquired in the community. It also causes a number of other serious illnesses such as meningitis, ear infections and sinusitis. Although it can affect anyone, it is more common in older people, the very young and those with certain underlying medical conditions.

A vaccine against pneumococcal infection has been available for a number of years and has been offered routinely to those aged two years and over who have a recognised medical condition. In 2002, as a result of new developments and new evidence, the DHSSPS revised its policy on pneumococcal immunisation to include:

1 *Pneumococcal Vaccine recommended for all those aged 65 and over*

In May 2002, the Joint Committee on Vaccination and Immunisation (JCVI), recommended that pneumococcal vaccine be offered to all those aged 65 and over. This has now been implemented in Northern Ireland. As it can be given at the same time as the influenza vaccination it was offered to those aged 65 and over during the 2002-2003 influenza immunisation campaign.

2 *Pneumococcal Vaccination for the Under 2s*

A new pneumococcal vaccine which is effective in the under 2s became available during 2002. It is now recommended that it is offered to all those under the age of 2 with specific medical conditions.

3 *Pneumococcal Vaccine recommended for all those with cochlear implants*

Evidence emerged during 2002 that patients with cochlear implants were potentially at higher risk of pneumococcal meningitis. It is now recommended that vaccination is offered to all patients with cochlear implants.

WHO SHOULD GET THE PNEUMOCOCCAL VACCINE?

- *Everyone aged 65 and over*
- *Whatever your age you should get the pneumococcal vaccine if you have:*
  - *Diabetes;*
  - *Long-term heart or lung problems;*
  - *Long-term liver or kidney problems;*
  - *A weakened immune system;*
  - *An absent spleen;*
  - *A cochlear implant;*
  - *Sickle cell disease.*

Measles, Mumps and Rubella

In Northern Ireland health professionals have worked hard to reassure parents that MMR is the safest and most effective way to protect their children against these three serious infections. The uptake rates here for MMR immunisation remain the highest in the UK at 90%. The recent publicity about the safety of MMR vaccine has resulted in a number of parents not having their children immunised. Consequently, serious outbreaks of measles have occurred in parts of England and Ireland where uptake of MMR vaccine was low.

There is no evidence to support a link between MMR a autism. In contrast there is mounting evidence to conf that MMR is a safe vaccine with no link to autistic spec disorders. The most recent evidence is from a large cohort study involving over 500,000 Danish children, 82% of whom had received their MMR vaccine. Those who had received MMR vaccine did not demonstrate any increased risk of autism compared with those who had not received MMR.

Between 1970-79 seventeen children in Northern Ireland died from measles.

MMR remains the best way to protect children against measles, mumps and rubella. It is important that all children are fully protected with two doses of the vaccine.

Ongoing Syphilis Outbreak

The outbreak of infectious syphilis, reported in last year's Annual Report, has continued during 2002. The ongoing spread of infectious syphilis in Northern Ireland is a cause for concern. By the end of December 2002, a total of 47 cases of infectious syphilis had been reported since July 2000. Almost all cases were in men, and of these, the majority were in men who have sex with men. Cases were aged between 17 and 64, with the majority being in their mid thirties. Some cases were linked to the ongoing outbreak of infectious syphilis in Dublin. At the time of diagnosis of their syphilis infection, almost half the cases also had at least one other sexually transmitted infection (STI), such as gonorrhoea. Seven of these cases were also HIV positive.

A number of actions have been taken aimed at raising public awareness and limiting further spread of this serious infection. They include issuing press releases, TV and radio interviews, articles and advertising in 'young peoples' magazines and the development of new publicity material by the Health Promotion Agency.

The increase in syphilis infections has been accompanied by an increase in all STIs. This confirms that some people in Northern Ireland continue to engage in risky sexual behaviour. Addressing this issue is a challenge and will require a collaborative approach between a number of professionals and agencies.

Hepatitis C – a Public Health Challenge

Hepatitis C is a viral infection which affects the liver. Most people do not develop any symptoms when they first become infected. However, up to 80% will go on to develop chronic hepatitis (inflammation of the liver). Cirrhosis (scarring of the liver) develops in about 10% to 20% of persons with chronic infection, and liver cancer develops in 1% to 5% over a period of 20 to 30 years.

