# 111th ANNUAL MOH/DPH/CMO REPORT Bailiwick of Guernsey

Special theme:

## *'Pandemic (H1N1) 2009'*

**Report for Year 2009/10**









STATES OF GUERNSEY


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# CONTENTS

# SUMMARY

It is my privilege to welcome you to the 111th Medical Officer of Health Report for the Bailiwick of Guernsey. In this report, I consider the local response to the flu pandemic, obesity in pregnancy, stroke, air pollution, and highlights from work of members of the Bailiwick's Public Health Directorate team.

The year 2009 was notable for the declaration by the World Health Organisation of the first influenza pandemic since 1968. This was a global public health emergency. The issue kept islanders and staff busy from the spring of 2009 into the first quarter of 2010. The pandemic caused less deaths worldwide than previous pandemics, yet there were some deaths in young people and there were difficult judgements to be made in trying to ensure a balanced response that was neither an over or under-reaction to the situation. In Guernsey, we saw peaks of flu-like illness in July and November. Fortunately, there were no local deaths and very few hospital admissions. The outbreak highlighted how well Islanders pulled together in the face of an external threat and local people should be proud of their achievements. After such an event it is important, however, that we look critically not just at what went well, but areas where performance in future could be improved. An example of two areas of some concern are our links to WHO through the UK Government, which also troubled the devolved administrations in the UK and the protection of Sark, which is outside the remit of the HSSD.

Obese women are at increased risk of almost every serious obstetric complication and maternal obesity has now become one of the commonest risk factors in pregnancy. The prevention of obesity is much more than just a clinical issue and turning back the rising tide of obesity on the island will require community-wide action. I am pleased that the Guernsey obesity strategy has been agreed by the States of Deliberation and this will give the island the foundations from which to start to tackle this very serious health and financial problem.

Stroke is a common cause of death and disability in the island. The good news is that there has been some progress in both treating acute stroke and in helping people rehabilitate after a stroke. In particular early "clot-busting" treatment can completely or partially reverse the effects of a stroke in a small proportion of patients. Treatment needs to be given early however, therefore it is important that all members of the public can recognise symptoms and signs of stroke in themselves and others and seek immediate professional assistance. While the island has a dedicated team of people leading on the issue and the service meets many of the national quality standards, there are still a few critical improvements in services required.

We all live in a sea of air. Breathing is essential for life. Clean air is essential for health. While Guernsey has made some progress in this area, there is still a long way to go to consistently and adequately protect people. Guernsey needs to set air quality standards and to develop an air quality strategy. Tobacco smoke remains a major issue.

While there has been improved protection for working people and customers in indoor commercial environments, better controls of indoor and outdoor pollutants are still required. Pollution from the combustion of fossil fuels in vehicles, industrial plant and heating systems is the most significant cause of air pollution in Guernsey and the island's monitoring programme has identified several 'hotspots' that need to be managed effectively to prevent ill health. Tobacco smoke is one of the major pollutants outdoors and while more complicated than indoor pollution to study, it is known that the pollution level outdoors can be as high as that indoors and that this commonly leads to adverse health effects. The pro-smoking lobby remains very strong on the island, but I do not think the right balance has been reached between the right to smoke and the right to breathe unpolluted air. One issue to overcome is attitudes and even in the environment of a hospital some staff and visitors consider, sometimes aggressively, that it is their right to smoke wherever they wish, irrespective of whether or not they are causing problems for third parties.

The last section of the report considers some of the achievements and issues within units directly managed within the Public Health Directorate. In the highly complex field of health and social care worldwide, care quality is known to be a major public health issue. The Patient Safety/Clinical Risk team have now implemented an electronic incident reporting system, which helps the HSSD to classify, monitor and feedback on risks. This system depends on openness, honesty and a supportive management environment. I would like to encourage members of the public who consider they have had a less than optimal experience in local services to report these to staff involved in care and/or through the HSSD incident reporting system, as this feedback is essential to help staff to maintain services of the highest quality. HSSD's ambitious new Electronic Health and Social Care Record System started to be introduced in November 2009 with the long-term aim of replacing medical records with an integrated electronic system that will improve clinical care by allowing clinicians better access to clinical information when and where they need it, unfortunately a range of issues have adversely affected the production of management information in the short-term.

The States Strategic Plan 2009-13 states that "*The purpose of the States is to promote the well-being of the people of Guernsey*". Health is a key contributor towards well-being. Ultimately the combined actions of all residents are crucial to maintain and improve public health and to reduce the risks of ill health. I hope you find this report of interest to you and that it may assist you in any action you plan to take to protect and improve health.

Thank you for reading it.

Dr Stephen Bridgman,

Medical Officer of Health, Director of Public Health, Chief Medical Officer

November 2010

# THE 2009 PANDEMIC INFLUENZA (H1N1) IN GUERNSEY

In 2009, the first flu pandemic was declared since 1968. This section provides a description of the planning process and operational responses, an assessment of local measures taken to contain the disease and its health impact and recommendations for future planning.

## *Guernsey planning for a Pandemic*

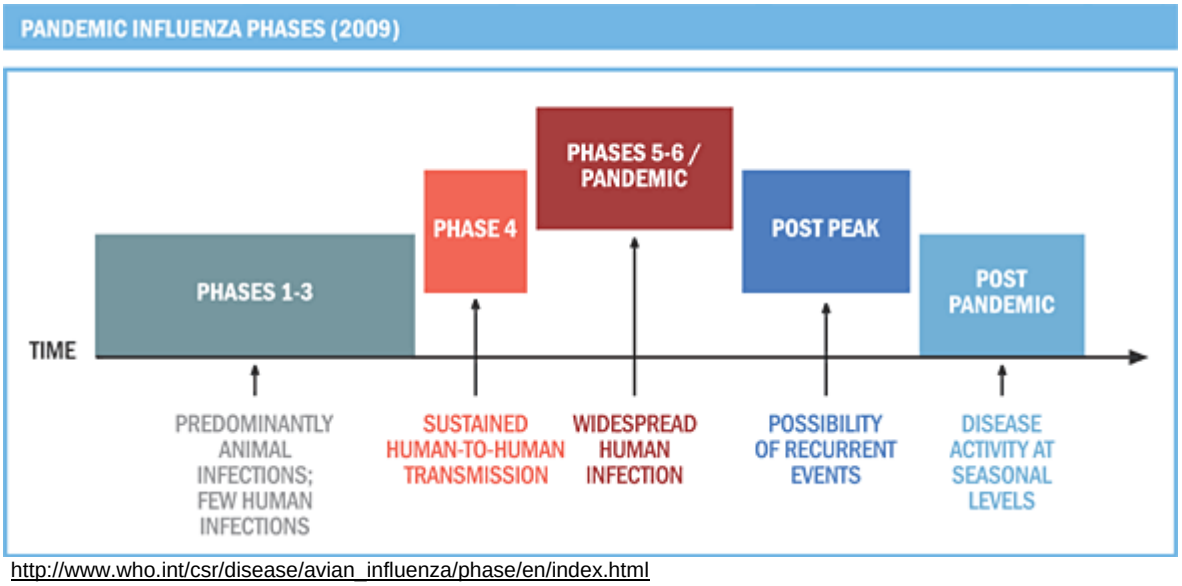
In 2005, influenza experts agreed that another pandemic was likely to happen, but were unable to say when. They considered that specific characteristics of a future pandemic virus could not be predicted, nor how pathogenic a new virus would be and which age groups it would affect. At this time it was considered that even in one of the more conservative scenarios, the world would face up to several 100 million outpatient visits, more than 25 million hospital admissions and several million deaths globally within a very short period.

http://www.who.int/csr/resources/publications/influenza/WHO_CDS_CSR_GIP_2005_4/en/, accessed 20 July 2010.

The World Health Organisation (WHO) recommended a six-phased approach to planning for pandemic flu, which allowed for easy incorporation of new recommendations into existing national preparedness and response plans. Phases 1–3 correlate with preparedness, including capacity development and response planning activities, while Phases 4–6 clearly indicated the need for response and mitigation efforts. The WHO also provided a helpful checklist.

http://www.who.int/csr/resources/publications/influenza/WHO_CDS_CSR_GIP_2005_4/en/ accessed July 20,2010

**Illustration 1:** Pandemic influenza phases




http://www.who.int/csr/disease/avian_influenza/phase/en/index.html

The objectives of planning were to reduce the risk of the transmission of the pandemic virus, to decrease cases, hospital admissions and deaths, to maintain essential services and to reduce the economic and social impact of an influenza pandemic.
http://www.who.int/csr/disease/avian_influenza/phase/en/index.html accessed 20 July,2010

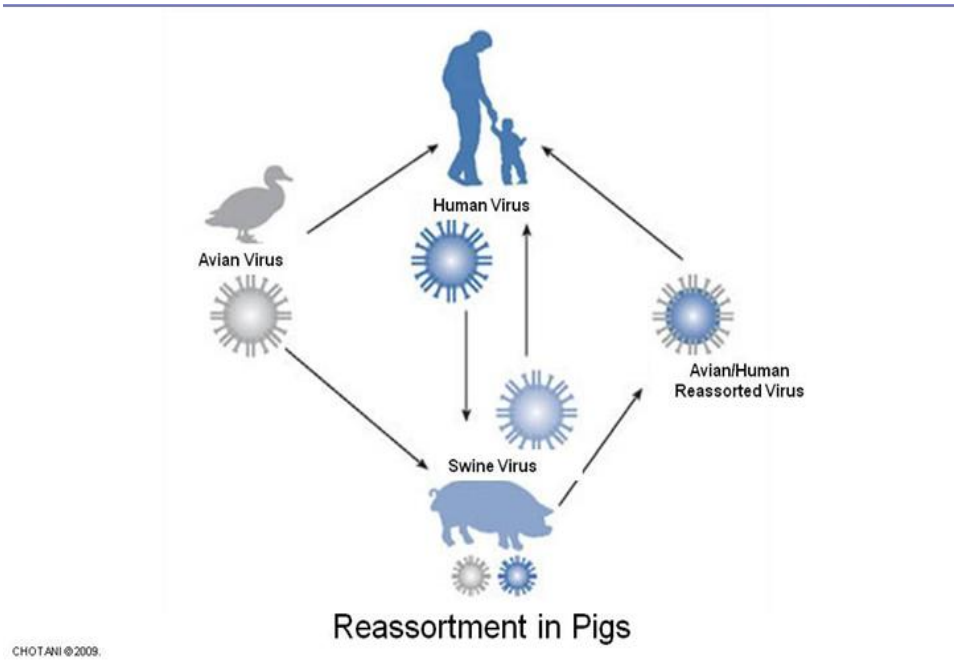
Guernsey's response to the WHO recommendations in preparing for a flu pandemic included:

- An island wide plan for a flu pandemic working closely with the Island's Emergency Planning Officer.
- A detailed HSSD plan for health and social services.
- Encouragement of public and private sector organisations to produce contingency plans in the event of a pandemic.
- Introduction of a GP based flu-like illness surveillance system for detecting the amount of flu-like illness in the community.
- Buying stocks of personal protective equipment (masks, gloves, aprons, gowns and goggles), anti-virals and antibiotics and extra equipment, such as ventilators.
- Production of public information website and leaflets.

## *Background and chronology of the Pandemic*

After the identification of the first cases of pandemic influenza H1N1 2009 in Mexico and the United States, the WHO issued an alert on 24th April 2009. On 27th April, it declared that the world was now at pandemic phase 4 indicating human to human transmission of an influenza virus with pandemic potential had occurred.

**Illustration 2:** Swine Influenza A(H1N1) - transmission through species.



Reports from Mexico suggested widespread illness, with many requiring admission to hospital and many deaths. As a result Guernsey, along with other jurisdictions, prepared to mount a robust public health response.

As the number of cases increased and infections were identified in other countries, the WHO moved to Phase 5 on 29th April and to Phase 6 on 11th June.

The timetable of the development of the pandemic worldwide and in Guernsey is shown below (Table 1). The pandemic was tracked in detail as it spread across the world and this information was transmitted to the general public through the media and directly via Health Agency websites.

**Table 1:** Timeline of events in Pandemic (H1N1) – *(Guernsey events)*

**18th March 2009:** First cases of swine flu in Mexico, with a worrying picture of unusually severe disease, in large numbers of previously healthy people, with medical resources exceeded by demand http://www.nature.com/news/2009/090429/full/news.2009.416.html, accessed July 14, 2009, and Dunning and Openshaw (2009).

***21st April 2009****: The PEH laboratory received 2 swabs for H1N1. One returning from Mexico cruise, the other from New York. Both results were negative.*

**24th April 2009:** WHO announces an outbreak of human cases of A(H1N1) in Mexico and USA.

**27th April 2009:** WHO held its second emergency meeting, in line with International Health Regulations and raised pandemic alert level from 3 to 4, having confirmed human-to-human transmission able to cause 'community-level outbreaks'. "Phase 4 indicates a significant increase in risk of a pandemic but does not necessarily mean that a pandemic is a foregone conclusion." Containment of outbreak not considered feasible and focus should be on mitigation measures. http://www.who.int/mediacentre/news/statements/2009/h1n1_20090427/en/index.html

***27th April 2009:*** *Guernsey's Influenza Pandemic Preparedness Group meet to plan Guernsey's response to a potential pandemic.*

**27th April 2009:** The first two UK cases of A(H1N1) are confirmed in Scotland after travel from Mexico.

***29th April 2009:*** *WHO announces Phase 5 of a Pandemic alert, which meant there was sustained human-to-human transmission of a novel influenza strain of animal origin in one WHO region of the world; exported cases detected in other regions, and a call for Governments to take "stronger preparations" to reduce the impact of the virus.* *http://www.who.int/mediacentre/swineflu_presstranscript_2009_04_30.pdf*

***8th June 2009:*** *Swabbing for pandemic H1N1 in people with flu like symptoms returning from affected areas.*

**11th June 2009:** WHO raises its pandemic alert level to 6, the highest level, defined as a sustained community outbreak in at least one other country in a second WHO region. This is the first flu pandemic since 1968/1969**,** with 30,000 cases in 74 countries.
http://www.who.int/csr/disease/influenza/pandemic_phase_descriptions_and_actions.pdf

http://www.who.int/mediacentre/influenzaAH1N1_presstranscript_20090611.pdf

**15th June 2009:** First UK death attributed to H1N1.

***15th June 2009:*** *First microbiologically confirmed case in Guernsey, acquisition associated with travel to the UK. Phase 2 containment commenced to reduce speed and extent of spread of outbreak. See below.*

***26th June 2009:*** *Second positive case in Guernsey.*

***7th July 2009:*** *Guernsey changes to alert Phase 3 moving from containment to outbreak management.*

**21st October 2009:** Vaccination available in UK.

***4th November 2009:*** *Guernsey received its first doses of vaccine and commenced first vaccination phase for high risk groups.*

***24th November 2009:*** *2nd vaccination phase for children over 6 months and under 5 years old, carers for the elderly and certain disabled persons.*

***2nd January 2010:*** *3rd vaccination phase for front-line support staff such as domestics and porters that were in regular contact with patients.*

***7th January 2010:*** *Vaccination offered to members of the general public.*

***2nd March 2010:*** *Guernsey Influenza Pandemic Expert Group stood down.*

**18th March 2010:** 457 Deaths in UK (Hine 2010) *0 in Guernsey.*

**4th July 2010:** Over 214 countries, overseas territories or communities have had a laboratory confirmed case of H1N1 (pandemic) including over 18,300 deaths, with at least 4879 in the WHO Europe Region.

**12th July 2010:** Nearly every country in the world has had a confirmed case. http://gamapserver.who.int/mapLibrary/Files/Maps/GlobalSubnationalMasterGradcolour_20100704_weekly.png

**10th August 2010:** The H1N1 swine flu pandemic is declared over by the World Health Organization. http://www.who.int/mediacentre/news/statements/2010/h1n1_vpc_20100810/en/index.html

## *Containment phase in Guernsey*

Further international spread of the pandemic was considered to be inevitable, therefore a strategy of containment was adopted in Guernsey to slow the spread of infection and to buy time until a H1N1 vaccine was available. Antiviral drugs were offered to cases and antiviral prophylaxis for close contacts. For both, isolation from the rest of the population was recommended, to reduce the risk of spread of infection to the rest of the population. Suspected symptomatic patients were swabbed, following the UK Health Protection Agency (HPA) guidance. Swabs were sent to Birmingham Heartlands Laboratory of the Health Protection Agency, with whom Guernsey has a service level agreement. This process of off-island diagnosis resulted in a considerable delay in receiving the results, ranging from 2-5 days. It was therefore recognised that once more than a small number of individuals were affected, these measures were unlikely to prevent a local outbreak.

**Photo 1:** Pharmacy Manager with anti-viral drugs

Pharmacy manager, Ms Janine Clarke, with some of the anti-viral drugs that could treat the majority of islanders. (Picture by Steve Sarre, 0763217).

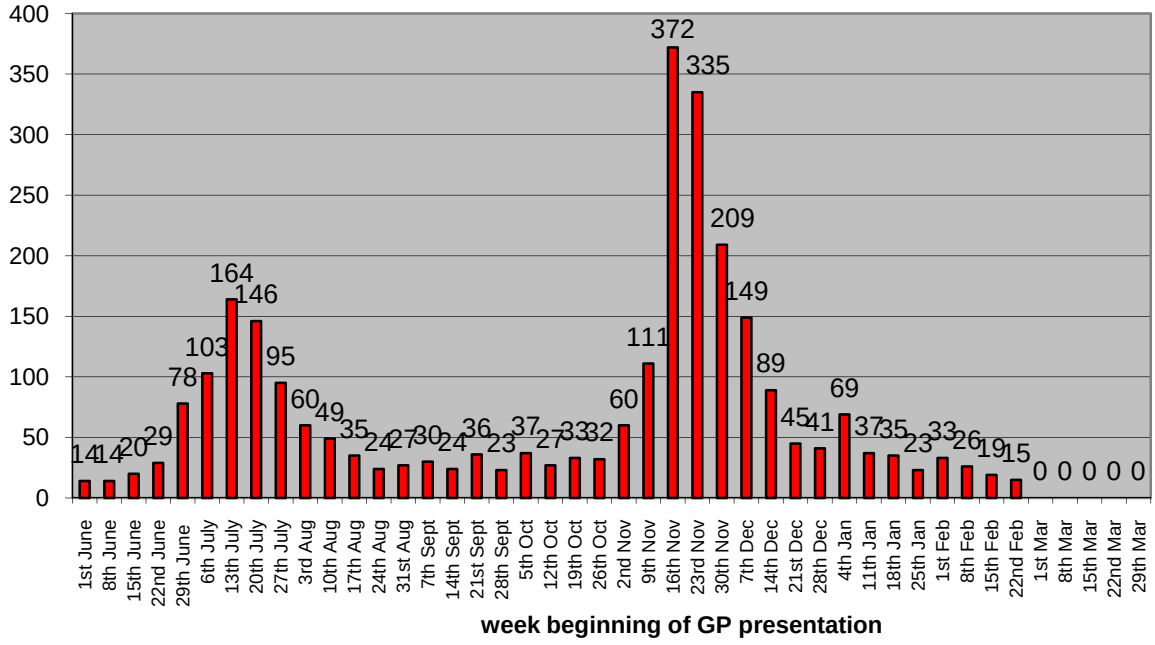
Guernsey Press 28th April 2009. Read more: http://www.thisisguernsey.com/2009/04/28/swine-flu-health-meets/#ixzz0uy7dCAwJ
(Reproduced with permission from Guernsey Press and Star)

The initiation by the Influenza Expert Group (consisting primarily of HSSD, Primary Care, and Medical Specialist Group [MSG]) of a GP influenza surveillance scheme captured patients that attended general practice with symptoms of flu-like illness. These patients were then advised when they could attend their practice to receive antiviral treatment if appropriate, as special 'Flu Clinics' were initiated to prevent secondary spread to other patients.

## *Flu-like illness surveillance scheme results*

The GP island-wide influenza system provided a picture of the impact of influenza pandemic virus (Fig.1). This information was used by the HSSD Expert Influenza Group to develop strategy throughout the pandemic.