To date in Northern Ireland almost 700 people have been diagnosed with Hepatitis C. The known prevalence of Hepatitis C infection in the UK is estimated to be low in comparison to other countries, however prevalence is high among injecting drug users. Hepatitis C infection is a public health issue with a global impact. The World Health Organisation estimates that up to 170 million people worldwide are chronically infected with Hepatitis C virus (HCV) and that between 3 to 4 million people are newly infected each year.

HOW DO YOU GET HEPATITIS C?

Like Hepatitis B, the Hepatitis C virus is found in blood and some other body fluids. Injecting drug use is the most common way of spreading Hepatitis C. In the past a number of people have also contracted it from a blood transfusion or blood products. (All blood used in Northern Ireland has been screened for HCV from 1991.)

Less common routes for transmission include: unprotected sex with someone who has HCV, infected mother to baby and as a result of tattooing, ear piercing, body piercing or acupuncture if the equipment is not properly sterilised before use.

There is currently no vaccine available to prevent Hepatitis C. Screening of all blood and organ donors for HCV infection

already takes place. The greatest impact on reducing the risk of HCV transmission is likely to be derived from raising public and professional awareness about the methods of acquiring infection and reducing in high-risk behaviours (e.g. injecting drug use).

There is a reasonably effective specialist treatment available for Hepatitis C, it is successful in clearing the virus in up to 40% of cases. New and more effective treatments are also becoming available. All patients with HCV should be assessed to determine the most appropriate management.

Conclusion

Due to the development of vaccines and antibiotics many communicable diseases are not the public health hazard they were 50 years ago. Nonetheless one cannot afford to be complacent as new infections such as Hepatitis C and HIV continue to emerge. Also, as a result of travel, infections such as malaria and legionnaires' disease are now becoming more common.

Chapter 6 Promoting Quality and Safety in our Services

Introduction

Public expectation of, and interest in, health and social services is now higher than at any time in the past. Patients have a right to expect the best possible care and treatment from the health service and in the vast majority of cases, they get it.

Quality in health and social care services is everybody's business. A commitment to improving services to the public requires a cultural change within management and the organisation. It also requires a partnership approach between the Health and Social Services, service users, private sector and voluntary organisations.

Best Practice Best Care

In April 2001, the DHSSPS issued for consultation the Report "Best Practice Best Care". It set out proposals for new ways to ensure the public receive a consistently high quality service. The framework had three interlinking strands; setting of standards, strengthening accountability for the delivery of these standards at local level and improving monitoring of performance and regulation.

In June 2002, the new arrangements for quality improvement were announced. They include:

- A system of clinical and social care governance;

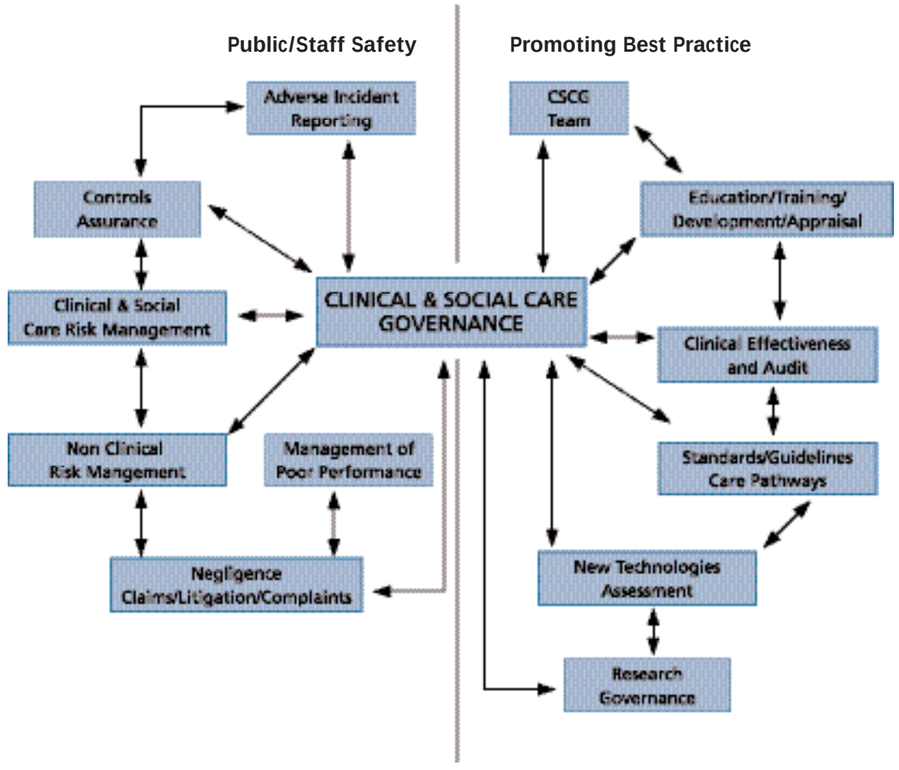
- A statutory duty of quality on HPSS for services provided;
- Formal links with the National Institute for Clinical Excellence and Social Care Institute for Excellence;
- A Departmental Standards and Guidelines Unit;
- Establishment of Health and Social Services Regulation and Improvement Authority to regulate and monitor the HPSS and other organisations;
- Extension of regulation to cover a wider range of social care services;
- Development of Performance Management Frameworks;
- Development of Service Development Frameworks.

Clinical and Social Care Governance

Through clinical and social care governance an organisation is held responsible for the quality of care which it provides. It is an umbrella term, which encompasses both quality improvement and accountability. Other important components of a clinical and social care governance framework are evidence based practice, clinical audit, risk management and continuing professional development (Figure 6(i)). Bringing all of these together ensures a co-ordinated approach to the provision of high quality health care. It also offers reassurance to the public that checks are in place to make sure that they receive the highest standards of care and treatment.

Figure 6(i)

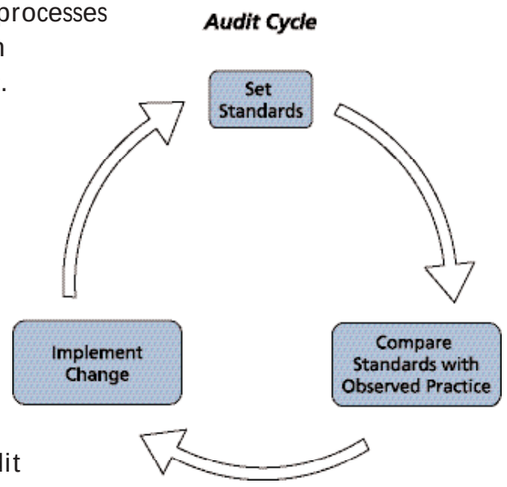
Key Components of Clinical and Social Care Governance



Clinical and social care governance arrangements should encompass all clinical services whether provided in hospital, community or primary care settings. They should also address uniprofessional and multiprofessional issues and support health and social care professionals in delivering quality services. Clinical governance should aim to identify and build on good practice, assess and minimise risk of untoward events and should disseminate findings of lessons learnt following any investigation.

Audit

Clinical Audit is the 'process of reviewing the delivery of care to identify deficiencies so that they may be remedied'. It can identify gaps in service provision but is also a useful mechanism for building evidence based practice. Structures and processes for audit have long been embedded in our service. However, in future, through the quality framework, there will be an increasing emphasis on audit against standards of care which have been set down in Regulations and in Service Development Frameworks. Clinical audit is a feature of services in both primary and secondary care.