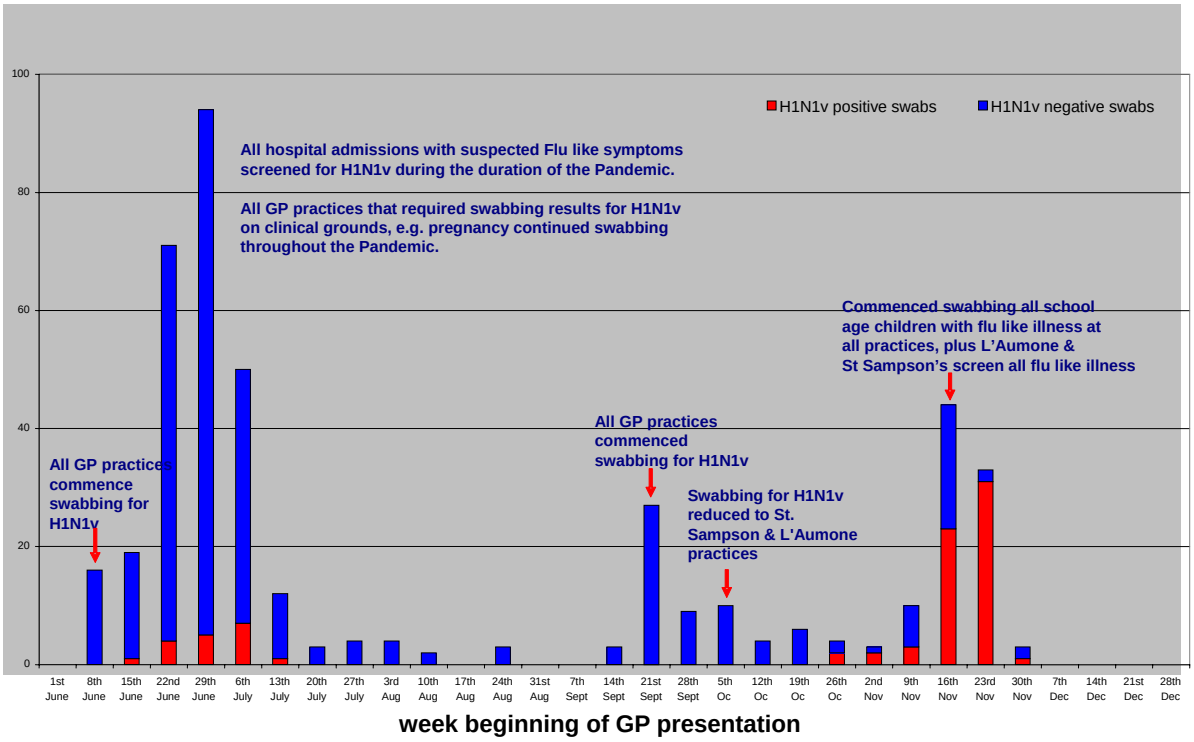
*Figure 1:* Total number of patients presenting to all GP practices with flu-like illness from June 2009 to March 2010




Source: Bailiwick general medical practices, Healthcare Group, Island Medical Centre, Queens Road, L'Aumone and St Sampson's

The first microbiologically confirmed case of pandemic H1N1 2009 infection in Guernsey was on 15th June 2009, in a male returning from a trip to the UK (Fig.2). In the first four weeks of the outbreak, transmission of the infection was sporadic and was generally linked to returning travellers.

**Figure 2***:* Number of swabs sent away for HINI virus testing and number of positive results from June to December 2009

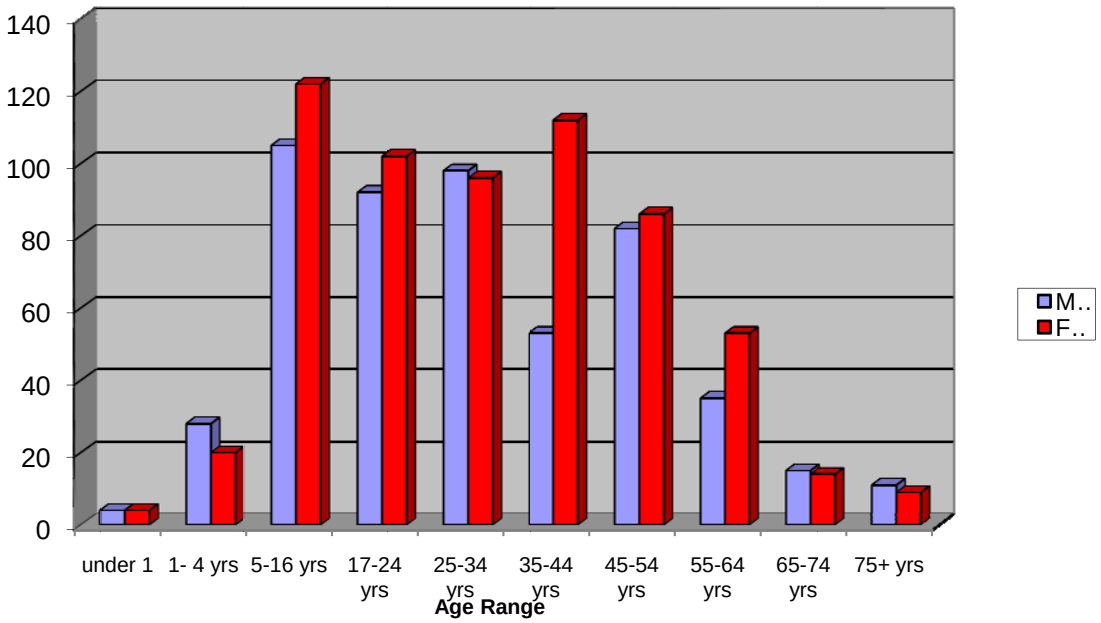



Source: Bailiwick general medical practices, Healthcare Group, Island Medical Centre, Queens Road, L'Aumone and St Sampson's

The occurrence of sporadic sustained cases (with no links to other known cases or travel) indicated that sustained community transmission, (i.e. transmission occurring outside the household or schools) occurred in July 2009 and during the second wave in November 2009. The first wave of cases ran from the end of June to the beginning of August, with 164 clinically diagnosed cases identified in the peak week (Fig.1). The second wave was from the beginning of November to the beginning of December 2009, with a peak of 372 clinically identified cases in the week beginning 16th November 2009. Cases of pandemic influenza were dispersed evenly throughout Guernsey. All areas experienced multiple school-related outbreaks.

The highest numbers of cases of flu-like illness recorded by GPs was in the under 65 year old age group, the reverse of what is recorded for seasonal influenza (Figure 3). This age distribution is likely to reflect past exposure to other strains of influenza A H1N1 and some level of cross-protecting antibodies among older age groups. In addition, exposure opportunities through attendance at school and travel to the high risk countries may have been relatively higher for younger than older age groups. There were no apparent gender differences.

**Figure 3:** Patients seen by a GP between 1st June 2009 and 22nd February 2010, and recorded to have a flu-like illness, by gender and age




Source: Bailiwick general medical practices, Healthcare Group, Island Medical Centre, Queens Road, L'Aumone and St Sampson's.

## *Outbreak management*

On 7th July 2009, because of accumulating evidence of widespread community transmission, Guernsey abandoned containment. Instead GPs offered advice and antiviral treatment for people with flu-like illness at Primary Care 'Flu Clinics", rather than attending patients in their own homes.

Outbreaks of flu-like illness occurred in several local schools. Unlike the UK, Guernsey did not advocate the closure of schools as there had been no significant evidence from the UK that this prevented further spread of influenza. The DPH and an Infection Control Nurse spoke at a Head Teachers' meeting, and provided them with leaflets and advice on cleaning the schools. A senior representative from the Education Department regularly attended pandemic meetings and acted as a link with schools.

## *Vaccination*

Part of the objectives of the earlier phases was to keep the outbreak controlled and slowed until an effective vaccination was developed. Co-operation between government agencies and manufacturers led to the first vaccine trials being carried out in Australia in July 2010, based on the US Centre for Disease Control isolate. http://www.msnbc.msn.com/id/32082687/

It is understood that some jurisdictions paid premium rates to secure early batches of the flu vaccine. Guernsey made judgements early, as the flu strain appeared not to be particularly virulent; it would purchase stocks of flu vaccine through the NHS in the UK, our normal method of procurement.

On 4th November 2009, Guernsey received its first batch of vaccines, 8,000 doses of Pandemrix and 600 doses of Celvapan for patients with a known egg allergy. Local general practices held flu clinics and administered the vaccines. The flu vaccine was provided by the States free of charge, with just an administration fee charged by the practices. A special clinic was set up for pregnant women and those who had an allergy to Pandemrix. As we started the programme, evidence was emerging as to whether one or two doses of vaccine would be satisfactory.

Residents were divided into risk groups based on the likelihood, from emerging world epidemiology of the differential risks, that different members of the population would be severely affected by flu.

Our initial priority groups, Phase 1 of our programme, based on UK expert advice were as follows:

- *Pregnant women.*
- *Those over 65 years in the current seasonal flu vaccine clinical at risk groups.*
- *Household contacts of immuno-compromised individuals.*
- *Frontline health and social care workers identified as having direct patient contact.*
- *Those between the ages of 6 months and up to 65 years who were in the current seasonal flu vaccine clinical at risk groups.*
  - *Chronic respiratory disease, such as chronic obstructive pulmonary disease (COPD);*
  - *Chronic heart disease, such as heart failure;*
  - *Chronic kidney disease, such as kidney failure;*
  - *Chronic liver disease, such as chronic hepatitis;*
  - *Chronic neurological disease, such as Parkinson's disease;*
  - *Diabetes requiring insulin or oral hypoglycaemic drugs, and*
  - *Immunosuppression (a suppressed immune system), due to disease or treatment.*

On 24th November 2009 we introduced Phase 2 of the programme, offering vaccination to all children under 5 years old.

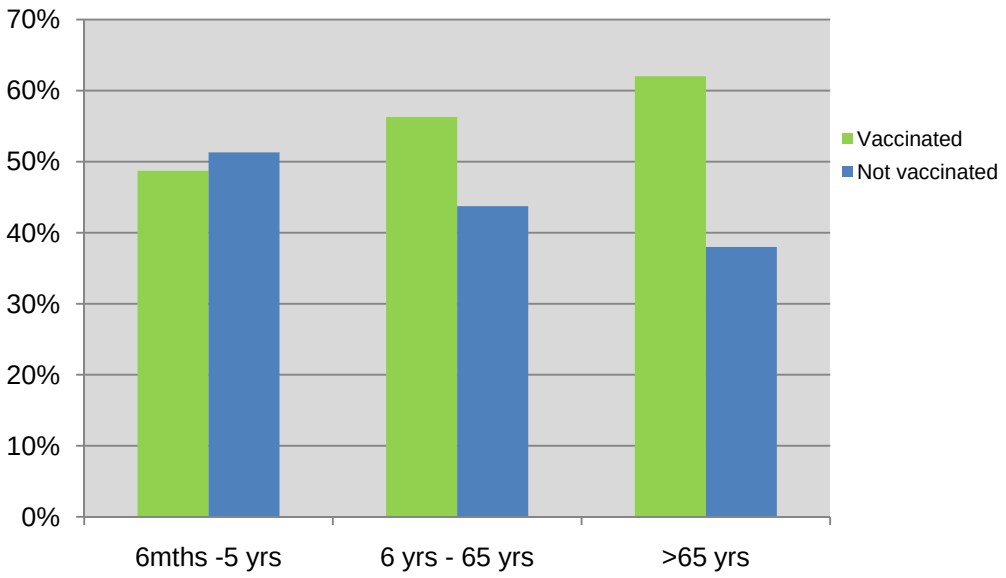
On the 2nd January 2010, Phase 3 of the programme began, when it was decided that the next level of prioritisation would be front-line support staff such as domestics and porters who were in regular contact with patients.

The last phase of our vaccination programme, Phase 4 began on 7th January 2010, when vaccination became available to normal risk members of the general public.

### *Vaccination uptake*

Figures provided by the three primary care practices in Guernsey and one of the two practices in Alderney show that a total of 13,299 'at risk' patients were identified and offered vaccination, of which 7,103 received the vaccine, giving an overall percentage uptake of 53.4%. Older patients were more likely to be vaccinated than younger patients (Fig 4). During the outbreak 668 healthcare workers were vaccinated, 40% of all those eligible.

**Figure 4** Percentage of at risk patients vaccinated by age.




Source: Bailiwick general medical practices, Healthcare Group, Island Medical Centre, Queens Road, L'Aumone and St Sampson's

### *Anti-viral drugs*

In Guernsey all GPs saw patients directly, while in the UK anti-viral drugs were prescribed to anyone who could state symptoms without going to a GP. Guernsey had excellent control of drug stocks thanks to our GPs and I consider that Guernsey handled the distribution of antiviral drugs better than the UK.

### *PPE (Personal Protective Equipment)*

We had been preparing for 5 years and the first stock was out of date. This is expected when contingency planning (this stock has been incinerated).

The second stock, bought three years previously, was out of date at the beginning of the pandemic. Although guidelines from the UK Health Protection Agency enabled us to dependably use this stock, we had already ordered back-up Filtering Face Piece Masks-2 (FFP2). All the FFP2 stock ordered is in the process being deployed in the Princess Elizabeth Hospital's main operating theatres so will not be wasted. Gloves and aprons not used during the pandemic were integrated into general stores.

Did we order too much PPE? Given the mild to moderate nature of the disease, the answer may be yes; however, if the virus had mutated into a more severe strain, then no! One of the dilemmas of contingency planning is that educated reasonable guesses are required, balancing risk versus cost and other good things for which that money could be used.

### *Health Impact of Pandemic*

Most cases reported a typical influenza-like illness of generally mild severity. Symptoms such as fever, malaise, dry cough, sore throat and headache were the frequently reported symptoms. The median duration of illness was seven days (range 1-29 days).

Infection without symptoms is a well recognised feature of seasonal influenza. Results of serological surveys conducted before and after the first wave of the pandemic in England suggest that considerably higher numbers of the population (particularly school age children and especially in the harder hit areas of the West Midlands and London) had evidence of infection without having been sufficiently ill to seek medical attention (Miller et al 2010).

Although the numbers of deaths have been very much lower than previous pandemics, both Guernsey's and the UK Influenza Surveillance Programmes showed that pandemic HIN1 affected not only the old and sick but also more commonly the healthy. Fortunately, Guernsey had no deaths associated with the pandemic.

In a UK study of 631 people admitted to 55 hospitals in 20 cities or towns, 55% had no underlying conditions and 59% of deaths occurred in generally healthy individuals. In Guernsey there were 3 hospital admissions. All had underlying health problems including chronic respiratory diseases, diabetes, immunosuppression and pregnancy in the 3$^{rd}$ trimester. All were discharged within 48hrs.

### *Communication*

The Guernsey public had considerable exposure to largely UK based media, through the television, radio and the press. Also the majority of the public have access to international sources of information through the internet, a situation which was novel for a pandemic flu outbreak.

At one point the Public Health team was under considerable pressure from requests from the local media for information on pandemic flu, such that it started to interfere with the running of the local response to the pandemic.

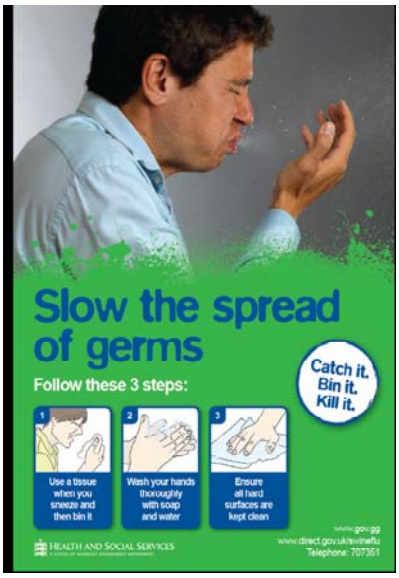
Therefore, an early decision was made that all communications would be co-ordinated by Treasury and Resources' Director of Communications. The Guernsey Expert Group and Health and Social Services Department Board agreed a single principle spokesperson, the DPH, to improve chances of consistent messages to the public through the media.

The Guernsey strategy differed from the UK and Jersey in that we did not mail-shot households, as we felt it was not cost-effective. We decided to communicate to the public through the mass media of the press, TV and radio. We also made information available in public places such as GP surgeries and libraries. We put locally tailored information on the States website.

In the containment phase public information was displayed at our Ports of Entry. In addition, local ferry and air carriers made public health announcements before passengers disembarked.

There were isolated problems with how the local media dealt with some issues. However, I believe the local media can take great credit for how they handled this issue and worked with local health professionals in a helpful and supportive way to give balanced and appropriate advice and reassurance to the public.

**Illustration 3:** One of Guernsey's Hygiene advice poster




The pandemic H1N1 virus is spread from person to person, similar to seasonal influenza viruses. It is transmitted as easily as the normal seasonal flu and can be passed to other people by exposure to infected droplets expelled by coughing or sneezing that can be inhaled or that can contaminate hands or surfaces.

To prevent spread, people who are ill should cover their mouth and nose when coughing or sneezing, stay home when they are unwell, clean their hands regularly and keep some distance from healthy people, as much as possible.

Local businesses, some of which are international ventures, naturally had significant concerns on the possible impact of a pandemic. A couple of meetings were organised to brief businesses who were encouraged to create their own contingency plans. The Public Health Directorate office received many requests for advice from businesses and therefore to improve communication with businesses and reduce the strain on the office, the Chamber of Commerce volunteered to be a single point of contact for businesses. This offer was gratefully received and I understood worked well.

### *Public Health Legislation*

At the start of the outbreak it was noted that the existing Public Health Orders were very outdated, as the original legislation was aimed at controlling vessels which might bring in human plague, cholera, yellow fever or smallpox.

Therefore the existing Orders were revised to enable other infectious diseases such as influenza to be controlled and to ensure the new Orders were Human Rights compliant including an appeal system. The States legal team worked rapidly to amend the Orders. Both Orders were 'made' and 'commenced' on Friday 15 May, 2009. The updated orders can be found below.

- The Public Health (Vessels) (Guernsey) (Amendment) Order, 2009

http://www.guernseylegalresources.gg/redirect/?oid=%5Bcom.runtimecollective.cms.contenttypes.LegalResource%3A%7Bid%3D11100094%7D%5D

- The Public Health (Aircraft) (Guernsey) (Amendment) Order, 2009

http://www.guernseylegalresources.gg/redirect/?oid=%5Bcom.runtimecollective.cms.contenttypes.LegalResource%3A%7Bid%3D11085063%7D%5D

### *Emergency Powers Advisory Group (EPAG)*

In response to this public health emergency I requested a meeting of EPAG. This was chaired by the Chief Officer of the Home Department and included legal and other key operational members. This arrangement worked well in giving the authority and urgency to actions required to manage the outbreak.

It is unclear, however, how the Emergency Powers Law of 1965 as amended relates to situations in which there is risk of a public health emergency developing and I suggest that clear legislative provision should be made in that respect.

| | |
|---|---|
| **Recommendation 1:** | The legislation currently under development to replace the Emergency Powers (Bailiwick of Guernsey) Law, 1965, as amended should clarify the arrangements for specifically addressing the risk of public health emergencies. |

### *International links*

Guernsey managed this outbreak within a global system led by the World Health Organisation. The English Department of Health was our official link through the Health Protection Agency, through which Guernsey submitted its surveillance figures to contribute to the world picture.

An independent review of the UK response to the 2009 Influenza Pandemic was carried out by Dame Deidre Hine. This identified a range of issues for the UK Departments leading on pandemic flu to address (e.g. recommendations 8-14 of the Hine Report).

Briefing notes from the UK Government's civil contingency committee (COBRA) were circulated via the Ministry of Justice to the Policy Council, who forwarded this to the Emergency Planning Officer at the Home Department for onwards dissemination. On occasion this circuitous route caused problems. Information from COBRA did not include the scientific rationale behind proposed policies.

Through two informal links, with a Health Protection Agency Field Unit (Merseyside and Cheshire) and a contact of the DPH in the Department of Health, and formal links with the Health Protection Agency Microbiology Laboratory in Birmingham Heartlands NHS Trust, we received some helpful information to help us understand better the scientific rationale behind UK and WHO policy - which the Guernsey Expert Group were able to use to help us formulate health policy locally. However these arrangements were not completely satisfactory and led to our local Expert Group not always having all the available scientific evidence at its disposal to make the best informed local decisions. Guernsey's experience appears to be shared with the devolved administrations in the UK (Hine Report).

'*The Cabinet Office, with the Government Chief Scientific Adviser (GCSA) and the four Chief Medical Officers (CMOs), should devise a process through which UK government ministers and the devolved administrations are presented with a unified, rounded statement of scientific advice. This process should engage CMOs (or CSAs for other emergencies) and should be included in a revised Concept of Operations by summer 2011.*
Hine (2010)

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| **Recommendation 2:** | The relationship between health policy bodies in the UK should be reviewed and options for greater direct relationships explored. The greater involvement and representation of Guernsey's interests through the UK to WHO should also be assessed to enable more efficient channels of communication to be developed. |

I was requested by the Emergency Powers Advisory Group to ensure that Sark was included in any population plans. Currently there are no formal arrangements for supporting Sark in population health planning or public health emergency responses.

The situation exposed a risk to those giving advice to Sark when they have no formal mandate to do so. It is also a risk to the UK Government as, if Sark does not take adequate preventative measures, they will be at high risk of breaching International Health Regulations and consequently their international obligations.

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| **Recommendation 3:** | Approach Sark with an offer to work with insular authorities and the relevant UK authorities to review Sark's compliance with International Health Regulations and its systems for dealing with public health emergencies. |

### *Contributions and comments from other agencies*

Managing the outbreak required the support, expertise and co-operation of many people and agencies. Some of their views are given below.

#### *Community Pharmacists*

General consensus programme went well.