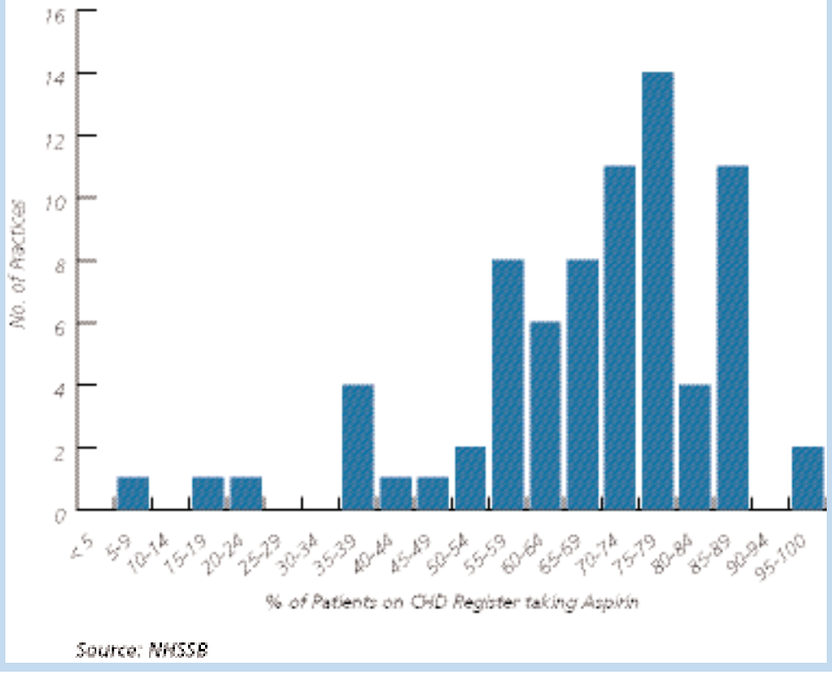


AUDIT OF CORONARY HEART DISEASE

'Fresh Start' is an example of a quality initiative aimed at improving prevention of coronary heart disease in primary care. It was carried out in 2001/02 in the Northern Health and Social Services Board. When the standards for risk factors for coronary heart disease were agreed, data on blood pressure control, smoking status, body mass index, cholesterol, physical activity and use of aspirin were collected for all patients with coronary heart disease who were on practice registers. Figure 6 (ii) shows that the majority of patients, where it was considered appropriate, were taking daily aspirin. However findings in relation to blood pressure control, smoking, obesity and physical exercise indicated that further action was needed at individual patient level to improve control of these risk factors in this 'high-risk' population.

Figure 6 (ii)

Percentage of Patients on a Coronary Heart Disease Register who were taking Asprin



Source: NHSSB

Risk Management

Managing risk is another important way in which the quality of care can be improved. Through it, exposure to events which potentially can have serious consequences for patients and staff can be reduced. It includes both clinical and non clinical situations. Clinical risk management involves the use of:

- Policies, procedures and clinical guidelines;
- Clinical indicators;
- Audit;
- Review of patient complaints and health records;
- Review of claims data;
- Survey reports;
- Strategies for communication and dissemination of information.

Non clinical risk management includes such areas as prevention of accidents or violence to staff and the public, fire safety, safety of devices and food hygiene.

CONSENT TO EXAMINATION OR TREATMENT

New guidance on consent has been developed by the DHSSPS. It aims to:

- *Promote patient-centred consent to ensure that the process of giving consent is focused on the rights of individuals and their families;*
- *Ensure consent procedures reflect patients' needs;*
- *Improve the health and social care professional's knowledge of the law regarding consent;*
- *Develop documentation that supports good practice in the health and personal social services.*

Conclusion

The promotion of quality in our health and social services is already happening. However, it is important that the many inter-related strands can be accommodated within a common framework and within integrated working. Although many components will take time to develop fully, the emphasis on quality will be an on-going one so that the public and staff derive maximum benefit from the services that are both giving and receiving.

Chapter 7 Difficult Decisions in Health Care

Introduction

Modern advances in medical techniques have brought about dramatic improvements in the health and well being of our population. However, the introduction of new treatments is not always straightforward and can pose difficult ethical problems both for the professionals and patients involved. No ethical rule is absolute and ethics is often a matter of weighing the burdens and benefits. Often there is no easy answer. This section explores several areas of modern medicine which have been under the spotlight in recent times.

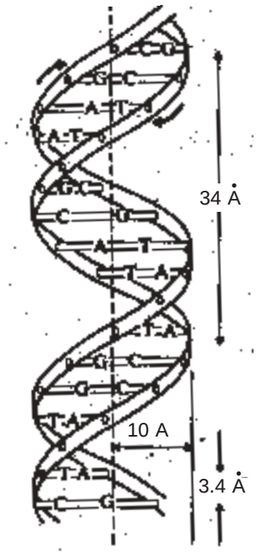
Genetics

Advances in genetics have received much publicity. In June 2000 the Human Genome Project announced the draft sequence of the human genome. This was heralded as one of the greatest medical advances of all time. Work is currently underway to identify the 30,000 genes in human DNA. This work has already had a considerable impact on the identification of disease genes and is radically increasing our understanding of normal development and disease processes. It is also opening up possibilities for new methods of preventing, diagnosing and treating currently incurable diseases.

THE HUMAN GENETICS COMMISSION

The Human Genetics Commission, which is made up of scientific and lay members, provides independent advice to government on the ethical, legal and social implications of developments in human genetics. It held an open meeting in Belfast in September 2002, to which the public were invited. It has recently considered the following areas:

- *Genetics and Employment;*
- *Genetics and Insurance;*
- *Human Genetic Databases;*
- *Pre-Implantation Genetic Diagnosis.*



Double Helix (DNA)

Genetic testing is a particularly complex area. It poses important confidentiality issues. Results of a genetic test may have implications for other family members. Although the patient has a right of confidentiality they should be encouraged to share information, which is relevant to other family members. For example, if an individual possesses the gene for familial breast cancer, they should be encouraged to tell other family members so that they can also be tested and if necessary put on a surveillance programme to monitor for breast cancer.

There are understandable public concerns that genetic testing could lead to new forms of discrimination, for example should employers and insurers have access to genetic information? This is an important issue particularly as many tests can only indicate that an individual has a predisposition to develop a condition but not a certainty that they will. At present insurance companies are not allowed to ask for genetic testing but this situation may change in the future.

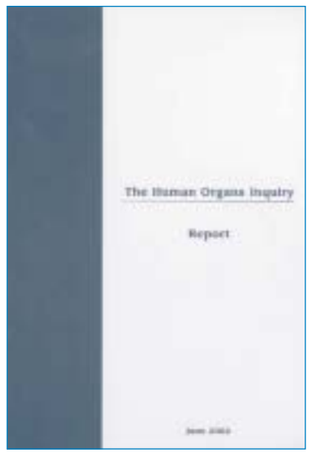
There are also concerns about medical technologies being used for non-medical reasons e.g. should couples be allowed to choose the sex of their child in order to 'balance' their families according to their preferences?

Retention of Human Organs and Tissues

During the Inquiry into Paediatric Cardiac Surgery at Bristol Royal Infirmary, the public became aware that many hospitals in the United Kingdom held organs or tissue samples of some children. This led directly to the Alder Hey Inquiry.

In March 2000 the Chief Medical Officer in Northern Ireland issued new guidance to hospitals here. The guidance sought to ensure that, when relatives were giving consent to post-mortem they understood the necessity to remove organs and to retain sections, or sometimes complete organs, for examination. The Chief Medical Officer also initiated an investigation into the number of organs retained in hospitals in Northern Ireland. The findings of this investigation were published in May 2001.

In March 2001 the Human Organs Inquiry was set up in Northern Ireland to examine what had happened since the Human Tissue Act (NI) 1962 was introduced in terms of post-mortems, and how human tissue had been handled. It was also asked to consider how improvements to post-mortem practice and procedure already in place could be built upon. The Report was published in June 2002.



RECOMMENDATIONS ARISING FROM THE HUMAN ORGAN INQUIRY

- New legislation to replace the existing Human Tissue Act;
- A public information campaign, focusing on the importance of post-mortem examination and the handling of organs and tissues;
- Development of new consent forms for post mortems in Northern Ireland;
- Enhanced staff training for hospital staff who are responding to patient grief and bereavement.