#### *Customs*

The Guernsey Border Agency (formerly the Customs and Immigration Service) was responsible for several key functions which needed to be maintained throughout the pandemic. It implemented a specific operational plan which sought to reassure and provide information prepared by HSSD to the travelling public at the ports of entry and departure. The Agency also provided a first line response to any passengers who arrived with symptoms, as well as collating information on persons identified as recently visiting an affected area, in order to support the infection control teams and medical response to any individuals who subsequently presented with influenza.

The Agency also played a proactive role amongst the emergency planning group, in order to put in place measures which would assist the import and export of goods (such as food and medical supplies) through the ports in the event of an escalation of the pandemic.

Mark de Garis, Assistant Chief Officer, Head of Law Enforcement

#### *Education*

The bringing together of the various individuals who worked well and attendance overall was good; lunchtime meetings seem to suit, so that's something to note in itself.

As far as education is concerned, there was an issue with contacting a head of one of the schools, as their mobile number had changed. This is something we, here at Education, will note for the future.

Perhaps the most important issue going forward is the issue which arose from Emergency Powers Advisory Group (EPAG), suggesting schools remain open during the crisis to enable emergency staff to attend work.

This was contrary to the UK Department for Education and Skills advice we were following. This is something we need to consider when future planning, as there may be reluctance from schools to follow local advice.

Mr Frank Flynn, Assistant Director, Education Department

### *Environmental Health Unit*

The following issues went well;

- A rapid but co-ordinated response from a multi-disciplinary team.
- Ability to instigate emergency powers, through guidance and assistance of the Law Officers and the EPAG.
- Taking a proportionate response in relation to the level of risk.

The following issues showed areas where improvements could or were made and lessons learned;

- At the time of the incident we were primarily reliant on the Public Health (Aircraft and Vessels) Orders, 1974, for legal powers of detention and isolation at our border control points (airports and harbours). This legislation was out of date in its terminology (e.g. referring to 'infected' not 'affected' areas), scope (it only covered 'diseases subject to the International Health Regulations) and application (it referred to the Chief Revenue Officer rather than the Chief Officer of Customs and Excise). Changes were made by the following amendment orders; The Public Health (Vessels) (Guernsey) (Amendment) Order, 2009 and Public Health (Aircraft) (Guernsey) (Amendment) Order, 2009.
- In order to comply with all of the provisions of the International Health Regulations (which cover aspects of incidents such as this one) further changes will need to be implemented.

Mr Tobin Cook, Environmental Health Officer

### *Finance and Purchasing*

Purchasing and Finance Departments must have a representative on future pandemic meetings. This will ensure consumables allocated will be matched with expenditure. Use of Stores Department as a distribution centre will be utilised in a cohesive way.

Steve Le Goupillot, Deputy Director of Finance

*Harbours*

Guernsey Harbours are satisfied that the procedures which were put in place during the pandemic scare were adequate and so proven when implemented for a suspect case landed from the Trinity house vessel Galatea.

Mr Tony Pattimore, Deputy Harbour Master

*Media*

The swine flu pandemic created an opportunity to develop crisis communications. The close teamwork of all involved in the expert pandemic team, from health professionals to emergency services, gave a real understanding of the issue and the opportunity, from a central point, to co-ordinate all media and communications activity while allowing the professionals to get on with their jobs.

Mr James Falla, Formerly Director of Communications

*Primary Care*

Primary Care was pleased to be involved in planning Guernsey's H1N1 campaign from the beginning. The Practices committed a lot of resources to ensuring high quality patient care. They each appointed a representative and allowed those representatives to engage fully with the HSSD planning process.

Each Practice had their own Flu plan, as well as engaging with the Island wide planning. Provision was made for the separation of "clean" and "dirty" patients and for appropriate protected home visits.

The NHS arrangement of prophylactic treatment following a phone call to a help line was considered unsatisfactory. The Practices committed to doctors assessing people individually, initially in person, and subsequently by a combination of in- person and telephone advice, but always from a doctor who had access to the patient's record.

Staff worked unsociable hours and immunisations were offered to all eligible patients within a much shorter timeframe than the NHS could achieve. Weekend clinics were introduced. Additional GPs were put on the Out of Hours rota.

We cooperated with, and were very grateful for the assistance of, the Infection Control Nurses in teaching the correct methods of using and disposing of PPE (Personal Protective Equipment).

Appropriate immunisations were offered and given within a very satisfactory time frame. Overall immunisation percentages reflected patient choice rather than lack of opportunity.

Overall, it was felt that Guernsey had a more proportionate and effective response than many jurisdictions.

Dr Brian Parkin, GP and Deputy Medical Officer of Health

*Social Security*

The Social Security Department acted quickly to enable self-certification of incapacity for people suffering from flu-like symptoms. Self-certification was used responsibly and in very small numbers.

Mr Malcolm Nutley, Chief Officer, Social Security Department

*States Airports*

In the early days of the swine flu warning a request was received through the Health and Social Services Department for airlines to start making passenger announcements on arrival at Guernsey. This request was able to be swiftly communicated with the airlines through the Guernsey Airport Consultative Committee.

Representatives from infection control attended a meeting of the Consultative Committee and were able to answer a number of questions from the airlines on how they could best manage any situations which developed on aircraft. The meeting also very usefully clarified a number of questions on how the infection might be spread.

At this early stage the airlines' co-operation was secured and passenger announcements were immediately introduced for all arriving aircraft, containing advice for passengers who were feeling unwell. Operational arrangements were then put into place with Customs on the handling of passengers who reported ill and the advice was repeated / communicated to all airport staff.

In addition, information posters supplied by the Health and Social Services Department were set up for both arriving and departing passengers, together with information leaflets. The airport also made available hand sanitizer and wipes for airline and airport staff working in common usage areas and also for use by its own staff, as well as increasing the frequency of cleaning hard surfaces, etc, in public areas.

Contingency plans were formulated in the event of a serious outbreak affecting key staff members, which may have affected the operation of the airport; as well plans to separate any arriving passengers showing obvious symptoms, to avoid them entering the public areas which have circulated air systems.

Similar arrangements were applied for Alderney Airport, which falls under the jurisdiction of Guernsey Airport.

Mr Colin Le Ray, Airport Director, Guernsey Airport

*States Emergency Planning Officer*

The island responded in an effective and proportionate manner to the swine flu virus, ensuring there was a coordinated approach to the swine flu threat. Whilst not always immediately clear why certain UK policies had been introduced, the island, worked logically to apply these procedures where appropriate for the island to ensure that we kept in kilter with the UK approach whilst making it suitable for the scale of the island and the resources available.

i. What went well

I believe that the Guernsey response was well judged and thought through by key individuals involved in the management, with an effective response put in place, suitable for the level of swine flu experienced on the island. Local monitoring/information systems seemed to be effective and provide reliable information for the decision making process.

Clear leadership was provided. Other key areas may require development of resilience.

Good media management with one point of contact established early on.

ii What went less well

Initial difficulty in understanding how UK policy was made and then deciphering it for appropriate use in Guernsey. This has now been rectified by closer working relations with NHS and contacts via Stephen Bridgman. A clear path for funding emergencies.

Logistics/supplies – supply and demand for kit, vaccines, antivirals, etc seemed unclear and disjointed.

iii How we might improve our planning in the future?

- A table top exercise for key services would help highlight any areas that require development and provide a better understanding of the overall picture.

- Development of triggers to assist with taking the response up to the next level should it have been necessary (i.e. the strategic co-ordinating group level).

- Awareness of emergency media plan and options for HSSD media management in future.

- Continue to work with critical infrastructure services, so that their expertise can easily be drawn upon for such incidents that require their awareness/input.

- Awareness of key points of failure which need greater resilience built in during times of emergency, i.e. limited staff numbers in some critical areas. Raise awareness of the need to provide a clear path for funding emergencies. Inclusion of dedicated logistics/supplies officer in response.

Mrs Catherine Veron, States Emergency Planning Officer

*St. John Ambulance and Rescue Service*

Throughout the Swine Influenza (H1N1) Pandemic period the Guernsey Ambulance & Rescue Service received a total of 9 calls concerning the virus. A total of 3 patients were admitted into the PEH. All cases were referred to a doctor prior to being admitting to A&E; some cases were dealt with by a doctor attending the scene. Ambulance crews did not encounter any problems or difficulties when dealing with these cases. Cases with serious medical conditions, i.e. breathing difficulties, were assessed by an A&E doctor in the rear of the ambulance prior to being admitted into the building.

The Ambulance & Rescue Service were kept well informed of any updates via meetings, telephone and email. HPA & WHO websites were also used where necessary. The Service's Business Continuity Contingency Plan for the Management of an Outbreak of Pandemic Swine Influenza was regularly reviewed, revised and tested to ensure that essential ambulance services would be maintained throughout the pandemic period.

Meetings were very informative and held at an acceptable level, with emergency meetings arranged when necessary. All meetings were well structured, giving time for representatives from each organisation to provide their points of view and express their issues and concerns. The meetings also greatly improved the working relationship and communications between the Ambulance & Rescue Service and other health organisations. In situations like these it is always beneficial to know who you can contact for information and being able to put a name to a face.

There were minor Personal Protective Equipment issues regarding the lack of FFP3 masks. The Infection Control Team advised us that an order for 6000 FFP3 masks had been placed and when they arrived in the island a proportion would be allocated to the Ambulance & Rescue Service, but this didn't happen. *(NB: these masks did not arrive until after the pandemic and the Ambulance Service were provided with a small stock of out of date masks. They also had their own contingency of FFP3s).*

Mr Steve Ford, Deputy Chief Ambulance Officer

### *Post-pandemic period*

The pandemic was declared over on 10th August 2010.

As Guernsey enters the post–pandemic period, this does not mean that the H1N1 virus has gone away. Based on experience with past pandemics, we expect the H1N1 virus to take on the behaviour of a seasonal influenza virus and continue to circulate for some years. Out of season outbreaks are no longer being reported, and good vaccination coverage, especially in high risk groups, increases community–wide immunity. No two pandemics are identical and this pandemic, fortunately, turned out to have a smaller health impact than had been feared.

**Table 2:** Comparison of last four Flu Pandemics

**Flu Pandemics**

**1918-9**: The Spanish flu pandemic remains the most devastating outbreak of modern times. Caused by a form of the H1N1 strain of flu, found in swine, it is estimated that 20-40 million people died. Young adults were particularly badly affected, and the case fatality rate was 2.5%, much higher than the less than 0.1% of previous pandemics. Unusually people aged 20-40 were observed to be particularly susceptible to pneumonia and death. http://virus.stanford.edu/uda

**1957:** Asian flu killed two million people. Caused by a human form of the virus, H2N2, combining with a mutated strain found in wild ducks. The impact of the pandemic was minimised by rapid action by health authorities, who identified the virus and made vaccine available within six months of the outbreak. TV was used to communicate public health messages.
http://edition.cnn.com/2009/LIVING/wayoflife/04/29/mf.famous.flu.history/index.html

**1968:** An outbreak first detected in Hong Kong, and caused by a strain known as H3N2 killed up to one million people globally, with those over 65 most likely to die.
http://news.bbc.co.uk/1/hi/health/8017585.stm

**2009:** An outbreak first detected in Mexico and caused by a form of the H1N1 strain of flu, with about 18,300 (July 2010) deaths reported worldwide. A generally mild disease that sometimes killed', Dunning & Openshaw, 2010.

### *Other lessons learnt*

The pandemic preparedness was based upon H5N1 avian influenza virus and that required us to plan for the worst. Given the pandemic was a lot less severe than we had planned for, it is apparent that in planning for a pandemic we also need a best case scenario, an intermediate scenario and a worst case scenario, aspects of which can be utilised as the pandemic evolves.

| **Recommendation 4:** | Plan for other pandemic scenarios other than the worst case. |
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*Business response*

Businesses were encouraged to put in place contingency plans and some attended training. One issue is that some significant businesses did not have occupational health services on island to which the States Public Health service could link.

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| **Recommendation 5:** | Significant businesses including some other States Departments should obtain professional occupational health advice. |

*Surge Capacity and Resilience*

At times, the small public health team were very stretched as this outbreak was managed within existing staffing. This is considered a significant risk. Surge capacity is about having extra resources to deal with exceptional circumstances and resilience is about bouncing back to normal after an unfortunate event. Consideration should be given to strengthening both these arrangements.

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| **Recommendation 6:** | Surge capacity and resilience for public health emergencies should be strengthened. |

*Complacency*

Whilst the H1N1 'swine flu' pandemic virus of 2009 was milder in its general impact than the H5N1 'bird flu' expected and planned for, the danger of another, more severe, pandemic has not gone away and complacency must be avoided. (Hine, 2010).

It is also the case that many other diseases, such as tuberculosis, can be spread by respiratory droplets through coughing and sneezing.

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| **Recommendation 7:** | The public should continue to implement hygiene measures to prevent the spread of respiratory diseases, both in Guernsey and abroad. |

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## WEIGHT AND OBESITY IN PREGNANCY IN GUERNSEY
## 'EAT FOR YOU NOT FOR TWO'

Body Mass Index (BMI) is a simply derived index of weight for height, which is calculated by dividing a person's weight in kilograms by the square of their height in metres ($kg/m^2$).

Obesity in pregnancy is usually defined as a Body Mass Index (BMI) of $30kg/m^2$ or more at the first antenatal consultation. Risk tends to increase with greater levels of obesity and to recognise this obesity is traditionally divided into Class 1 (BMI 30 to 34.9), Class 2 (BMI 35 to 39.9) and Class 3 or morbid obesity (BMI 40+) (Modder and Fitzsimmons 2010).

**Photo 2:** Obese mother and daughter


Obesity (excess body fat) in pregnancy is associated with an increased risk of a wide range of serious and unwanted problems for both mother and baby (see below).

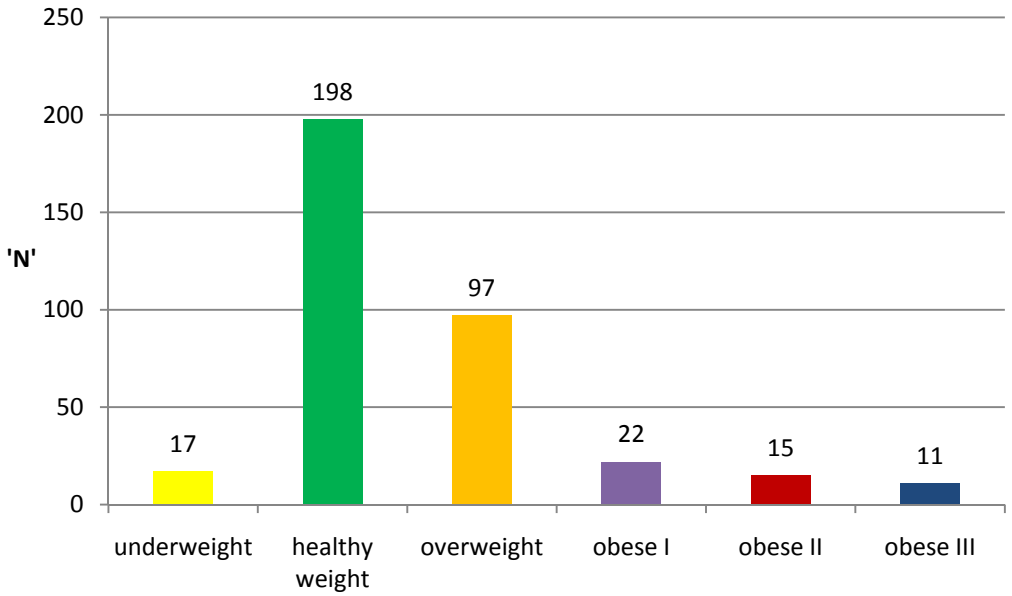
Corbit, 42-23163833, under licence

Midwives routinely enter height and weight data of pregnant women, at first booking, onto the computer system they use for patient administration and BMI is automatically derived from this data. Data were predominantly self-reported by mothers during the booking consultation, but in a very few cases when mothers did not know their normal height and weight measurements, midwives took measurements in the clinic. Anonymous data were extracted for women booked between 1st November 2009 and 30th April 2010.

The vast majority of bookings were at or before 12 weeks pregnancy. Of the 360 women booked, 13% were recorded as obese and 40% as overweight or obese (Fig 5 and Tab 3). This compares to 13% (20/157) of women in the Guernsey Healthy Lifestyle survey who were obese and 43% (67/159) who were overweight.

In the UK, studies have shown an increase in maternal obesity in recent years, which mirrors the increasing rate of obesity over time in the general population. While we do not have trend data in pregnant women in Guernsey, it is highly likely we have a similar increase of obesity in pregnancy.

**Figure 5:** Weight status of women booked into Guernsey Maternity Services 1st November 2009 to 30th April 2010




*Problems associated with Obesity in Pregnancy*

Obese pregnant women are at an increased risk of almost every serious obstetric complication. Maternal obesity has become one of the commonest risk factors in obstetric practice.

Prior to conception there is a higher risk of infertility.

Once pregnant there is a higher incidence of miscarriage, stillbirth and foetal congenital anomaly, and more major complications during pregnancy including diabetes, hypertensive disease (pre-eclampsia) and thrombo-embolism.

Obese women are more susceptible to adverse outcomes in labour, with an increased risk of anaesthetic related complications and need for instrumental delivery and caesarean section.

After delivery there is an increased risk of haemorrhage, wound infection and failure to breast feed. There is also an increased risk of a longer hospital stay, long term health problems for mother and an increased risk of obesity in her children.

While maternal deaths are now fortunately rare, The Confidential Enquiry into Maternal and Child Health (2003-05), (which Guernsey co-sponsors and participates in), reported that 28% of mothers who died were obese, compared to 16 to 19% women of child bearing age.

**Table 3:** Number of overweight (BMI 25-29.9) and obese women by age, in those booking into Guernsey Maternity Services, 1st November 2009 to 30th April 2010

| Age category | N | overweight n | (%) | obese I n | (%) | obese II n | (%) | obese III n | (%) | overweight & obese n | (%) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 15-19 | 18 | 5 | (27.8) | 1 | (5.6) | 0 | (0.0) | 1 | (5.6) | 7 | (38.9) |
| 20-24 | 50 | 11 | (22.0) | 2 | (4.0) | 7 | (14.0) | 3 | (6.0) | 23 | (46.0) |
| 25-29 | 73 | 19 | (26.0) | 6 | (8.2) | 2 | (2.7) | 3 | (4.1) | 30 | (41.1) |
| 30-34 | 124 | 35 | (28.2) | 6 | (4.8) | 5 | (4.0) | 2 | (1.6) | 48 | (38.7) |
| 35-39 | 80 | 23 | (28.8) | 6 | (7.5) | 1 | (1.3) | 2 | (2.5) | 32 | (40.0) |
| 40+ | 15 | 4 | (26.7) | 1 | (6.7) | 0 | (0.0) | 0 | (0.0) | 5 | (33.3) |
| **All ages** | **360** | **97** | **(26.9)** | **22** | **(6.1)** | **15** | **(4.2)** | **11** | **(3.1)** | **145** | **(40.3)** |

Babies of obese mothers have a higher risk of perinatal and neonatal death and long term health problems. Foetal growth is affected and these babies have significantly increased risk of obesity at 12 months, while children who are obese beyond 12 years are likely to be obese adults.

**Photo 3:** Healthy baby

*Interventions and Planning Locally*

Obesity in pregnancy is already taken very seriously by local health professionals.

New guidance on dealing with obesity in pregnancy has recently been issued by the Confidential Maternal and Child Health Enquiry (CMACE) and Royal College of Obstetricians and Gynaecologists and the English National Institute for Health and Clinical Excellence (NICE). Many aspects of these guidelines have already been introduced in Guernsey practice.

The following issues were highlighted from the CMACE report;

1. Women need to be informed of the risks associated with obesity and pregnancy.

2. Greater significance and awareness needs to be placed on the importance of normal weight before conception. Education should take place through school, family planning clinics and primary care so that appropriate healthy diet and lifestyle advice is given.

3. All healthcare professionals should target obese and overweight women of child bearing age with effective anti-obesity strategies to help women achieve and maintain a healthy weight.

**Illustration 4:** Eating for a healthy pregnancy, the eatwell plate


*http://www.eatwell.gov.uk/healthydiet/eatwellplate/*

NICE guidance on Obesity in Pregnancy recommends that, to achieve and maintain a healthy weight, people should:-

- Base meals on starchy food.
- Eat a low fat-diet and avoid increasing fat and/or calorie intake.
- Eat breakfast.
- Eat at least five portions of fruit and vegetables day.
- Minimise long periods of sitting.
- Walk, cycle or use another mode of transport involving physical activity.

Guidance on effective weight loss programmes recommended for practitioners;

- Find out why a person might find it difficult to lose weight
- Tailor to individual needs and choices
- Base on a balanced, healthy diet
- Encourage regular physical activity

Weight loss programmes are not recommended in pregnancy, as they may harm the baby. People are directed to approved sources of information, including the pregnancy book “birth to five” and the “Eat Well” website.

Information in Guernsey is, and will be, given sensitively to enable the woman to engage with health professionals and raise the awareness of her risks and the importance of healthy eating and exercise to avoid excessive weight gain in pregnancy, together with other more specific recommendations as required for each individual. This will give mothers an improved sense of well being so that they can enjoy their pregnancy and the positive event of giving birth. Post-natal lifestyle intervention will also be provided to optimise weight prior to her next pregnancy and for long term health benefits.

It is anticipated that if these guidelines are followed, this will enable the modification in Guernsey of an extremely important risk factor and improve pregnancy outcome together with longer term health benefits for both the mother and her children.

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| **Recommendation 8:** | Introduce population surveillance of overweight and obesity in pregnant women to monitor trends. |

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| **Recommendation 9:** | Local standards are set following recent guidance in obesity and pregnancy. |

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| **Recommendation10:** | Training on obesity management is provided to people working with pregnant women and prospective mothers. |

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| **Recommendation 11:** | Implementation of local standards is assessed with clinical audit and patient survey. |

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# STROKE IN GUERNSEY

David, aged just 68 years old, suffered severe communication problems and moderate physical disability. Through his sheer determination and with the support of a dedicated stroke team, together with the ongoing efforts of the community disability team and the support and love of his family, he strives to reach his goal of returning home and living independently. This is a very real goal that he moves ever closer to each day, during a long period of rehabilitation. This vignette is based on real cases, but does not represent any identifiable individual.

David's is just one example of the devastating effects of stroke, but also the effectiveness of specialist stroke care and gives hope for the future of survivors. A stroke, known medically as a cerebrovascular accident (CVA), is the rapidly developing loss of brain function(s) due to disturbance in the blood supply to the brain. Some 85% of strokes are from ischaemia (lack of blood flow) caused by blockage (thrombosis, arterial embolism). This initiates the ischaemic cascade, when brain tissue ceases to function if deprived of oxygen for more than 60 to 90 seconds and, after approximately three hours, will suffer irreversible injury possibly leading to death of the tissue, i.e. infarction. About 15%, of strokes are from haemorrhage (leakage of blood).

As a result of a stroke, the affected area of the brain is unable to function, leading to inability to move one or more limbs on one side of the body, inability to understand or formulate speech, or an inability to see one side of the visual field.

The traditional definition of stroke, devised by the World Health Organization in the 1970s, is a "neurological deficit of cerebro-vascular blood supply that persists beyond 24 hours or is interrupted by death within 24 hours". This definition was designed to reflect the reversibility of tissue damage with the time frame of 24 hours being chosen arbitrarily. The 24-hour limit divides stroke from transient ischemic attack, which is a related syndrome of stroke symptoms that resolve completely within 24 hours. With the availability of treatments that, when given early, can reduce stroke severity, many now prefer alternative concepts, such as brain attack and acute ischaemic cerebrovascular syndrome (modelled after heart attack and acute coronary syndrome respectively), that reflect the urgency of stroke symptoms and the need to act swiftly.

The diagnosis of stroke itself is clinical, with assistance from brain imaging techniques such as Computed Tomography (CT) or Magnetic Resonance Imaging (MRI) (Ilustration 7).

## *Risk Factors*

The most important modifiable risk factors for stroke are high blood pressure and atrial fibrillation. Other modifiable risk factors include high blood cholesterol levels, diabetes, cigarette smoking (active and passive), heavy alcohol consumption and drug use, lack of physical activity, obesity and unhealthy diet and increasing age.

High blood pressure accounts for 35-50% of stroke risk.

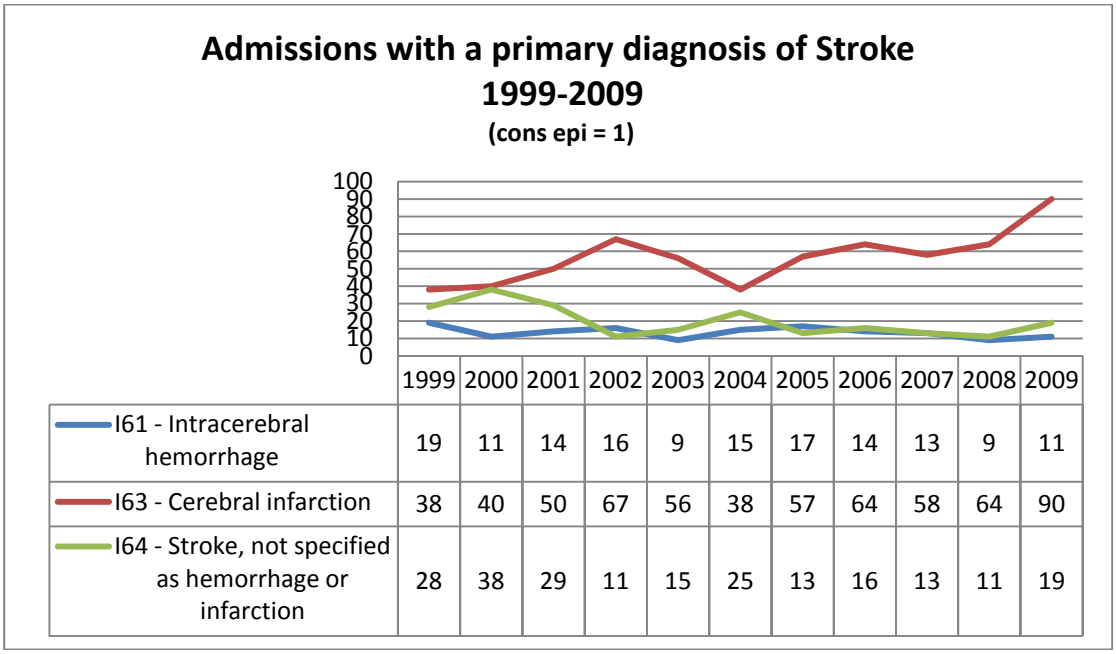
Atrial fibrillation (AF), the most common heart arrhythmia or irregular heart rhythm, increases the risk of stroke five-fold and is considered to cause 15 to 20 per cent of all ischaemic strokes.

Disability affects 75% of stroke survivors enough to decrease their employability. Emotional problems resulting from stroke can result from direct damage to emotional centres in the brain or from frustration and difficulty adapting to new limitations. Depression affects 30% to 50% of post stroke survivors and is characterized by lethargy, irritability, sleep disturbances, lowered self esteem and withdrawal (Senelick).

### *Stroke Epidemiology in Guernsey (Figures 6 to 9)*

The number of cases of stroke admitted to the Princess Elizabeth Hospital (PEH) is about 120 a year (Fig 6) and deaths 50 a year (Fig 8), the majority of which are from cerebral infarction. The modal age of admission for men is 75-79 and for women 85-89 years old (Fig 7). The modal age for deaths for men is 80-84 and for women 85-89 years old (Fig 9). As the number of older people in Guernsey increases, then if the risk of stroke stays the same, the number of people with strokes that services will need to help will increase.

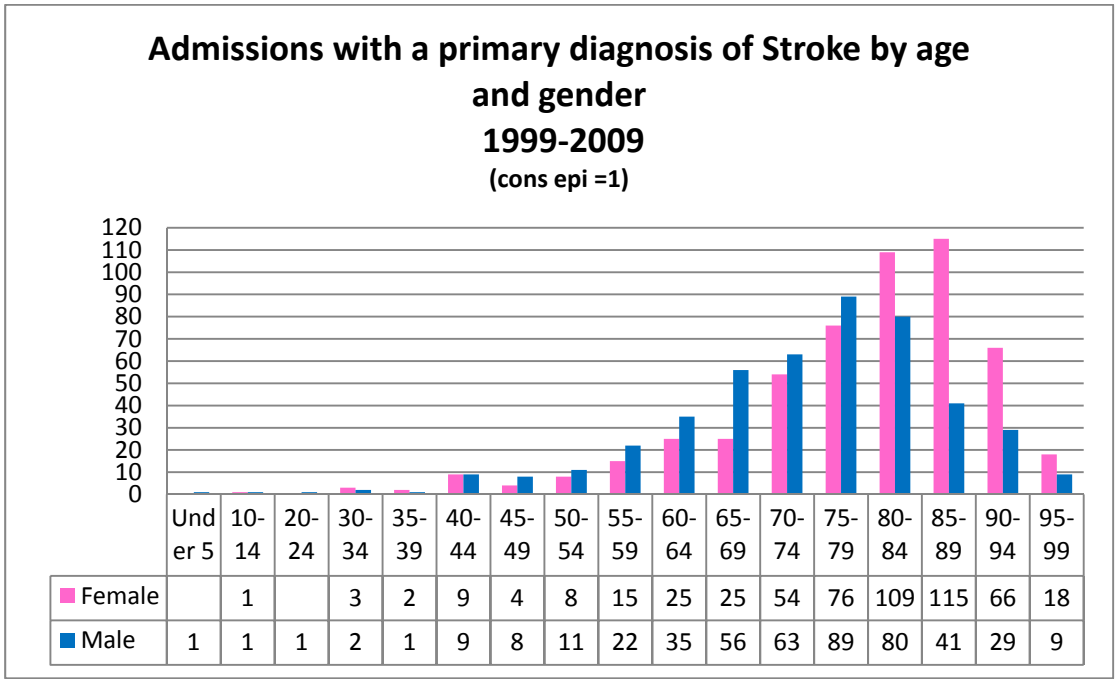
**Figure 6:** Number of hospital admissions to Princess Elizabeth Hospital (PEH), (first consultant episodes), with a primary diagnosis of stroke (ICD 10, I61, I63 or I64) by year, 1999-2009.




| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| I61 - Intracerebral hemorrhage | 19 | 11 | 14 | 16 | 9 | 15 | 17 | 14 | 13 | 9 | 11 |
| I63 - Cerebral infarction | 38 | 40 | 50 | 67 | 56 | 38 | 57 | 64 | 58 | 64 | 90 |
| I64 - Stroke, not specified as hemorrhage or infarction | 28 | 38 | 29 | 11 | 15 | 25 | 13 | 16 | 13 | 11 | 19 |

Source: HSSD

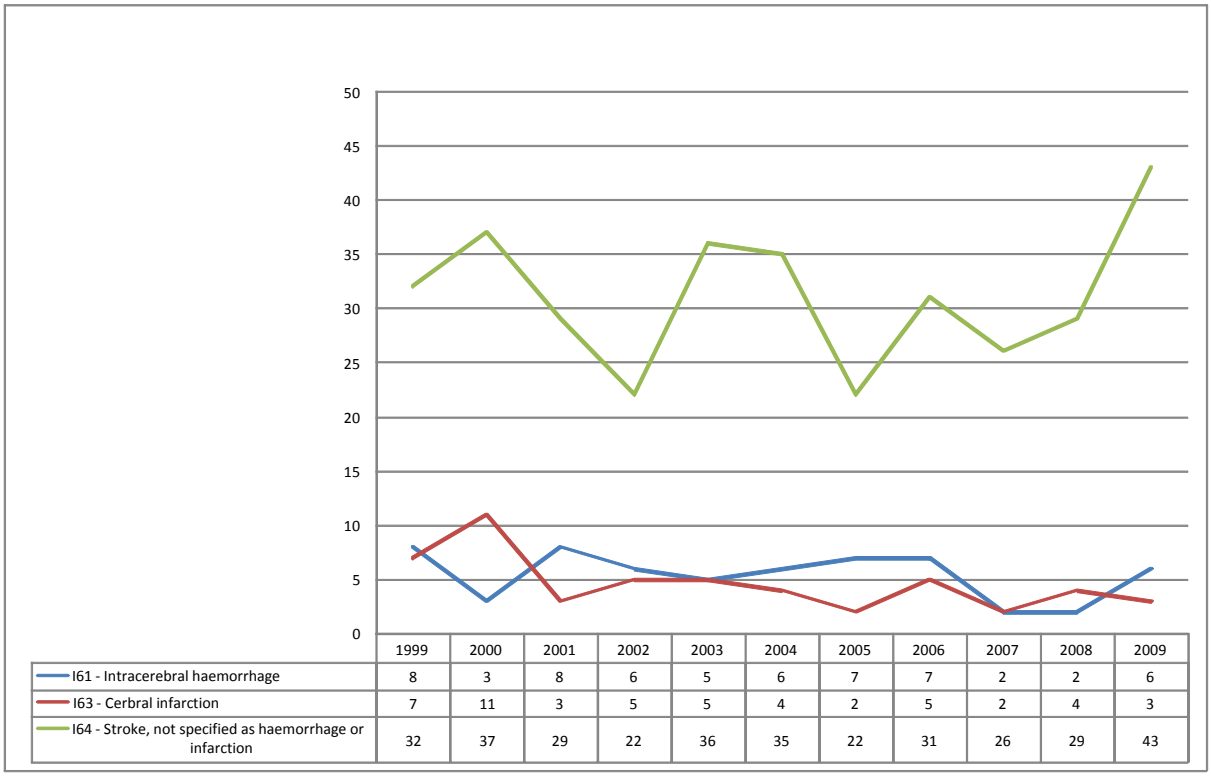
**Figure 7:** Number of hospital admissions (first consultant episodes) to PEH with a primary diagnosis of stroke by age and gender, 1999 - 2009




| | Under 5 | 10-14 | 20-24 | 30-34 | 35-39 | 40-44 | 45-49 | 50-54 | 55-59 | 60-64 | 65-69 | 70-74 | 75-79 | 80-84 | 85-89 | 90-94 | 95-99 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Female | | 1 | | 3 | 2 | 9 | 4 | 8 | 15 | 25 | 25 | 54 | 76 | 109 | 115 | 66 | 18 |
| Male | 1 | 1 | 1 | 2 | 1 | 9 | 8 | 11 | 22 | 35 | 56 | 63 | 89 | 80 | 41 | 29 | 9 |

Source: HSSD

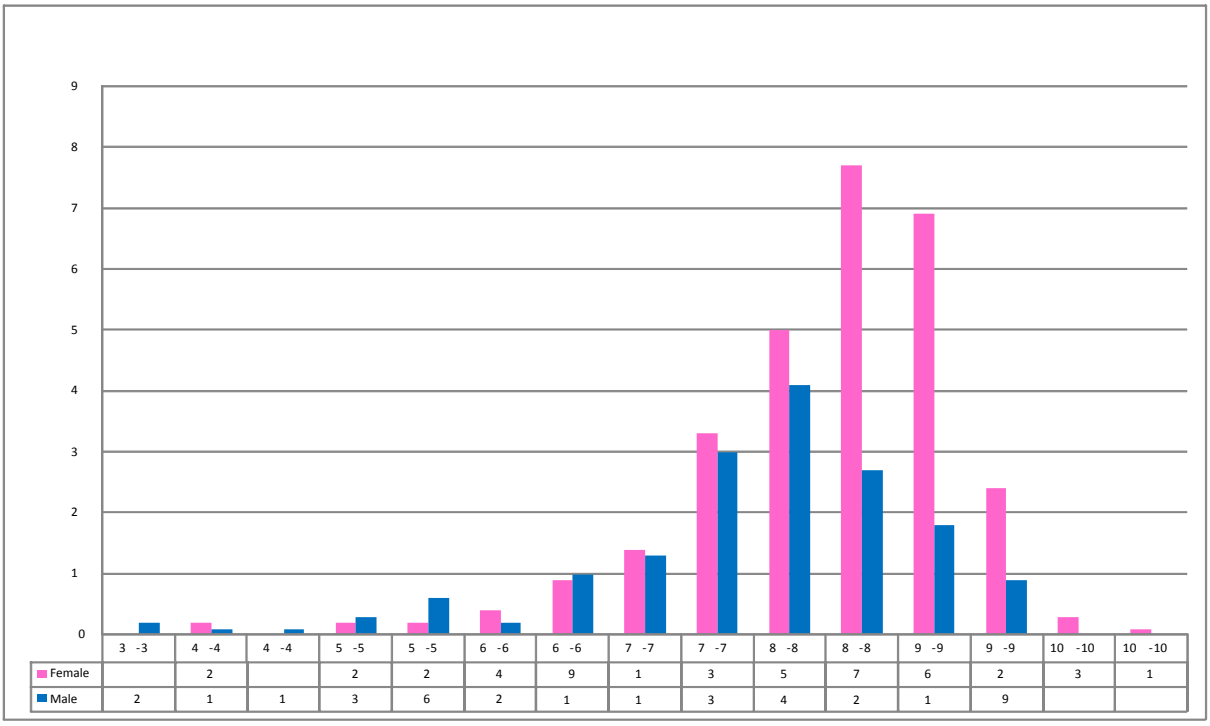
**Figure 8:** Number of deaths recorded in Guernsey with a primary diagnosis recorded as stroke by year, 1999 to 2009




| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| I61 - Intracerebral haemorrhage | 8 | 3 | 8 | 6 | 5 | 6 | 7 | 7 | 2 | 2 | 6 |
| I63 - Cerbral infarction | 7 | 11 | 3 | 5 | 5 | 4 | 2 | 5 | 2 | 4 | 3 |
| I64 - Stroke, not specified as haemorrhage or infarction | 32 | 37 | 29 | 22 | 36 | 35 | 22 | 31 | 26 | 29 | 43 |

Source: The Greffe, Guernsey

**Figure 9:** Number of deaths recorded in Guernsey with a primary diagnosis recorded as stroke by age and gender 1999 to 2009




| | 3 -3 | 4 -4 | 4 -4 | 5 -5 | 5 -5 | 6 -6 | 6 -6 | 7 -7 | 7 -7 | 8 -8 | 8 -8 | 9 -9 | 9 -9 | 10 -10 | 10 -10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Female | | 2 | | 2 | 2 | 4 | 9 | 1 | 3 | 5 | 7 | 6 | 2 | 3 | 1 |
| Male | 2 | 1 | 1 | 3 | 6 | 2 | 1 | 1 | 3 | 4 | 2 | 1 | 9 | | |

Source: The Greffe, Guernsey

## *Reduction of Impact of Stroke in Guernsey*

### *Control of risk factors*

A review of the evidence on the prevention of cardiovascular disease (which includes modification of many of the risk factors for stroke) has recently been published (NICE 2010). Guernsey already has strategies in place for some of the key risk factors, i.e. smoking, obesity, and alcohol and drugs.

| **Recommendation 12:** | The Bailiwick should audit its services against recent evidence-based guidance on the prevention of cardiovascular disease. |
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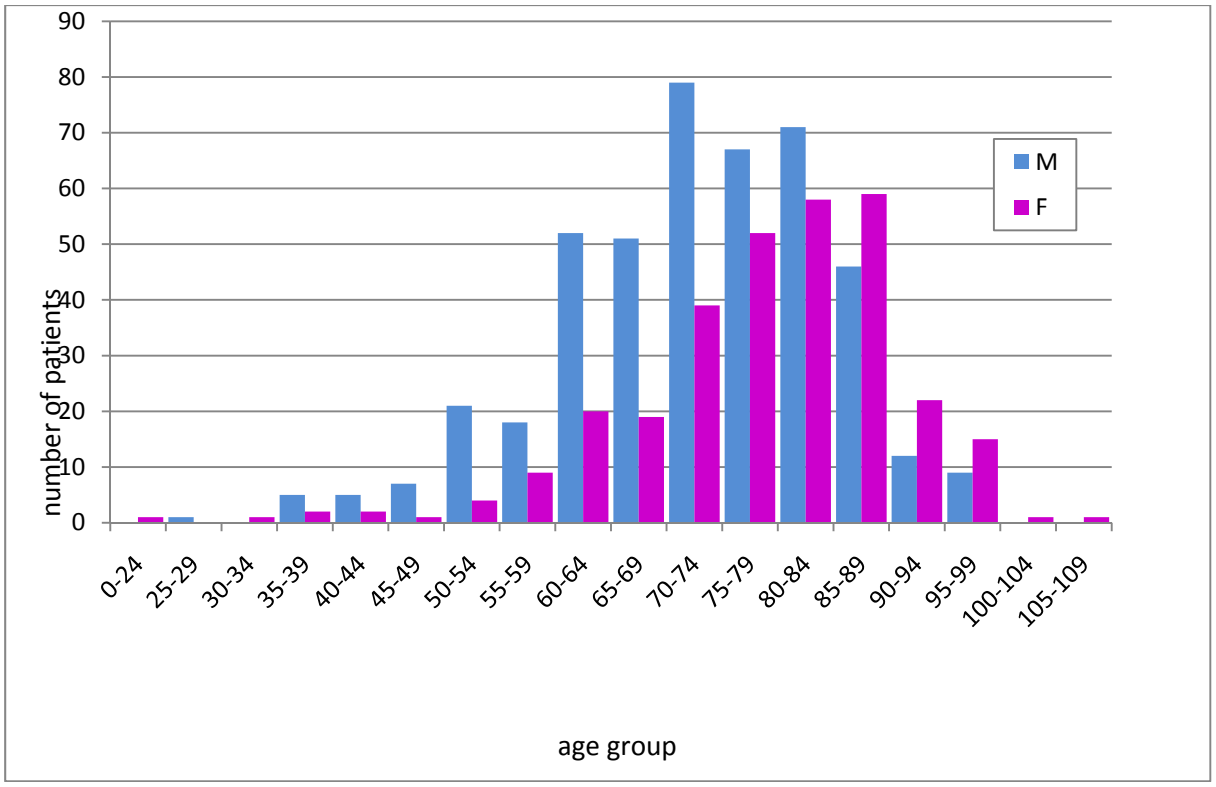
Atrial fibrillation (AF) is common and affects more than 1% of the population. In two local general medical practices that kindly supplied data, a total of 750 people with atrial fibrillation were identified, suggesting a very good level of identification of AF in Guernsey. Risk increases with age (Figs 10 and 11) The treatment of AF with the anticoagulant warfarin in patients at higher risk of stroke reduces this risk by 50-70%. The numbers needed to treat (NNT) to prevent one stroke range from 25 to 37 and the costs of each stroke prevented with warfarin is in the range £9,500 to £14,000. Although the numbers of people identified with AF in Guernsey is encouraging, nonetheless I suggest that when patients at higher risk attend their GP, they have their pulse and blood pressure checked if they have not had it done within the last couple of years or so.