It is hoped that implementation of the recommendations will help rebuild public confidence and enhance understanding of the process of postmortem examination. Post mortems are vital in understanding the underlying processes of disease, providing accurate information on the cause of death, and in enabling monitoring of the patterns of certain important diseases. Modern diagnostic tests may provide a lot of information but they do not always provide all the answers. For the bereaved family the post mortem provides information and explanations not only on the illness and cause of death but may also reveal co-existing conditions including inherited problems whose early recognition may be of benefit to other family members.

Organ Donation

It is possible for an organ donor to donate a heart, lungs, two kidneys, pancreas, liver and small bowel and restore the sight of two others through donation of their corneas, thus bringing a significant improvement in quality of life and life expectancy to many people. The United Kingdom Transplant Authority oversees a system whereby organs are transplanted into patients whose blood and tissue type most closely match those of the donor. This reduces the potential risk of the organ being rejected but it also means that organs donated by families in Northern Ireland will not necessarily be transplanted into local people.

Waiting lists for organ donation in the UK have grown This reflects the disparity between the limited number of organs available for transplant and the increasing number of persons living with kidney failure. Scientific advances have also increased the number of individuals who could benefit from a kidney transplant.

Most organ donations come from people who have died on a ventilator in an Intensive Care Unit, often as a result of a serious brain injury caused by a road traffic accident or a brain haemorrhage. If there is no prospect of survival and death has been confirmed by brain stem tests, consideration is given to whether the patient could possibly donate organs before approachi relatives for consent.

Relatives often feel that donating the organs of their loved ones is a tangible way of helping other people. It is made somewhat easier for the family at this harrowing time if the donor has previously discussed organ donation with them or holds a donor card. Medical and nursing staff can find approaching relatives difficult but their task can be somewhat easier if they know that the patient was on the Organ Donor Register.

When relatives agree to donate organs from their loved one, the Transplant Co-ordinator assists the hospital with the complex arrangements that are required. She can also provide information to hospital staff on suitability of the donor and will also talk to the relatives. Relatives often say that knowing that the organs could be used helps them come to terms with their tragic loss.

Organ donation information line 0845 60604000

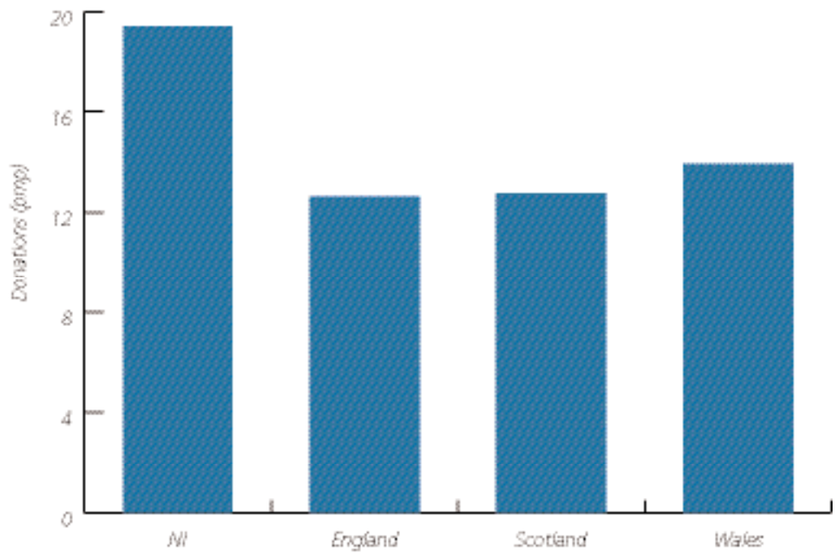
LIVING DONOR TRANSPLANTS

For many years transplantation of kidneys, and in some cases livers, has taken place between family members. This is particularly successful where family members share a common tissue type. An increasing number of kidney transplants from live donors are being carried out in Northern Ireland. There were 13 in 2000-2001. Very occasionally an unrelated living donor donates a kidney. The Unrelated Live Transplant Authority oversees such donations.