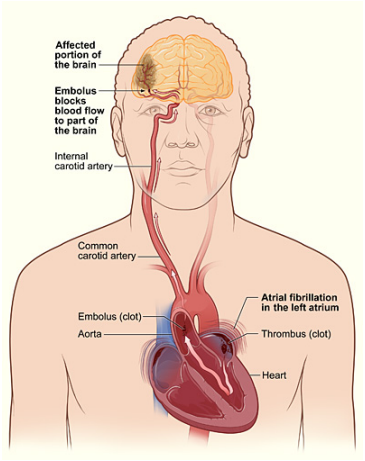
**Recommendation 13:** A Bailiwick wide audit of the measurement of blood pressure should be a priority.

**Figure 10:** Number of people with atrial fibrillation or flutter by age and sex in two general medical practices in Guernsey, October 2010




Source: Healthcare Group and Queens Road general medical practices.

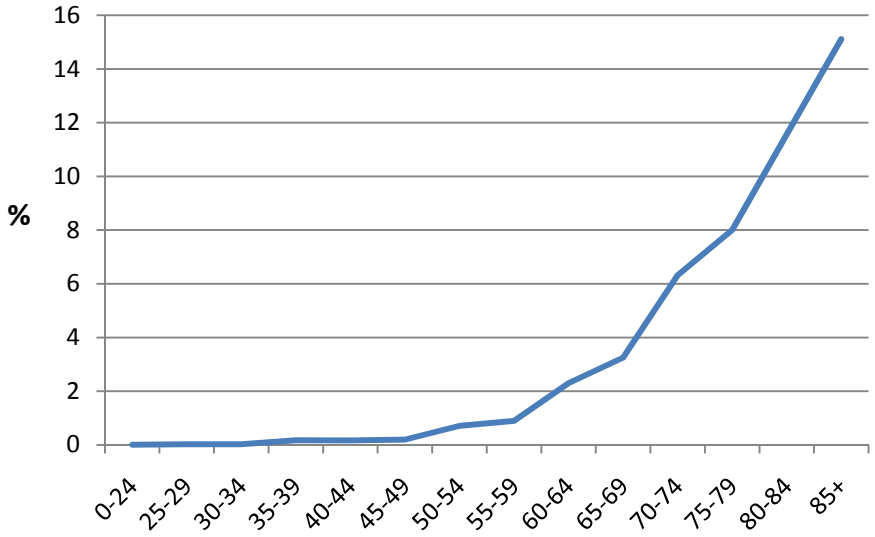
**Illustration 5:** Diagram of source clots from the heart that can block the blood supply to brain




Clots from atrial fibrillation of the heart are an important cause of stroke, some of which can be prevented by anticoagulants.

http://www.nhlbi.nih.gov/health/dci/images/atrial_fib_stroke.jpg
accessed 14th September 2010

**Figure 11:** Percentage of patients with atrial fibrillation by age-group October 2010




Source: HealthCare Group, and Queens Road general medical practices

### *Identification and management of stroke*

Advances in imaging and treatment have meant that the proportion of people with stroke who have clots blocking part of their brains can be treated. To do this requires scanning rapidly nearly everybody with a stroke. Those who have a clot can then be given clot busting drugs. However, this needs to be given rapidly, ideally within three hours.

**Illustration 6:** Poster to encourage public to recognise and gain treatment for stroke


Source: New York State, Department of Health (amended)

| **Recommendation 14:** | The general public should be familiar with the symptoms of stroke and seek early advice, as early intervention can improve outcomes. |
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| **Recommendation 15:** | HSSD should assess public awareness of the signs and symptoms of stroke and how to act and introduce an education campaign if necessary. |

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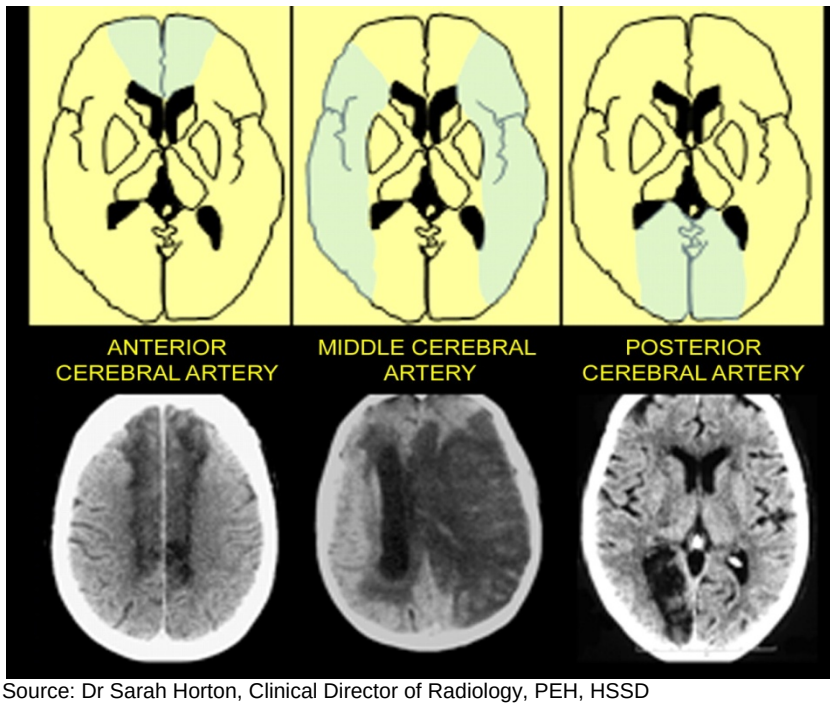
| **Recommendation 16:** | The stroke service should study factors in the history of acute stroke patients that might indicate areas for improved prevention. |

**Illustration 7:** CT image of a stroke and diagram of parts of brain main cerebral arteries supply




As with all imaging, the left hand aspect of each image represents the right hand aspect of the patient (and vice versa) - as if you are looking at a patient, standing at the foot of their bed. The dark grey wedge-shaped areas within each section of the head represent the areas of infarction - the first image on the left shows a central wedged shaped area representing an anterior cerebral infarct (bilateral), the middle image shows a large left middle cerebral artery infarct and the last image on the right a right posterior cerebral artery infarct.

Source: Dr Sarah Horton, Clinical Director of Radiology, PEH, HSSD

National Institute for Health and Clinical Excellence (NICE) guidelines on the diagnosis and initial management of stroke and transient ischaemic attack were issued in July 2008. Guernsey meets many aspects of these guidelines, e.g. clinical assessments such as swallowing and neurological assessment within the first 24 hours.

The stroke service is one where team work between HSSD, MSG consultants, A&E, Health Promotion and the general public have reaped rewards in the past in terms of improved services, including the appointment of a medical consultant to lead the service and a stroke care co-ordinator. While recent audits have demonstrated that the service meets many National Guidelines, Guernsey does not scan and thrombolyse all appropriate patients as emergencies.

Skilled staff also need to be available to clinically assess the patient and give the treatment because it is not without its risks. This is particularly challenging somewhere like Guernsey, where the number of people coming through are relatively small.

However, it is estimated that if best practice guidance was followed then this would equate to the complete recovery from a stroke of about one Guernsey patient a year and partial recovery of another two to three patients.

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| **Recommendation 17:** | Cerebral imaging should be available for all appropriate stroke patients. |

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| **Recommendation 18:** | Thrombolysis treatment should be available to treat all appropriate patients with cerebral infarction. |

In addition, Guernsey does not have; a dedicated acute stroke unit; more than one stroke consultant; or give the recommended 45 minutes therapy daily.

Given the size of our population, it is not going to be economic to provide a dedicated stroke unit, and there is not enough work for more than one consultant. Although we could send people off island for rehabilitation, there are major advantages for people being treated locally and, daily therapy should be achievable. The therapy recommendation, important to help someone regain as much independence as possible, is not specific and can be speech therapy, occupational therapy (to improve someone's ability to undertake activities of daily living) or physical therapy, depending on the person's problems.

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| **Recommendation 19:** | Stroke patients should be offered the daily provision of 45 minutes of appropriate therapy in their rehabilitation. |

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| **Recommendation 20:** | A cross-Bailiwick stroke task group should be formed to implement best-practice guidelines in the management of acute stroke in the most cost-effective and timely way. |

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# AIR POLLUTION

Clean air is a basic requirement of human health and well-being. Air pollution, however, continues to pose a significant threat to health in Guernsey and worldwide. Air pollution is known to cause and exacerbate a wide range of diseases, ill health and conditions such as cancer, asthma, coronary heart disease, etc, and is therefore of concern in Guernsey (WHO 2006).

In 2006, a World Health Organisation (WHO) assessment of the burden of disease due to air pollution identified that more than two million premature deaths each year can be attributed to the effects of urban outdoor air pollution and indoor air pollution (WHO 2006).

The WHO set out air quality guidelines for the most significant outdoor pollutants (particulate matter, ozone, nitrogen dioxide and sulphur dioxide) and these guidelines were recommended to be used by policy makers at national and local level when setting standards (WHO 2002). Guidelines for these four pollutants have been used to set air quality standards in the UK, with the addition of a range of other pollutants associated with vehicle emissions and industrial developments. Different countries of the UK have slightly different standards.

In the UK much research has been undertaken into the effects of air pollution on health and the Committee on the Medical Effects of Air Pollutants (COMEAP) is the main advisory body. COMEAP works with the Expert Panel on Air Quality Standards (EPAQS), which assesses the research and sets appropriate standards for air pollutants. Whilst much work is being done, there are not international standards set for indoor air quality.

There are no air quality standards set for Guernsey although, since 1992, local ambient (outdoor) air quality has been monitored for a range of pollutants including oxides of nitrogen ($NO_2$), ozone ($O_3$), particulate matter 10 microns and below ($PM_{10}$), sulphur dioxide ($SO_2$) and carbon monoxide (CO).

A local comprehensive ‘air quality screening and assessment’ report was published in 2010, which focused on sources and levels of local ambient (outdoor) air pollution in comparison with the standards and objectives set in UK law (OEHPC 2010). The ‘standard’ sets a limit for a pollutant and the ‘objective’ is the deadline by which this must be achieved. Whilst these standards and objectives are not currently applicable to Guernsey, they can be considered to be a benchmark to measure Guernsey’s current position against and for future standards to be implemented in local legislation.

There are few significant industrial processes on-Island, although road traffic volumes are high. The findings from monitoring are that air quality in Guernsey is generally very good. However, air pollutants known to be of local concern include nitrogen dioxide, associated with local road traffic, and ozone with levels which are greatly affected by trans-boundary airflows from the continent and cannot be controlled at a local level.

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Currently Guernsey does not have any ambient (outdoor), air quality standards.

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| **Recommendation 21:** | Guernsey should set standards on ambient (outdoor) air pollution, based on the WHO air quality guidelines, to protect and improve public health. |

To ensure that any future developments, new industries, new traffic flows, etc, do not have a detrimental impact on air quality and that air pollution is prevented or the risk minimised to protect human health, an air quality strategy should be developed.

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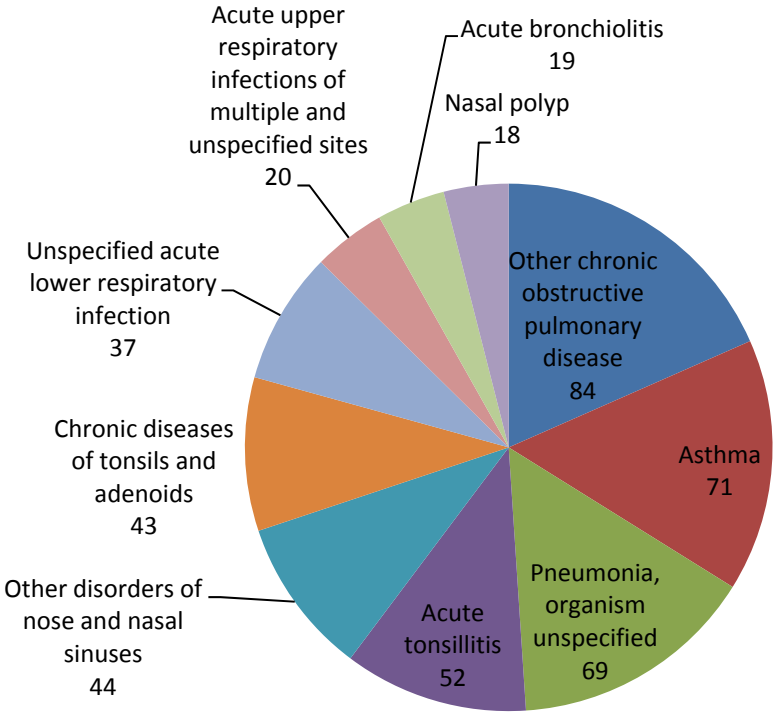
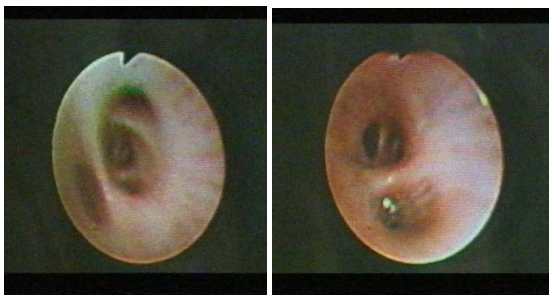
| **Recommendation 22:** | An air quality strategy should be developed. |

**Figure 12:** Average number of hospital admissions per year (first consultant episodes) to Princess Elizabeth Hospital (PEH) during 2004-8, with a primary diagnosis of diseases of the respiratory system (ICD 10, J codes)




Asthma is one of the most common respiratory conditions leading to admission to hospital, with an average of around 70 admissions a year (Fig 12). Many asthma attacks are triggered by indoor air pollution (US Expert Panel, 2007). The WHO estimates that people spend about 80% of their time indoors, so the contribution made by indoor air pollution should not be underestimated. At this stage, the evidence on the impacts of indoor air pollution is limited and local research is planned to increase understanding of the link between air pollution and asthma.

**Photo 4:** Airway narrowing during an asthma attack



**Source: frames taken from BBC TV – Jimmy's Hospital**

Much of the evidence to date focuses on the smoking of tobacco indoors and the introduction of local legislation has already seen improvements in air quality in work places. This needs to be further developed to consider other indoor exposures such as smoking at home and in cars, exposure to carbon monoxide and nitrogen dioxide in homes from cooking and heating systems, etc. There is evidence to support that an asthma attack is more likely to be triggered when the sufferer is also routinely exposed to low levels of nitrogen dioxide (Tunnicliffe et al 1994, Chauhan et al 2003). In Guernsey this may happen both indoors and outdoors and is of particular concern in places where the air flow is restricted so pollutants may not be dispersed and may accumulate e.g. in stairwells and street canyons.

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| **Recommendation 23:** | Indoor exposures to air pollution, such as smoking in cars and pollutants from cooking systems and heating systems should be effectively controlled through health promotion programmes and new legislation. |

The concentration of tobacco smoke pollution in buildings and in vehicles is proportional to the density of smokers and inverse to the ventilation rate.

Outdoor tobacco smoke (OTS), pollution is more complicated than indoor pollution (Repace 2008). Smoke concentrations increase with smoker density, low wind velocities and stable atmospheric conditions. During smoking, levels of OTS may be as high as that indoors, especially in close proximity to smokers, although they tend to persist for a shorter time when smoking ceases. Tobacco smoke contains a large quantity of respirable particles, which can cause breathing difficulties for those with chronic respiratory diseases or trigger an asthmatic attack in those with asthma. Tobacco smoke can also cause eye, nasal and throat irritation for otherwise healthy people. Because OTS is both a health threat and nuisance, several jurisdictions have restricted smoking in outdoor locations.

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| **Recommendation 24:** | Regulation of smoking outside buildings, shops, restaurants, etc, should be considered in order to reduce risk of third party health and nuisance effects. |

While there is strong evidence on the problems OTS can cause, there is little data so far for Guernsey.

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| **Recommendation 25:** | Further local research should be carried out on air pollution in micro-environments, e.g. corners of buildings, under canopies. |

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# OTHER PUBLIC HEALTH HIGHLIGHTS

## Environmental Health

Achievements during the year included:

- Supporting the DPH in containment phase of the Flu Pandemic, working closely with Guernsey Border Agency (formerly Customs Service) at our Ports.

- On the retirement of Mr John Cook, Mrs Valerie Cameron took up post on 1st October 2009 as Director of Environmental Health and Pollution Regulation, including the Chief Environmental Health Officer role.

- Air quality monitoring equipment was upgraded and an additional air monitoring station was added at Bulwer Avenue in St Sampson.

- First local comprehensive 'air quality screening and assessment' report.

Future Developments:

- Food Supplements-Nutrition and Health Claims law

- Air Quality Strategy

- New Food Safety Law

## Health Promotion

Achievements during the year included:

- Obesity Strategy approved by the States of Deliberation in November 2009.

- Smoking: training for mental health service staff, move of Quitline to new premises within the Princess Elizabeth Hospital, Saturday morning Quitline clinics, a public consultation exercise on the possibility of banning the display of tobacco products at the point of sale and restrictions on tobacco vending machines, which have subsequently been approved by the States of Deliberation (subject to a Requéte).

- The 5th Guernsey Healthy Lifestyle Survey was published in March 2010 which indicated that over the last couple of decades the proportion of the population smoking has been decreasing, alcohol issues remained the same, obesity is getting worse, while stress, particularly at work, is highlighted as a major issue without an existing strategy.

Future developments:

- Adult Mental Health and well being survey and mental health promotion strategy
- Continue implementation of tobacco strategy
- Start implementation of obesity strategy
- Achieve states support for the second phase of the obesity strategy.

## Infection Prevention and Control

Infection prevention and control services aim to prevent infection and control the spread of infections when they occur, both in hospital and in the community.

Achievements during the year included:

- A key role in the co-ordination of the Flu Pandemic outbreak

- Methicillin resistant *Staphylococcus aureus* (MRSA) rates have remained low, with one case of hospital acquired MRSA detected in 2009, whereas comparable UK hospitals all had more than one case during this period.

- Infection control audits have highlighted good effective hand-washing, pro-active approach by Infection Control Link Nurses, good infection control practices and consistently high levels of environmental cleanliness. Issues identified during audits have been dealt with in a timely manner.

- In June 2009 root cause analysis investigations on all Healthcare Acquired Infections was commenced. This is a quick, simple action tool to use when a patient has a confirmed hospital acquired infection, based on a three stage action checklist. This has highlighted areas of infection control non-compliance, especially during periods of increased bed occupancy rates.

  An example of its use is: Patient screened on admission MRSA negative and one week later patient MRSA positive. *React:* patient isolated, commenced on MRSA treatment. *Record:* Patient contact with known MRSA positive patient and this patient's equipment. *Respond:* Introduce specific equipment cleaning regimes, staff educated on MRSA policy and procedures.

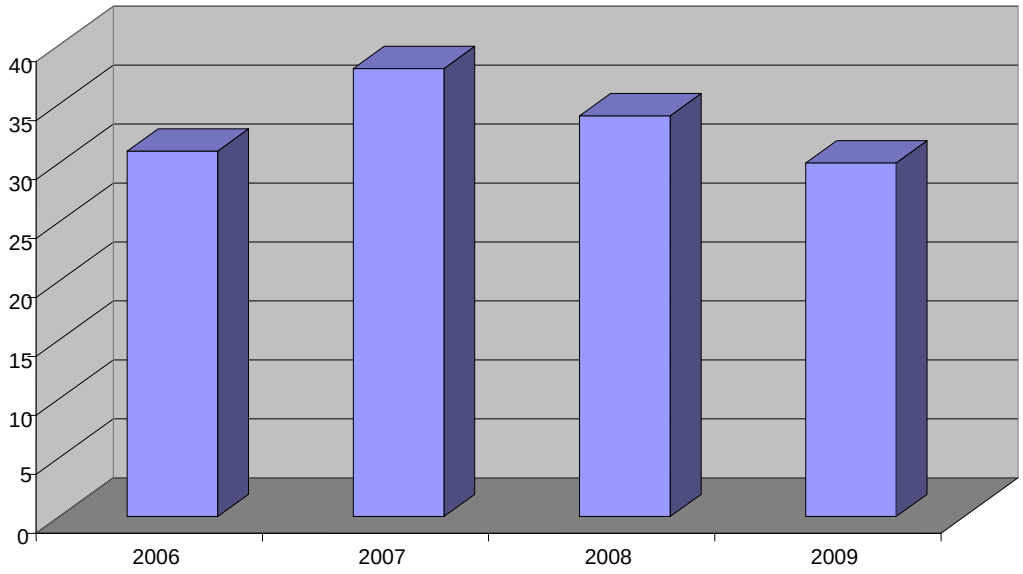
- Active monitoring of patients, from the time of their operation until they are discharged from hospital, as surgical site infections cannot be reliably identified from laboratory data alone as the diagnosis depends on the presence of signs and symptoms of infection in the wound.

- Decrease in numbers of wound infections over last three years (Fig 14).

Key Issue

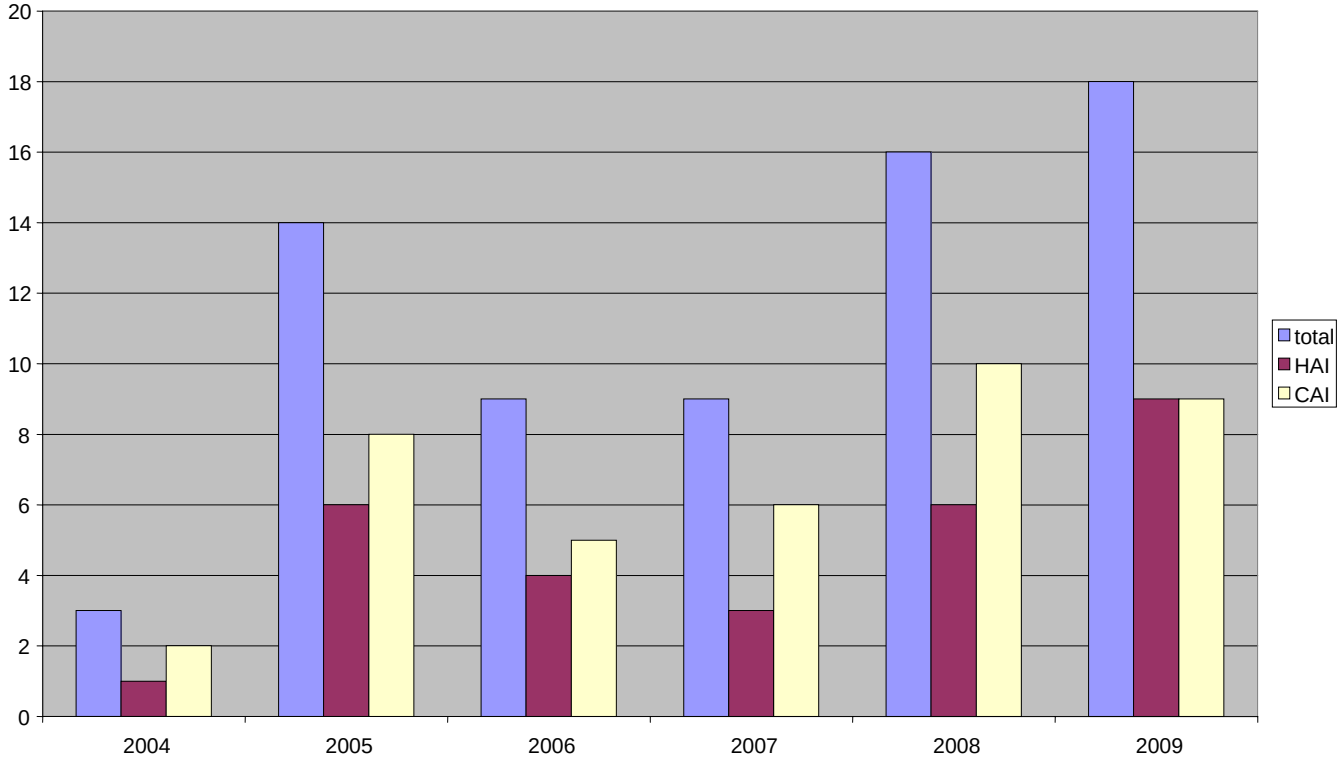
- The number of cases of *Clostridium difficile* has increased, reaching eighteen in 2009 (Fig 13). Investigations showed these were all antibiotic related.

**Figure 13:** Number of post-operative wound Infections at Princess Elizabeth Hospital (PEH) by year, 2006-2009




Source: HSSD

**Figure 14:** Number of cases of microbiologically confirmed hospital and community acquired *Clostridium difficile* associated infections (amended figures from previous annual report).




Source: HSSD

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| **Recommendation 26:** | To agree and implement antibiotic prescribing guidelines to control the increased numbers of *Clostridium difficile* associated infections. |

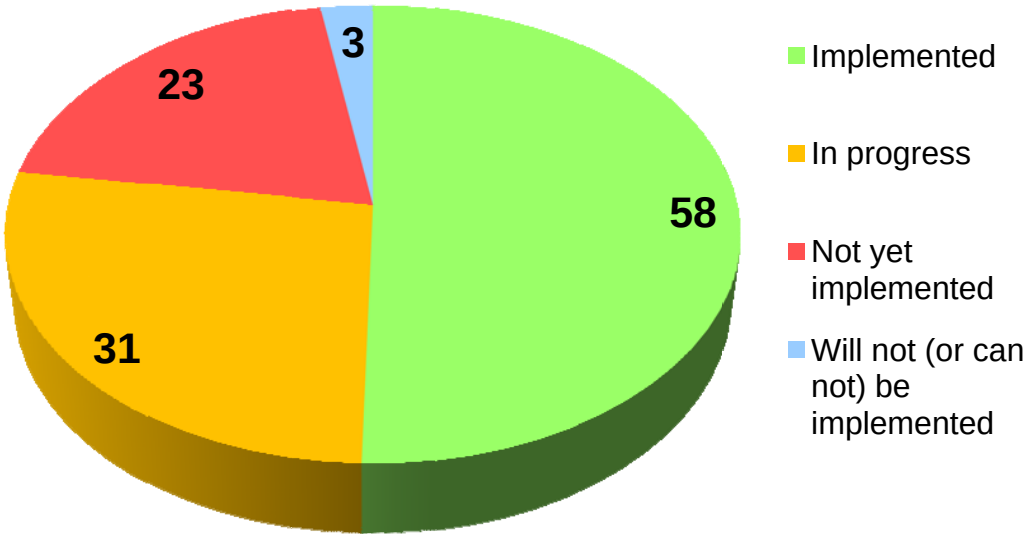
## Clinical Audit and Quality

Clinical audit is an activity all health and social care professionals should use to examine the quality of the care delivered to their service users. The process involves taking a snap shot of current care and comparing it to nationally or internationally recognised best practice standards. Any issues identified should then be addressed by making changes to improve the quality of that care.

Achievements during the year included:

- Participation in the National Audit of Falls and Bone Health led to a local action plan for change being developed by the clinicians and audit staff. The action plan was nationally recognised by the Clinical Effectiveness and Evaluation Unit (CEEU) of the Royal College of Physicians of London; the CEEU sought permission to circulate it to audit participants across the UK as an example of good quality action planning. The plan led to a new screening tool being introduced in the Accident and Emergency Unit and a new referral pathway for GPs so that patients who had fallen could be appropriately referred to the Balance Clinic.
- Development and delivery of a clinical audit module for clinical staff in conjunction with the University of East Anglia and Guernsey Institute of Health and Social Care Studies led to the training of fourteen HSSD staff, all of whom have completed audits.
- The annual audit of in-hospital cardiac arrest showed Guernsey met or exceeded international standards in 2009.
- Production of the annual clinical audit report and of “Closing the Loop”, an analysis of the implementation in 2009 of recommendations made in clinical audit reports in 2008. It was found that 78% of recommendations had been or were in the process of being implemented. Re-audit had been done or scheduled in 52% of audits.
- Hip fractures are the commonest orthopaedic emergency. Participation in the National Hip Fracture database began on 01 April 2009.
- Eithne Downey left in January 2010 after a successful role as audit nurse.
- Brian O’Connell took over as single-handed Acting Clinical Audit and Quality Manager on 01 February 2010 after the combination of a clinical audit post and a clinical quality and guidelines post.

**Figure 15:** Progress in implementing the 115 clinical audit recommendations in the projects completed January to December 2008




Future Developments

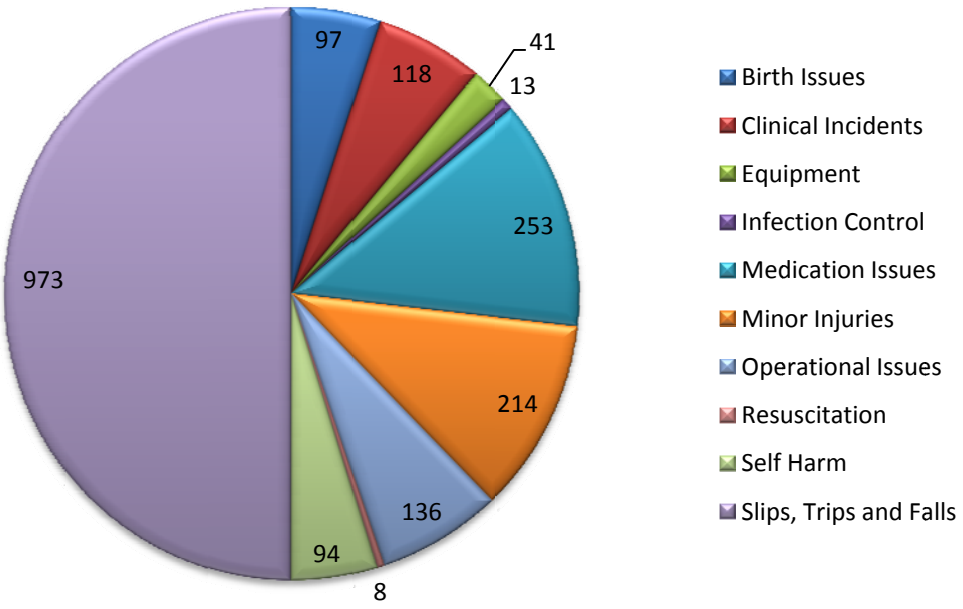
- To continue to strengthen clinical and social care audit activity and embed it in care professionals' everyday practice.
- To ensure audit recommendations are followed through and to systematically monitor implementation and quality improvement.
- To set up a network of link staff for clinical audit and quality throughout HSSD.
- To implement the agreed HSSD and clinical and social care audit policy.
- To compare the standard of our care for hip fractures with the other hospitals.
- To explore the use of the Electronic Health and Social Care Record in clinical audit.
- To undertake an audit across all health sectors.
- To introduce categories of audit recommendations based on those used by NCEPOD.

## Patient Safety/Clinical Risk

Clinical care is often complex. Clinical risk can be defined as the ability to identify the likelihood and consequence of actual and potential risks to the health and wellbeing of service users under care. It is a key component of continuous quality improvement within HSSD services. A culture of openness is vital to improve services and staff and services users are encouraged to report problems. Reporting is important, as it is not only individual incidents that require to be investigated that are important but patterns of problems that might suggest organisational issues rather than individual or team errors. Organisations that do not have a culture of open and honest reporting, and then address issues raised, are less likely to provide high quality care.

The number of incidents reported in 2009 were 1,947. Slips, trips and falls are the predominant risks that are reported, followed by drug errors.

**Figure 16:** Number of incidents reported to clinical risk by categories of risk in 2009, (N=1947)




Achievements during the year included:

- Pro-active approach to risk management in each ward area with a senior staff member of each risk meeting taking the chair and lead of the meetings with high level of reporting.
- All new staff have clinical risk training at corporate induction.
- Introduction of electronic safeguard system for clinical risk and training of staff.

- General increase in reporting across all health care professionals which gives a much better picture of risks, enabling better control of risks.
- Extensions of clinical risk to cover children's services and learning disability.
- Provision of systematic risk reports for service managers.

Future Developments

- A need to increase reports of incidents for people returning to theatre, with only 6 reports last year
- Increase in numbers of reports from social workers
- Completing integrated risk policy
- Multi-agency investigations, e.g. if other agencies such a primary care, police or probation are involved with a service user
- Developing risk link staff
- Further development of risk performance management metrics

## Health Information and Clinical Coding

These services are both very important to understand health and healthcare and to obtain the best health value out of the public health resources available.

Although corridors apart in office proximity, they are hugely dependant on each other. ICD10 (International Classification of Diseases version 10) and OPCS (Office of Population Censuses and Surveys) procedure codes link the two teams, which are required to give a full representation of diagnoses and procedures of people admitted to the HSSD's three hospitals and off-island.

### *Clinical Coding*

Key Achievements in 2009 have been:

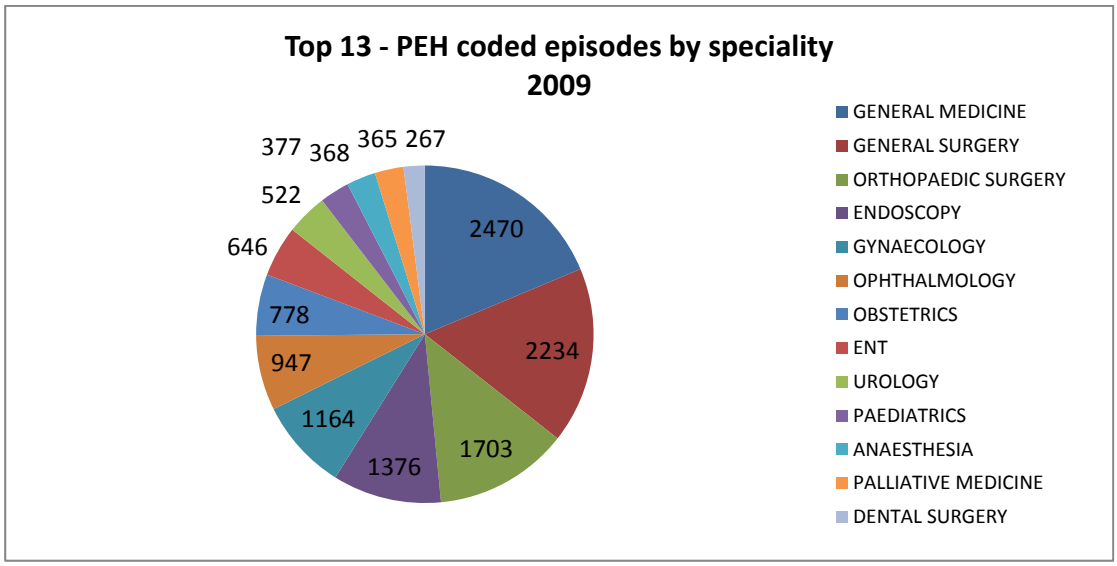
- Coding of over 14,000 hospital episodes.
  - In 2009 the Princess Elizabeth Hospital had 13,973 episodes of which 97% were coded (specialties shown in Fig. 17)
  - Clinical Assessment Team (Albecq Ward) had 349 episodes of which 99% were coded, all were in the speciality of psychiatry
  - King Edward VII (Alan Grut Ward) had 203 episodes of which 97% were coded, nearly all in the speciality of rehabilitation.

- The new version of OPCS 4.5 was introduced in Guernsey in November 2009, following its introduction in England in April 2009. This version has expanded extensively the categories of coding and, for instance, now includes high cost drugs and chemotherapy regimens.

- Introduction of new Simple Code software alongside the new EHSCR.

- To ensure our coders maintain their status among the top performing coding services, they attended a UK Clinical Coding Forum, organised by an expert in OPCS 4.5 to train them, (and also the health information analyst (HIA) and Jersey coders), and a Simple Code Training day to prepare for the Electronic Health and Social Care Record (EHSCR) changes.

**Figure 17:** Coded hospital admissions at Princess Elizabeth by speciality, January to December 2009




Key Issues

- The replacement Patient Administration System (PAS), TrakCare, which was part of the new Electronic Health and Social Care Record (EHSCR) system was implemented in November 2009. This opened up the system from a core centralised team to a much larger number of clinical users. This has introduced issues around the consistency of accurate data recording which has impacted on the quality of clinical coding.

- The performance of a few Medical Specialist Group (MSG) consultants in completing discharge summaries, had a significant detrimental effect on coding timeliness.

- While the proportion of hospital episodes coded is good, there is still room to improve further the proportion of episodes coded.

*Health Information*

Achievements during the year included:

- In April 2009, introduction of a Healthcare Information Request Form which enabled systematic monitoring of customer requests and service performance (Fig 18).

- Nearly all requests were turned around within one week, and no complaints were received.

- High quality production of information, despite only one analyst in post from a previous team of three.

- Regularly producing high quality business information, up until November 2009, e.g. for CHIPS and MSG doctor's appraisal.

- The analyst was responsible for a suite of 60 routine reports of management information and undertook a wide-variety of ad hoc requests to support service reviews, etc. (e.g. Fig 19).

Key issues

- The last Electronic Data Systems (EDS) Patient Administration System (PAS) reports were published in November 2009. For a variety of reasons, the transition from the previous arrangements to their replacement has not been as speedy or seamless as they should have been and the new system requires new reporting tools and reports, that are currently in the process of being built, to permit the reliable production of quality management information from the new system.

- Because of financial constraints only one analyst rather than three was in post throughout 2009.

**Figure 18:** Number of healthcare information requests by source (MSG = Medical Specialists Group)

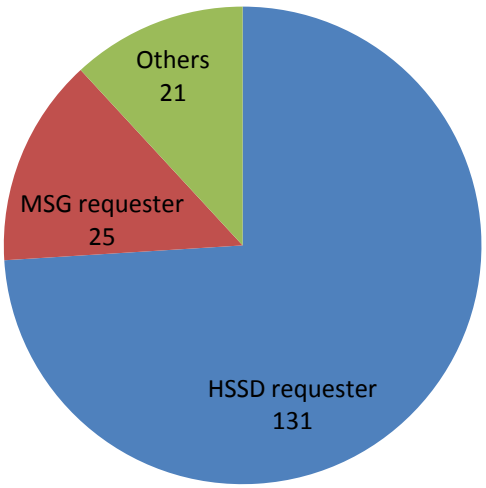
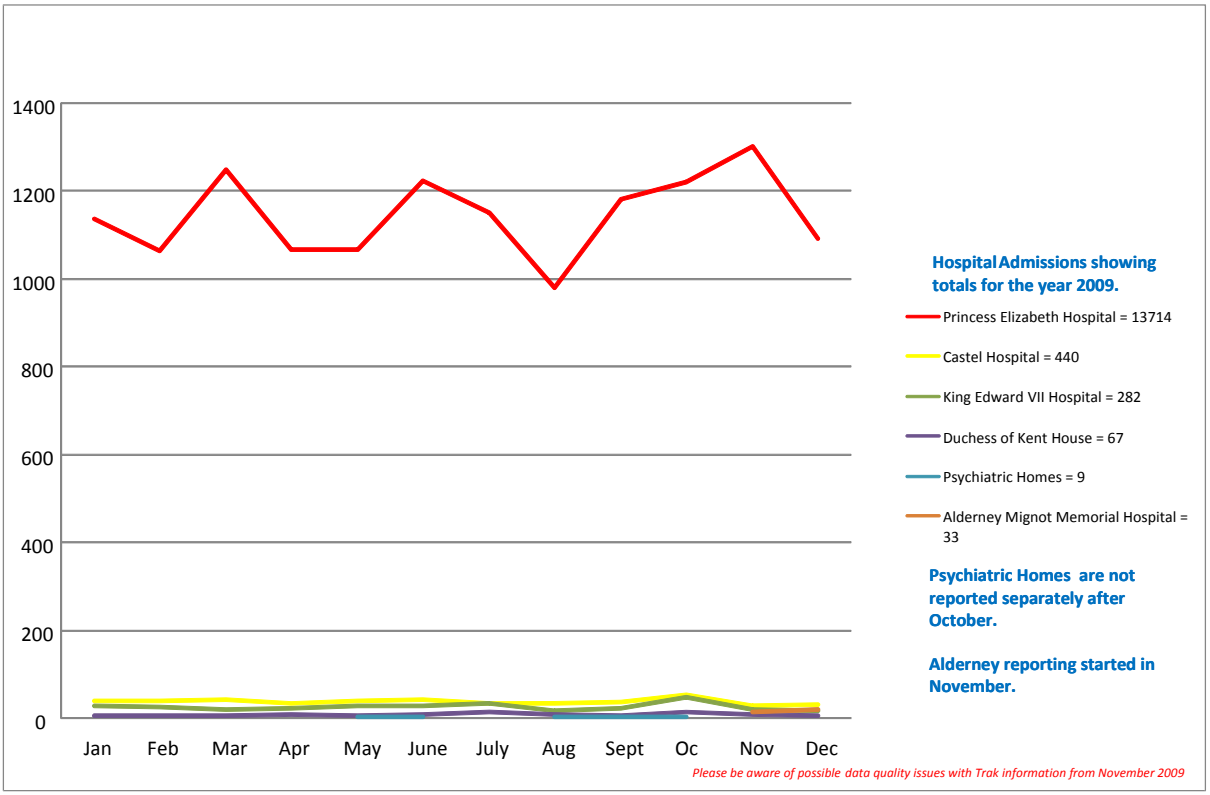


**Figure 19:** Number of admissions to Guernsey Hospitals in 2009
**(consultant episode = 1)**




| | |
|---|---|
| **Recommendation 27:** | HSSD should consider the further development of good quality management information from the new system as a priority and to continue to review lessons learnt from implementation issues. |

.