There had been concerns that the publicity attracted by the Alder Hey and Bristol Inquiries would damage the Organ Donation Scheme in Northern Ireland. However, over the last few years the organ donation rate here has increased and in 2001 Northern Ireland had the highest rate of organ donation (per million population) in the UK (Figure 7(i)).

Figure 7 (i)

Organ Donation Rates in UK Countries 2001



Source: UK Transplant Authority

Ethical Issues in Fertility Treatment

Couples who experience difficulties conceiving a child now have access to a range of treatments that can overcome their subfertility. In-vitro fertilisation (IVF), first introduced in the 1970s, represented a major advance. In IVF, fertilisation takes place outside the body and then a number of the embryos created are subsequently transferred into the woman's womb. IVF is now a well established and accepted form of treatment and has permitted many couples to have a child that otherwise would not have been possible. It is however subject to controversy.

Recent media publicity has focused on a couple who, in the course of treatment, had embryos frozen. Following a break-up of their relationship, a legal battle has ensued over whether the woman can have an embryo implanted in her womb without the consent of her ex-partner. Normally the consent of both partners is required before a decision on embryo use or disposal can be agreed, but are there circumstances in which one partner can have that responsibility? What are the legal rights and/or responsibilities of the other partner if the fate of an embryo is decided without their approval? The case currently going through the courts raises a number of ethical and social issues and no doubt future cases will highlight other difficult decisions.

Another controversial issue focuses on who should have access to treatments such as IVF. When a child can only be conceived following medical intervention, there is a responsibility on those providing treatment to make a decision about the suitability of couples for treatment. This, for example, may result in older couples, in their 40s, being denied treatment on the basis that it is unlikely to be effective. Fertility experts in Europe have successfully employed techniques to allow women in their 50s to have a child. This has raised questions about the merits and problems of having a child later in life than nature intended. All licensed fertility centres must consider the 'welfare of the child' before offering couples treatments such as IVF.

Conclusion

These examples highlight some of the highly complex issues and decisions which healthcare providers and the public have to face. In time some of these issues may be resolved but new ones will almost certainly evolve. The public must engage fully in the debate and it is incumbent upon those charged with organising and delivering health care here that the necessary mechanisms exist to allow this to happen.

Chapter 8 New and Emerging Health Threats

Introduction

Over the years there have been threats to the health of the public but also advances which have resulted in significant improvement in it. In the first half of the 20th Century infectious diseases were a major public health hazard. However their incidence has decreased dramatically as a result of improved social and environmental factors and the development of vaccines and antibiotics. In the second half, cancer and heart disease became major threats to health. Although they are both major causes of death and ill health in Northern Ireland, there have been major developments in their prevention, diagnosis and treatment. Now at the start of the 21st Century yet more threats to the public health are emerging. In this chapter bioterrorism and variant CJD, and measures to minimise their impact on the public's health, are discussed.

Deliberate Chemical and Biological Attacks

Safeguarding the public's health and safety took on a new urgency after the attacks in America on 11 September 2001 and the deliberate dispersal of anthrax through the US postal system in October 2001. In Northern Ireland, more than sixty suspect parcels and letters were examined for the presence of anthrax: all were negative but the numerous hoaxes diverted the emergency services away from essential and life-saving work.

In the aftermath of these events, the DHSSPS and the emergency services began a process to strengthen the response to chemical and biological terrorist attacks. These measures included obtaining supplies of antidotes to various chemicals, as well as vaccines and antibiotics for use in some types of bio-terrorist attacks and emergency equipment to assist with decontamination and respiratory support of victims. New personal protective equipment has been issued to A & E departments and the ambulance service. The Health Service and emergency services already had plans for response to major incidents. These have been updated and expanded to cover the new and emerging threats. Additional training programmes have been put in place and test exercises have been held.

New protective equipment for staff

Bioterrorism

Both naturally occurring infectious diseases and deliberate acts of bioterrorism pose threats to public health. Historically, major infectious disease outbreaks like smallpox and influenza have killed far more people than war. Preventing major disease outbreaks poses as great a challenge as ever before but recent events highlight the threat of bioterrorism. In the light of this, plans against any deliberate release of biological agents, including smallpox, have been strengthened.