## Sexual Health Unit

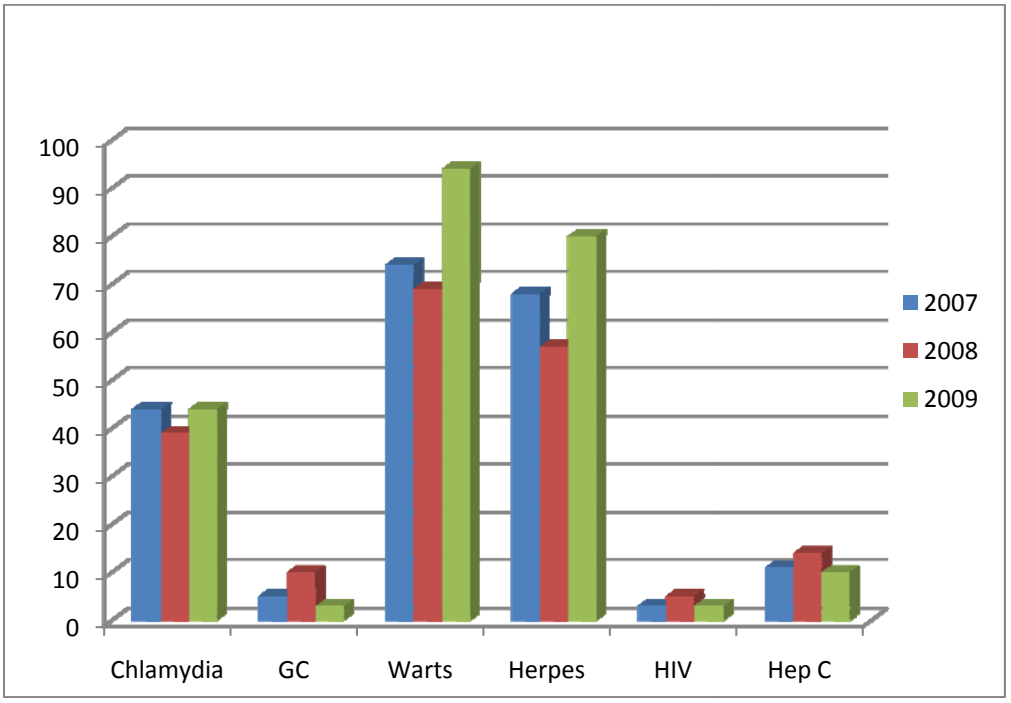
The service sees a variety of sexually transmitted infections (Fig 20).

Achievements during the year included:

- Following relocation to new premises within the Castel Hospital, the service became fully operational in February 2009. This new clinic benefits from clean and modern surroundings that are compliant with current infection control standards and regulations. In general, this move has been popular with both staff and service users.

- Protocols for screening for sexually transmitted infections were developed in 2008 and modified in 2009 using the UK National Screening Guidelines but taking into account local epidemiology. This has allowed the monitoring of trends and emerging infections.

**Figure 20:** Types of confirmed cases seen in the Sexual Health Unit, by Year. (GC = gonococcus, HIV = human immunodeficiency virus, Hep C = hepatitis C)




- The HIV treatment programme is run in collaboration with a centre of excellence, University College, London. This has enabled the unit to be compliant with guidelines issued by the British HIV Association (BHIVA). Engagement of staff working with the media is aimed at promotion of a greater understanding of HIV/AIDS locally.

- The hepatitis B and C treatment programme is also run in collaboration with a centre of excellence, The Royal Free Hospital, London. Patients benefit from a quarterly visit from clinicians to ensure the provision of high quality care locally. Injecting drug use is the principle driver of hepatitis C infection in Guernsey and preventative strategies have therefore included harm minimisation as a key strategy, working within the framework of the Bailiwick drug and alcohol strategy.

Future developments

- To reduce the impact of Chlamydia infections by expansion of the availability of Chlamydia testing.

- To improve the provision of sexual health services to Alderney in collaboration with local health care professionals.

- To explore the feasibility of establishing a nurse-led out-reach clinic targeted at 16 to 20 year olds.

- To continue with the provision with high quality care for individuals living with hepatitis and HIV in the Bailiwick.

- To pilot programme budgeting for HSSD.

## States Analyst

Achievements during the year included:

- The laboratory achieved accreditation for Total Organic Carbon content, which is a measure of the amount of organic matter in samples.

- The laboratory also received accreditation for *Legionella* in water samples in building maintenance programmes.

- In June 2009 the laboratory was visited by the UK accreditation service, who reported no serious defects.

- 2009 was the busiest year ever recorded for the laboratory, well done to all the staff!

Future Developments

- The current States Analyst is due to retire in 2011, and his replacement will be a crucial appointment for the Laboratory.

- The laboratory's main equipment for detecting drugs, a High Pressure Liquid Chromatograph with Diode Array Detection, requires replacement with a gas chromatograph – mass spectrometer, which will separate and unequivocally identify (with a few exceptions) components of a mixture.

- The future of alcohol analyses on the island requires review.

## Vital Statistics 2008 **(amended from 2008-9 annual report)**

| • **Births and birth-related data** | **Guernsey** | |
|---|---|---|
| | **2008** | **5 Year Mean 2004-2008** |
| **Estimated mid year resident population** | 60,488 | 60,206 |
| • Males* | 29,686 | 29,489 |
| • Females* | 30,802 | 30,717 |
| • M : F | 0.96 | 0.96 |
| **Marriages:** | 300 | 322 |
| • marriages/000 | 5.0 | 5.3 |
| **Divorces:** | 141 | 145 |
| • divorces/000 | 2.3 | 2.4 |
| **Divorces: Marriages** | 0.47 | 0.45 |
| **Live birth registrations:** | 651 | 624 |
| • males | 332 | 330 |
| • females | 319 | 294 |
| • M : F | 1.04 | 1.12 |
| **Births outside marriage** | 264 | 236 |
| • % all births | 41% | 38% |
| **Stillbirths:** | 3 | 3 |
| • rate/000 live births | 4.6 | 4.4 |
| **Infant deaths: (<1 year)** | 0 | 1 |
| • infant death rate/000 LB | 0.0 | 2.3 |
| **Crude Birth Rate/000** | 10.8 | 10.4 |
| **Natural increase per annum:** | 175 +0.29% | +0.19% |

* includes '*natural increase*', but excludes net migration

- **Deaths and death-related data** (ICD 10 Codes)

**Guernsey**

| | 2008 | 5 Year Mean 2004-2008 |
|---|---|---|
| **Total deaths: (number)** | 476 | 511 |
| • males | 219 | 244 |
| • females | 257 | 267 |
| • M : F | 0.85 | 0.91 |
| **Crude death rate:/000** | 7.9 | 8.5 |
| **Circulatory deaths (I00-I99): No** | 168 | 172 |
| • males/- rate/00,000 | 263 | 287 |
| • females - rate/00,000 | 292 | 285 |
| **Cancer deaths (C00-C97/D00-D48): No** | 136 | 135 |
| • males- rate/00,000 | 239 | 232 |
| • females- rate/00,000 | 211 | 218 |
| **Lung cancer deaths(C33/4): No** | 35 | 33 |
| • males - rate/00,000 | 71 | 66 |
| • females- rate/00,000 | 45 | 43 |
| **Breast cancer deaths (C50): No** | 6 | 9 |
| • females- rate/00,000 | 19 | 28 |
| **Alcoholic liver disease and cirrhosis (K70/3/4):No** | 4 | 4 |
| • males - rate/00,000 | 1 | 8 |
| • females - rate/00,000 | 6 | 3 |
| **Injury deaths (S00-X59) (excluding suicide): No** | 6 | 8 |
| • males- rate/00,000 | 10 | 18 |
| • females- rate/00,000 | 10 | 9 |
| **Suicide deaths* (X60-X84): No** | 1 | 2 |
| • males **-** rate/00,000 | 3 | 7 |
| • females - rate/00,000 | 0 | 1 |

Population estimates are based on 2001 census figures, with the an increase for births, a decrease for deaths, and excluding migration changes, and are consistent with previous public health annual report

## GUERNSEY - DEATHS BY ICD 10 CODE AND AGE GROUPS - 2008

| ICD 10 Code | Cause of Death | Age Under 1 | | Age 1-14 | | Age 15-24 | | Age 25-44 | | Age 45-64 | | Age 65-74 | | Age 75+ | | Age All Ages | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F |
| **Group I** | | | | | | | | | | | | | | | | | |
| **Infectious and parasitic diseases** | | | | | | | | | | | | | | | | | |
| A41 | Other septicaemia | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 4 | 3 | 4 |
| **Total Group I** | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1** | **0** | **2** | **4** | **3** | **4** |
| **Group II** | | | | | | | | | | | | | | | | | |
| **Neoplasms** | | | | | | | | | | | | | | | | | |
| C06 | Malignant neoplasm of other and unspecified parts of mouth | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| C10 | Malignant neoplasm of oropharynx | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| C15 | Malignant neoplasm of oesophagus | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 2 | 1 | 0 | 5 | 2 |
| C16 | Malignant neoplasm of stomach | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| C18 | Malignant neoplasm of colon | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 2 | 3 | 3 | 5 |
| C19 | Malignant neoplasm of rectosigmoid junction | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| C20 | Malignant neoplasm of rectum | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| C22 | Malignant neoplasm of liver and intrahepatic bile ducts | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 3 | 0 |
| C25 | Malignant neoplasm of pancreas | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 | 0 | 4 | 4 | 6 |
| C26 | Malignant neoplasm of other and ill-defined digestive organs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 |
| C34 | Malignant neoplasm of bronchus and lung | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 3 | 5 | 4 | 11 | 7 | 21 | 14 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C41 | Malignant neoplasm of bone and articular cartilage of other and unspecified sites | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| C43 | Malignant melanoma of skin | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 1 | 3 |
| C44 | Other malignant neoplasms of skin | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| C45 | Mesothelioma | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 |
| C50 | Malignant neoplasm of breast | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 3 | 0 | 6 |
| C56 | Malignant neoplasm of ovary | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 3 | 0 | 7 |
| C61 | Malignant neoplasm of prostate | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 8 | 0 | 9 | 0 |
| C64 | Malignant neoplasm of kidney, except renal pelvis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| C67 | Malignant neoplasm of bladder | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 3 | 4 | 3 |
| C71 | Malignant neoplasm of brain | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 2 | 0 | 3 | 3 |
| C73 | Malignant neoplasm of thyroid gland | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| C76 | Malignant neoplasm of other and ill-defined sites | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| C78 | Secondary malignant neoplasm of respiratory and digestive organs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| C79 | Secondary malignant neoplasm of other sites | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| C80 | Malignant neoplasm without specification of site | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 3 | 3 |
| C83 | Diffuse non-Hodgkin's lymphoma | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 3 | 1 |
| C85 | Other and unspecified types of non-Hodgkin's lymphoma | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| C90 | Multiple myeloma and malignant plasma cell neoplasms | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 |
| C92 | Myeloid leukaemia | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 0 |
| D47 | Other neoplasms of uncertain or unknown behaviour of lymphoid, haematopoietic and related tissue | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| **Total Group II** | | **0** | **0** | **0** | **0** | **0** | **0** | **1** | **0** | **17** | **14** | **18** | **17** | **35** | **34** | **71** | **65** |

**Group IV**

**Endocrine, nutritional and metabolic diseases**

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E14 | Unspecified diabetes mellitus | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| E46 | Unspecified protein-energy malnutrition | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| **Total Group IV** | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |

**Group V**

**Mental and behavioural disorders**

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| F01 | Vascular dementia | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 2 | 1 |
| F03 | Unspecified dementia | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 8 | 2 | 8 |
| **Total Group V** | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1** | **0** | **3** | **9** | **4** | **9** |

**Group VI**

**Diseases of the nervous system**

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G12 | Spinal muscular atrophy and related syndromes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 2 | 1 |
| G30 | Alzheimer's disease | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 3 | 1 |
| G31 | Other degenerative diseases of nervous system, not elsewhere classified | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| G35 | Multiple sclerosis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| G71 | Primary disorders of muscles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| G93 | Other disorders of brain | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| **Total Group VI** | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1** | **1** | **0** | **1** | **7** | **1** | **8** | **3** |

**Group IX**

**Diseases of the circulatory system**

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I09 | Other rheumatic heart diseases | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| I21 | Acute myocardial infarction | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 2 | 14 | 12 | 18 | 14 |
| I24 | Other acute ischemic heart diseases | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| I25 | Chronic ischemic heart disease | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 4 | 2 | 7 | 2 |
| I26 | Pulmonary embolism | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 5 | 2 | 7 |
| I27 | Other pulmonary heart diseases | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| I31 | Other diseases of pericardium | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 3 |
| I35 | Nonrheumatic aortic valve disorders | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| I42 | Cardiomyopathy | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 |
| I46 | Cardiac arrest | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 4 | 4 | 4 |
| I49 | Other cardiac arrhythmias | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| I50 | Heart failure | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 1 | 7 | 0 | 11 | 24 | 23 | 25 |
| I51 | Complications and ill-defined descriptions of heart disease | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 1 |
| I61 | Intracerebral hemorrhage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| I63 | Cerebral infarction | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 2 | 2 | 2 |
| I64 | Stroke, not specified as hemorrhage or infarction | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 12 | 15 | 13 | 16 |
| I67 | Other cerebrovascular diseases | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 10 | 3 | 10 |
| I71 | Aortic aneurysm and dissection | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| **Total Group IX** | | **0** | **0** | **0** | **0** | **0** | **0** | **2** | **0** | **12** | **3** | **14** | **4** | **50** | **83** | **78** | **90** |

**Group X**

**Diseases of the respiratory system**

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| J18 | Pneumonia, organism unspecified | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 13 | 17 | 16 | 19 |
| J22 | Unspecified acute lower respiratory infection | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 |
| J43 | Emphysema | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 3 |
| J44 | Other chronic obstructive pulmonary disease | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 7 | 7 | 7 | 11 |
| J45 | Asthma | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| J69 | Pneumonitis due to solids and liquids | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 1 | 2 | 2 |
| J81 | Pulmonary edema | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| J84 | Other interstitial pulmonary diseases | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 2 |
| J96 | Respiratory failure, not elsewhere classified | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 4 | 1 |
| **Total Group X** | | **0** | **0** | **0** | **0** | **0** | **0** | **1** | **0** | **3** | **3** | **2** | **7** | **27** | **33** | **33** | **43** |

**Group XI**

**Diseases of the digestive system**

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K63 | Other diseases of intestine | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| K65 | Peritonitis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| K70 | Alcoholic liver disease | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 2 |
| K92 | Other diseases of the digestive system | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| **Total Group XI** | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **3** | **3** | **0** | **0** | **0** | **2** | **3** | **5** |

**Group XIV**

**Diseases of the genitourinary system**

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N17 | Acute renal failure | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| N18 | Chronic renal failure | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 1 |
| N19 | Unspecified renal failure | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 3 | 2 | 4 |
| N39 | Other disorders of urinary system | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| **Total Group XIV** | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1** | **0** | **0** | **0** | **0** | **5** | **6** | **5** | **7** |

**Group XVI**

**Certain conditions originating in the perinatal period**

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P95 | Fetal death of unspecified cause | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 |
| **Total Group XVI** | | **2** | **1** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **2** | **1** |

**Group XVIII**

**Symptoms, signs & abnormal clinical & laboratory findings, nec**

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R09 | Other symptoms and signs involving the circulatory and respiratory systems | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| R53 | Malaise and fatigue | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| R54 | Senility | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 23 | 5 | 23 |
| **Total Group XVIII** | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **6** | **25** | **6** | **25** |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Group XIX** | | | | | | | | | | | | | | | | | |
| **Injury, poisoning and certain other consequences of external causes** | | | | | | | | | | | | | | | | | |
| S06 | Intracranial injury | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| S09 | Other and unspecified injuries of head | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| S72 | Fracture of femur | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| T51 | Toxic effect of alcohol | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| **Total Group XIX** | | **0** | **0** | **0** | **0** | **0** | **0** | **1** | **0** | **0** | **1** | **0** | **0** | **0** | **2** | **1** | **3** |
| **Group XX** | | | | | | | | | | | | | | | | | |
| **External causes of morbidity and mortality** | | | | | | | | | | | | | | | | | |
| W31 | Contact with other and unspecified machinery | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| V29 | Motorcycle rider injured in other and unspecified transport accidents | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| X70 | Intentional self harm (suicide) by hanging, strangulation and suffocation | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| **Total Group XX** | | **0** | **0** | **1** | **0** | **0** | **0** | **2** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **3** | **0** |
| | Cause of death unascertained - open verdict | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| | Awaiting inquest | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| **Total Deaths** | | **2** | **1** | **1** | **0** | **0** | **0** | **7** | **1** | **37** | **25** | **36** | **29** | **136** | **201** | **219** | **257** |

**Alderney Vital Statistics – 2008**

| | Males | Females | Total 2008 | 5 year mean 2004-2008 |
|---|---|---|---|---|
| **Population*** | 1,108 | 1,130 | **2,238** | 2,247 |
| • **M : F** | | | **0.98** | 0.98 |
| **Births** - In Guernsey: | 5 | 4 | **9** | 12 |
| **Births** - In Alderney: | 1 | 1 | **2** | 2 |
| **Total Births** to Alderney residents: | 6 | 5 | **11** | 14 |
| **Births** outside marriage | 2 | 1 | **3** | 4 |
| **Crude Birth Rate/000** | | | **5** | 6.4 |
| **Marriages r**egistered in Alderney: | | | **20** | 16 |
| **Deaths** registered in Alderney: | 15 | 12 | **27** | 27 |
| **Crude Death Rate/000** | | | **12.1** | 12.2 |
| **Natural Increase: **** | | | **-16 -0.7%** | -0.6% |

*****Includes 'natural increase, but excludes net migration.

******'*Natural increase'* is the difference between the crude birth and the death rates, expressed as a percentage of the resident population.

Source: Alderney States Office

**Sark Vital Statistics – 2008**

| | Males | Females | Total 2008 |
|---|---|---|---|
| **Population*** | | | **650** |
| *** M : F** | | | |
| **Births** - In Guernsey: | 2 | 1 | **3** |
| **Births** - In Sark: | 0 | 1 | **1** |
| **Total Births** to Sark residents: | 2 | 2 | **4** |
| **Births** outside marriage | 1 | 1 | **2** |
| **Crude Birth Rate/000** | | | **6.15** |
| **Deaths** registered in Sark: | | | **1*** |
| **Crude Death Rate/000** | | | **1.53** |

*****Includes 'natural increase, but excludes net migration.

*One Sark resident died in the Princess Elizabeth Hospital.
One visitor died in Sark, but was taken to the Princess Elizabeth Hospital.

Source: Dr Peter Counsell, who obtained data from the Sark Greffier

- **Births and birth-related data**

| | Guernsey 2009 | Guernsey 5 Year Mean 2005-2009 |
|---|---|---|
| **Estimated mid year resident population** | 60,206 | 60,341 |
| • Males* | 29,796 | 29,585 |
| • Females* | 30,846 | 30,756 |
| • M : F | 0.97 | 0.96 |
| **Marriages:** | 329 | 317 |
| • marriages/000 | 5.4 | 5.3 |
| **Divorces:** | 162 | 140 |
| • divorces/000 | 2.7 | 2.3 |
| **Divorces : Marriages** | 0.49 | 0.44 |
| **Live birth registrations:** | 690 | 644 |
| • males | 366 | 341 |
| • females | 324 | 304 |
| • M : F | 1.13 | 1.12 |
| **Births outside marriage** | 285 | 252 |
| • % all births | 41% | 39% |
| **Stillbirths:** | 6 | 4 |
| • rate/000 live births | 8.7 | 5.8 |
| **Infant deaths: (<1 year)** | 0 | 1 |
| • infant death rate/000 LB | 0.0 | 1.3 |
| **Crude Birth Rate/000** | 11.4 | 10.7 |
| **Natural increase per annum:** | 154 +0.25% | +0.22% |

* includes '*natural increase*', but excludes net migration

## Vital Statistics 2009

- **Deaths and death-related data** (By ICD 10 Codes)

**Guernsey**

| | 2009 | 5 Year Mean 2005-2009 |
|---|---|---|
| **Total deaths: (number)** | 536 | 510 |
| • males | 256 | 246 |
| • females | 280 | 264 |
| • M : F | 0.91 | 0.93 |
| **Crude death rate:/000** | 8.8 | 8.5 |
| **Circulatory deaths (I00-I99): No** | 181 | 171 |
| • males/- rate/00,000 | 242 | 281 |
| • females - rate/00,000 | 353 | 287 |
| **Cancer deaths (C00-C97/D00-D48): No** | 171 | 140 |
| • males- rate/00,000 | 329 | 252 |
| • females- rate/00,000 | 237 | 212 |
| **Lung cancer deaths(C33/4): No** | 33 | 32 |
| • males - rate/00,000 | 74 | 65 |
| • females- rate/00,000 | 36 | 41 |
| **Breast cancer deaths (C50): No** | 8 | 9 |
| • females- rate/00,000 | 26 | 29 |
| **Alcoholic liver disease and cirrhosis (K70/3/4):No** | 5 | 4 |
| • males - rate/00,000 | 7 | 8 |
| • females - rate/00,000 | 10 | 4 |
| **Injury deaths (S00-X59) (including suicide): No** | 5 | 7 |
| • males- rate/00,000 | 14 | 16 |
| • females- rate/00,000 | 3 | 7 |
| **Suicide deaths (X60-X84): No** | 1 | 2 |
| • males **-** rate/00,000 | 3 | 5 |
| • females - rate/00,000 | 0 | 1 |

**Note**: Outstanding inquests of the death of one female aged 25-44 years and therefore cause of death at present 'unclassified'.

Population estimates are based on 2001 census figures, with an increase for births, a decrease for deaths and excluding migration changes, and are consistent with previous public health annual report.

## GUERNSEY - DEATHS BY ICD 10 CODE AND AGE GROUPS - 2009

| | | Age Under 1 | | Age 1-14 | | Age 15-24 | | Age 25-44 | | Age 45-64 | | Age 65-74 | | Age 75+ | | Age All Ages | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F |
| **Group I** | | | | | | | | | | | | | | | | | |
| **Infectious and parasitic diseases** | | | | | | | | | | | | | | | | | |
| A41 | Other septicaemia | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 4 | 5 | 5 | 7 |
| B24 | Unspecified human immunodeficiency virus [HIV] disease | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| **Total Group I** | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1** | **0** | **1** | **2** | **4** | **5** | **6** | **7** |
| **Group II** | | | | | | | | | | | | | | | | | |
| **Neoplasms** | | | | | | | | | | | | | | | | | |
| C01 | Malignant neoplasm of base of tongue | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| C04 | Malignant neoplasm of floor of mouth | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| C07 | Malignant neoplasm of parotid gland | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| C09 | Malignant neoplasm of tonsil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| C15 | Malignant neoplasm of oesophagus | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 2 | 4 | 5 | 8 | 7 |
| C16 | Malignant neoplasm of stomach | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 |
| C18 | Malignant neoplasm of colon | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 7 | 4 | 9 | 5 |
| C20 | Malignant neoplasm of rectum | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 |
| C22 | Malignant neoplasm of liver and intrahepatic bile ducts | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| C25 | Malignant neoplasm of pancreas | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 3 | 1 | 4 |
| C26 | Malignant neoplasm of other and ill-defined digestive organs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| C32 | Malignant neoplasm of larynx | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 2 | 0 |
| C34 | Malignant neoplasm of bronchus and lung | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 3 | 8 | 4 | 9 | 4 | 22 | 11 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C37 | Malignant neoplasm of thymus | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| C43 | Malignant melanoma of skin | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| C45 | Mesothelioma | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 3 | 0 |
| C49 | Malignant neoplasm of other connective and soft tissue | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| C50 | Malignant neoplasm of breast | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 3 | 0 | 8 |
| C51 | Malignant neoplasm of vulva | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| C53 | Malignant neoplasm of cervix uteri | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| C54 | Malignant neoplasm of corpus uteri | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| C56 | Malignant neoplasm of ovary | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 5 |
| C61 | Malignant neoplasm of prostate | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 18 | 0 | 20 | 0 |
| C64 | Malignant neoplasm of kidney, except renal pelvis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 3 | 2 | 7 | 2 |
| C67 | Malignant neoplasm of bladder | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 3 | 2 |
| C71 | Malignant neoplasm of brain | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 1 | 1 | 0 | 2 | 4 |
| C78 | Secondary malignant neoplasm of respiratory and digestive organs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 |
| C79 | Secondary malignant neoplasm of other sites | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| C80 | Malignant neoplasm without specification of site | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 3 | 6 | 4 | 7 |
| C84 | Peripheral and cutaneous T-cell lymphomas | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| C90 | Multiple myeloma and malignant plasma cell neoplasms | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 3 |
| C92 | Myeloid leukaemia | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 3 | 5 | 3 |
| C93 | Monocytic leukaemia | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| D38 | Neoplasm of uncertain or unknown behaviour of middle ear and respiratory and intrathoracic organs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| **Total Group II** | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **3** | **15** | **17** | **27** | **10** | **56** | **43** | **98** | **73** |

**Group V**

**Mental and behavioural disorders**

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| F00 | Dementia in Alzheimer's disease | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| F01 | Vascular dementia | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| F03 | Unspecified dementia | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 12 | 2 | 13 |
| **Total Group V** | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1** | **3** | **14** | **3** | **15** |

**Group VI**

**Diseases of the nervous system**

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G12 | Spinal muscular atrophy and related syndromes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| G20 | Parkinson's disease | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 |
| G30 | Alzheimer's disease | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 |
| G35 | Multiple sclerosis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| G40 | Epilepsy | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 |
| **Total Group VI** | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1** | **2** | **1** | **1** | **4** | **2** | **6** | **5** |

**Group IX**
**Diseases of the circulatory system**

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I21 | Acute myocardial infarction | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 4 | 0 | 9 | 13 | 14 | 14 |
| I24 | Other acute ischemic heart diseases | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| I25 | Chronic ischemic heart disease | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 6 | 4 | 7 | 5 |
| I26 | Pulmonary embolism | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 3 | 3 |
| I31 | Other diseases of pericardium | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 2 |
| I38 | Endocarditis, valve unspecified | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| I46 | Cardiac arrest | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 2 | 4 | 5 | 4 |
| I49 | Other cardiac arrhythmias | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| I50 | Heart failure | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 | 1 | 11 | 27 | 16 | 30 |
| I51 | Complications and ill-defined descriptions of heart disease | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| I60 | Subarachnoid hemorrhage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 1 | 3 | 3 |
| I61 | Intracerebral hemorrhage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 |
| I62 | Other nontraumatic intracranial hemorrhage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| I63 | Cerebral infarction | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 3 |
| I64 | Stroke, not specified as hemorrhage or infarction | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 8 | 32 | 10 | 33 |
| I67 | Other cerebrovascular diseases | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 2 | 7 | 2 |
| I71 | Aortic aneurysm and dissection | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 2 | 2 |
| I85 | Esophageal varices | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| **Total Group IX** | | **0** | **0** | **0** | **0** | **0** | **0** | **3** | **0** | **5** | **7** | **14** | **7** | **50** | **95** | **72** | **109** |

**Group X**

**Diseases of the respiratory system**

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| J15 | Bacterial pneumonia, not elsewhere classified | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| J18 | Pneumonia, organism unspecified | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 18 | 12 | 18 |
| J22 | Unspecified acute lower respiratory infection | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 |
| J43 | Emphysema | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 3 | 0 |
| J44 | Other chronic obstructive pulmonary disease | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 9 | 5 | 14 | 5 |
| J47 | Bronchiectasis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 2 |
| J69 | Pneumonitis due to solids and liquids | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 0 |
| J84 | Other interstitial pulmonary diseases | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 2 | 1 |
| J96 | Respiratory failure, not elsewhere classified | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 1 | 5 | 1 | 8 | 2 |
| **Total Group X** | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **6** | **1** | **8** | **1** | **30** | **28** | **44** | **30** |

**Group XI**
**Diseases of the digestive system**

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K40 | Inguinal hernia | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| K55 | Vascular disorders of intestine | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 0 |
| K62 | Other diseases of anus and rectum | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| K63 | Other diseases of intestine | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 |
| K65 | Peritonitis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 2 |
| K66 | Other disorders of peritoneum | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| K70 | Alcoholic liver disease | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 2 | 1 |
| K74 | Fibrosis and cirrhosis of liver | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 |
| K76 | Other diseases of liver | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| K85 | Acute pancreatitis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| K92 | Other diseases of the digestive system | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| **Total Group XI** | | **0** | **0** | **0** | **0** | **0** | **0** | **2** | **0** | **2** | **2** | **2** | **3** | **2** | **7** | **8** | **12** |

**Group XIV**
**Diseases of the genitourinary system**

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N17 | Acute renal failure | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| N18 | Chronic renal failure | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 1 |
| N19 | Unspecified renal failure | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 4 |
| N32 | Other disorders of bladder | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| N39 | Other disorders of urinary system | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| **Total Group XIV** | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1** | **4** | **6** | **4** | **7** |

**Group XVI**

**Certain conditions originating in the perinatal period**

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P95 | Fetal death of unspecified cause | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| **Total Group XVI** | | **3** | **3** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **3** | **3** |

**Group XIV**

**Congenital malformations, deformations & chromosomal abnormalities**

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q00 | Anencephaly and similar malformations | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| **Total Group XIV** | | **0** | **1** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1** |

**Group XVIII**

**Symptoms, signs & abnormal clinical & laboratory findings, nec**

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R02 | Gangrene, not elsewhere classified | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| R54 | Senility | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 16 | 4 | 16 |
| R57 | Shock, not elsewhere classified | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| **Total Group XVIII** | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1** | **0** | **4** | **17** | **5** | **17** |

**Group XIX**

**Injury, poisoning & certain consequences of external causes**

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S06 | Intracranial injury | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| S09 | Other and unspecified injuries of head | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| S72 | Fracture of femur | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| **Total Group XIX** | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **2** | **1** | **2** | **1** |

**Group XX**

**External causes of morbidity & mortality**

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V47 | Car occupant injured in collision with fixed or stationary object | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| X42 | Accidental poisoning by and exposure to narcotics and psychodysleptics [hallucinogens], not elsewhere | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| X70 | Intentional self harm (suicide) by hanging, strangulation, and suffocation | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| **Total Group XX** | | **0** | **0** | **0** | **0** | **0** | **0** | **2** | **0** | **1** | **0** | **0** | **0** | **0** | **0** | **3** | **0** |
| | Awaiting inquest | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| **Total Deaths** | | **3** | **4** | **1** | **0** | **1** | **0** | **8** | **3** | **31** | **29** | **54** | **26** | **159** | **218** | **257** | **280** |

**Alderney Vital Statistics – 2009**

| | Males | Females | Total 2009 | 5 year mean 2005-2009 |
|---|---|---|---|---|
| **Population*** | 1105 | 1122 | **2,227** | 2,241 |
| • **M : F** | | | | |
| **Births** - In Guernsey: | 5 | 4 | **9** | 11 |
| **Births** - In Alderney: | 0 | 0 | **0** | 2 |
| **Total Births** to Alderney residents: | 5 | 4 | **9** | 13 |
| **Births** outside marriage | 5 | 0 | **5** | 5 |
| **Crude Birth Rate/000** | | | **4.1** | 5.8 |
| **Marriages r**egistered in Alderney: | | | **22** | 18 |
| **Deaths** registered in Alderney: | 8 | 12 | **20** | 25 |
| **Crude Death Rate/000** | | | **9.0** | 11.1 |
| **Natural Increase: ** | | | **-11 -0.5%** | -0.5% |

*****Includes 'natural increase, but excludes net migration.

******'*Natural increase'* is the difference between the crude birth and the death rates, expressed as a percentage of the resident population.

**Sark Vital Statistics – 2009**

| | Males | Females | Total 2009 |
|---|---|---|---|
| **Population** | | | **605** |
| **M : F** | | | |
| **Births** - In Guernsey: | 4 | 0 | **4** |
| **Births** - In Jersey: | 1 | 0 | **1** |
| **Total Births** to Sark residents: | 5 | 0 | **5** |
| **Births** outside marriage | 3 | 0 | **3** |
| **Crude Birth Rate/000** | | | **8.3** |
| **Marriages r**egistered in Sark: | | | **4** |
| **Deaths** registered in Sark: | | | **3*** |
| **Crude Death Rate/000** | | | **5.0** |

The Population is estimated from the number of tax payers, the number of school children, plus the number of people registered with the Procureur who do not pay tax. This excludes visitors.

Source: Dr Peter Counsell, who obtained data from the Sark Greffier

## Appendix Two

## A.2 Staff employed within the Public Health Directorate during 2009

**Director of Public Health/Medical Officer of Health/Chief Medical Officer**
Dr Stephen Bridgman MBCHB MD MPH Dip Biomech FRCS (Ed) FRCS (Glas) FFPH

**Deputy Medical Officer of Health (Part-Time)**
Dr Brian Parkin MB BS BSc FRCP MRCGP DRCOG

**Personal Assistant**
Mrs Yvonne Kaill

***Clinical Governance Unit:***

**Acting Clinical Governance Manager**
Mrs Elaine Burgess RSCN, ENB329/998, C&G 7307, MSc (Health Sciences), (May to November 2009)

**Clinical Risk Manager/Patient Safety Advisor**
Mrs Lynn Lewendon RGN (until 14th May 2009)
Ms Trish De La Mare Reg. PharmTech, PTQA Dip, FDSc MM
(from 22nd June 2009)

**PA to Patient Safety Advisor**
Mrs Jo McGinn

**Clinical Audit Nurses**
Miss Eithne Downey RGN Dip HE BN MSc (Health Education)
Mr Brian O'Connell

***Environmental Health Unit:***

**Director of Environmental Health and Pollution Regulation**
Mr John Cook, Chartered Environmental Health Practitioner (until 30th September 2009)
Mrs Val Cameron Ch EHO MREHIS MCIEH MBA FFPH (from 1st October 2009)

**Deputy Chief Environmental Health Officer**
Mr Tony Rowe MCIEH

**Environmental Health Officers**
Mr Tobin Cook MSc Chartered Environmental Health Practitioner
Mrs Jane Cutting GradCIEH
Mr Philip Goodchild MCIEH
Mr Stuart Wiltshire MCIEH

**Waste Regulation Officer**
Mr Simon Welch BSc(Hons) CEnv MCIWM CMIOSH AIEMA

**Pest Control Officers**
Mr Paul Tostevin
Mr Michael Brache

**Secretary**
Mrs Diane Harding

***Health Information and Clinical Coding Unit:***

**Health Information Analyst**
Mrs Jenny Elliott

**Senior Clinical Coder**
Mrs Margaret Cann, ACC

**Clinical Coder**
Mrs Sue Sheppard

***Health Promotion Unit:***

**Health Promotion Manager**
Miss Yvonne Le Page Bed (Hons) PgDip (HealthPromotion) FRSPH

**Health Promotion Officer (smoking and heart disease)**
Mrs Gerry Le Roy RGN

**Health Promotion Officer (cancer)**
Mrs Diane Mathews H.Dip

**Health Promotion Officer (obesity)**
Mrs Lucy Whitman MSc (Conservation Biology) PGDip (Health Promotion)

**Health Promotion Officer (health inequalities)**
Mrs Lynn Spencer HNC

**Resources Officer**
Mrs Stephanie Charlwood

**Secretary**
Mrs Bella Mahy

***Infection Prevention and Control Unit:***

Mrs Elaine Burgess RSCN, ENB329/998, C&G 7307, MSc (Health Sciences)
Mrs Kay Bull RGN, ENB329/998

***Sexual Health Unit:***
Dr Nikki Brink MBChB MMed FRCPath
Mrs Stella Vile RN
Mr Mauro Sensi RN
Ms Marianne Duquemin BSc Hons PGDip (CBT)

***States Analyst Laboratory***

**States Analyst**
Dr David Mortimer BA BSc(Hons) PhD CChem FRSC MCIWEM

Mr Laurence Knight BSc (Hons) CChem MRSC
Mr Michael Hughes BSc (Hons)MIBiol
Mrs Joanne Alder, BSc(Hons)
Mrs C. Joan Le Tissier HNC
Mr John Bullock
Mrs. Carol Deveau (until January 2009)
Mrs. Julie Perring (from January 2009)

**Recommendations:**

| | |
|---|---|
| **Recommendation 1:** Page 14 | The legislation currently under development to replace the Emergency Powers (Bailiwick of Guernsey) Law, 1965, as amended should clarify the arrangements for specifically addressing the risk of public health emergencies. |
| **Recommendation 2:** Page 15 | The relationship between health policy bodies in the UK should be reviewed and options for greater direct relationships explored. The greater involvement and representation of Guernsey's interested through the UK to WHO should also be assessed to enable more efficient channels of communication to be developed |
| **Recommendation 3:** Page 16 | Approach Sark with an offer to work with insular authorities and the relevant UK authorities to review Sark's compliance with International Health Regulations and its systems for dealing with public health emergencies. |
| **Recommendation 4:** Page 22 | Plan for other pandemic scenarios other than the worst case. |
| **Recommendation 5:** Page 22 | Significant businesses including some other States Departments should obtain professional occupational health advice. |
| **Recommendation 6:** Page 23 | Surge capacity and resilience for public health emergencies should be strengthened. |
| **Recommendation 7:** Page 23 | The public should continue to implement hygiene measures to prevent the spread of respiratory diseases, both in Guernsey and abroad. |
| **Recommendation 8:** Page 29 | Introduce population surveillance of overweight and obesity in pregnant women to monitor trends. |
| **Recommendation 9:** Page 29 | Local standards are set following recent guidance in obesity and pregnancy. |
| **Recommendation10:** Page 29 | Training on obesity management is provided to people working with pregnant women and prospective mothers. |
| **Recommendation 11:** Page 29 | Implementation of local standards is assessed with clinical audit and patient survey. |

| | |
|---|---|
| **Recommendation 12:** Page 34 | The Bailiwick should audit its services against recent evidence-based guidance on the prevention of cardiovascular disease. |
| **Recommendation 13:** Page 35 | A Bailiwick wide audit of the measurement of blood pressure should be a priority. |
| **Recommendation 14:** Page 36 | The general public should be familiar with the symptoms of stroke and seek early advice, as early intervention can improve outcomes. |
| **Recommendation 15:** Page 37 | HSSD should assess public awareness of the signs and symptoms of stroke and how to act and introduce an education campaign if necessary. |
| **Recommendation 16:** Page 37 | A study of factors in the history of acute stroke patients that might indicate areas for improved prevention. |
| **Recommendation 17:** Page 38 | Cerebral imaging should be available for all appropriate stroke patients. |
| **Recommendation 18:** Page 38 | Thrombolysis treatment should be available to treat all appropriate patients with cerebral infarction. |
| **Recommendation 19:** Page 38 | Stroke patients should be offered the daily provision of 45 minutes of appropriate therapy in their rehabilitation. |
| **Recommendation 20:** Page 38 | A cross-Bailiwick stroke task group should be formed to implement best-practice guidelines in the management of acute stroke in the most cost-effective and timely way. |
| **Recommendation 21:** Page 41 | Guernsey should set standards on ambient (outdoor) air pollution, based on the WHO air quality guidelines, to protect and improve public health. |
| **Recommendation 22:** Page 41 | An air quality strategy should be developed. |
| **Recommendation 23:** Page 42 | Indoor exposures to air pollution, such as smoking in cars and pollutants from cooking systems and heating systems should be effectively controlled through health promotion programmes and new legislation. |
| **Recommendation 24:** Page 42 | Regulation of smoking outside buildings, shops, restaurants, etc, should be considered in order to reduce risk of third party health and nuisance effects. |

| | |
|---|---|
| **Recommendation 25:**<br><br>Page 43 | Further local research should be carried out on air pollution in micro-environments, e.g. corners of buildings, under canopies. |

| | |
|---|---|
| **Recommendation 26:**<br><br>Page 47 | To agree and implement antibiotic prescribing guidelines to control the increased numbers of *Clostridium difficile* associated infections. |

| | |
|---|---|
| **Recommendation 27:**<br><br><br>Page 53 | HSSD should consider the further development of good quality management information from the new system as a priority and to continue to review lessons learnt from implementation issues. |

**Illustration:**



**Photo:**



**Table:**

## Some telephone numbers and websites of agencies and services

| | |
|---|---|
| Age Concern | 726312/267660 |
| Alcohol | http://www.drinking.nhs.uk/ |
| Alzheimer's Society | 244057/243815 |
| Drug Concern | 729000 |
| Environmental Health (9 to 5pm)<br>Environmental Health Out of hours | 711161<br>725241 |
| Exercise and fitness website | http://www.nhs.uk/LiveWell/Fitness/Pages/Fitnesshome.aspx |
| Healthy eating tips | http://www.eatwell.gov.uk/ |
| Health Information Exchange | 707470 |
| Family Planning | 07781 103 434/714954 |
| Guernsey Adolescent Smoking Project | 727899 |
| Guernsey Alcohol and Drug Abuse Council | 723255 |
| Guernsey Society for Cancer Relief | 263129 |
| Guernsey Women's Refuge (www.refuge.org.gg) | 721999 |
| Health Care Equipment Centre<br>*Hire and sales* | 729268 |
| Health Promotion Unit | 707311 |
| Les Bourgs Hospice | 251111 |
| MENCAP | 07781 456 801 |
| MIND Guernsey | 722959 |
| Pink Ladies | 07781 415 131 |
| Quitline (Smoking) | 233170 |
| Samaritans | 233170 |
| Sexual Health Clinic | 707707 |
| Women's Refuge | 721999<br>www.refuge.org.gg |

# 111th ANNUAL
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STATES OF GUERNSEY