The last known naturally occurring case of smallpox was in 1980 when the disease was finally eradicated. Since then, the only known stocks of the virus have been kept in highly secure World Health Organisation laboratories in the United States and Russia. Routine vaccination ceased in the Province more than 25 years ago. There is no specific threat of smallpox to Northern Ireland or the United Kingdom generally.

In December 2002 an announcement was made by Government that in each country a small group of healthcare workers would be immunised against smallpox. This would allow key healthcare staff to respond to a suspected case of smallpox without immediately putting themselves at risk. Northern Ireland will also have supplies of the smallpox vaccine available to deal effectively with any threat. Planning will allow vaccination of increasing numbers of healthcare staff and members of the public depending on the seriousness of the situation.

Child with Smallpox - Northern Ireland (circa 1900)

Emergency Medical Assistance and Rescue Team - EMART

The DHSSPS has been examining ways of further strengthening the health response to chemical or biological incidents as well as more conventional disasters where large numbers of casualties would require assistance. Last year a small number of representatives from the emergency services briefly visited the United States to learn about the most innovative approaches to disaster management. Following that trip the DHSSPS is supporting the concept of the development of Northern Ireland's Emergency Medical Assistance & Rescue Team (EMART).

The EMART team comprises a multidisciplinary group of individuals from the health and emergency services who have volunteered to make themselves available to manage casualties at the scene of large scale disasters and to augment the hospital response. They will work in concert with the emergency services to ensure that an appropriate and effective response can be mounted. The EMART team will be specifically trained to deal with emerging threats such as those highlighted in this section.

The recent ricin scare in London in January 2003 tested the local arrangements and brought the health and emergency services together again to co-ordinate any response should it be required locally.

RICIN

- Ricin is a potent protein toxin produced from the castor plant, *Ricinus communis*;
- It is one of the most toxic plant toxins;
- Poisoning can occur following ingestion, inhalation or injection of ricin;
- The whole of the castor plant is poisonous but the toxin reaches its highest levels in the beans;
- Castor oil is produced in large quantities around the world for lubrication in the motor industry;
- There is no available antidote or vaccine;
- Ricin can get into the body by inhaling contaminated air; by injection, or via food and water.

Transmission of Creutzfeld-Jakob Disease

The emergence of variant CJD (vCJD) has emphasised the need to take a precautionary approach to minimise any potential there is for transmission. While there is no evidence that any type of CJD can spread from person to person through normal social contact, transmission has occurred between patients undergoing certain treatments, for example, during neurosurgical procedures.

Variant CJD is thought to be caused by an infectious protein known as a prion. It has shown an unusual resistance to normal chemical and physical methods of decontaminating surgical instruments.

Decontamination of Surgical Instruments

Information collected in the UK on patients presenting with vCJD has not shown that patients with a history of surgery are at increased risk. However, it was recognised that careful consideration should be given to the potential problem of transferring this or other infections from patient to patient by the use of surgical instruments. It is well known that the best defence against this type of spread of infection is good general hygiene measures. It was also recognised that particular attention should be given to the way surgical instruments are cleaned and disinfected. An Expert Advisory Committee in the UK advised, in the Autumn 2000, that the Health Service should take particular care in these areas and that where disposable instruments could be used, they should be introduced.

Taking account of this advice, single use tonsillectomy instruments were introduced in the UK during 2001. The number of complications following surgery rose in some areas, although not in Northern Ireland, and as a result it was decided that surgeons could return to using reusable instruments, as long as procedures for decontamination were at the best possible level.

In January 2001 Trusts and Community Providers of Care were asked to review their arrangements for decontamination of reusable surgical instruments and to develop action plans to ensure that best practices were being followed. The Regional Decontamination Working Group, which was established in early 2001, meets on a regular basis to assist in this process.

Conclusion

The emergence of these threats highlights the need for continuing vigilance regarding possible threats to health. Early warning of them helps to ensure that, where possible, preventive measures can be put in place.