

Methods of categorising diseases



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Introduction

At the beginning of my written assignment I have been asked to do a research about communicable and non-communicable disease and to choose one communicable and one non-communicable disease by explaining the similarities and the difference between both. My chosen diseases are malaria which is communicable and skin cancer which is non-communicable disease.

However my rationale for choosing malaria is because malaria affects many people in the UK and around the world. Malaria occurs where the Anopheles mosquito breeds, mainly in rural tropical areas. From a UK perspective, it's a threat to people travelling to malarial regions in Africa, Asia, the Middle East, central and southern America.

Also my rationale for skin cancer is because skin cancer affects many people in the UK and around the world. This means that skin cancer has become more prevalent in many parts of the world because people are spending more time in the Sun and are exposing more of their skin in the process. For example Australia, with high sunshine levels, has very high skin cancer rates. An estimated 2 out of every 3 people in most parts of the country will develop some form of skin cancer.

Definition of health, Health is seen as a resource for everyday life and not just the objective of living also it is a positive concept emphasising social and personal resources, as well as physical capabilities.

Definition of disease, Disease is abnormal state of the body and mind that causes discomfort or distress to the person affected or those in contact with the person.

For example the term is used broadly to include injuries, disabilities, syndromes, symptoms, deviant behaviours, and atypical variations of structure and function, while in other contexts these may be considered distinguishable categories.

Different methods of categorising diseases, including:

Physical diseases or illness are those which affect the functioning of parts of the human body, for example physical diseases are;

- Coronary heart disease
- Bronchitis
- Nephritis
- Arthritis

Psychological disease, more usually thought of as mental health disorder and those affect mind or intellect. The include;

- Depression
- Anxiety disorder
- Bipolar disorder

Social disease, or conditions associated with personal lifestyle choices and the environment disorders are those that raise from social deprivation also relationships those which have their roots in our personal activities, such as;

- Alcoholism

- Substance abuse
- Sexually transmitted disease

Similarly, alcoholism effects and depression and bulimia can be seen as having foundations in modern society. Although the other way of classifying disease is simply into communicable and non communicable diseases. Also in order to prevent communicable disease this is necessary to closely investigate all the factors contributing to the infection and its spread.

The similarities and the different between communicable and non communicable are; both are a form of disease and communicable diseases are caused by micro-organisms such as, viruses, bacteria, fungi and protozoa. However communicable disease is not caused by factors, but some factors may influence the outcome and spread of a communicable disease for example, tuberculosis is more prevalence in poor living conditions and influenza speeds quickly in overcrowded situations.

Non communicable disease may caused by explained tissue deterioration, deficiency of a matter essential for health, inherited genes also lifestyle choices or the environmental effect.

Spread of disease

Communicable disease spread from one organism to another, this means that it usually from human to human. Although Non communicable diseases do not spread from one person to another.

Life stage of effected individual;

Communicable disease can generally affect people at any life stage. As many infections result in immunity of a range of lengths. This means that the

individual is never invaded by the micro-organisms again, but rather that full-blown disease which never develops because the body defence rapidly overcome the infection. For example some infections have a greater impact at specific the life stage such as infancy and childhood, a (Measles and Diphtheria).

Non communicable diseases are often linked with specific life stages for example Alzheimer's disease and osteoarthritis are also linked with adulthood and CF and haemophilia with infancy and childhood.

The similarities and the difference between communicable and non-communicable disease

Communicable diseases are highly infectious and can be transmitted to other individuals through different modes like close physical contact, touching the things an infected person touched,

Non-communicable diseases cannot be transmitted by the aforementioned modes but are inherited, triggered, or developed through nutritional deficiencies and other causes.

The symptoms are measurable and obvious. Some of the most usual symptoms of communicable diseases include:

The symptoms would depend on the kind of infection a person is dealing with. Non-communicable disease includes;

Muscle aches, headaches, fever, cough and chills

Obesity, diabetes, skin cancer, Gaining of excess weight, unexplained excessive hunger and thirst

For sexually transmitted infections, the symptoms include smelly discharge, greenish or grayish discharge, ulcers in the genital areas, Lesions located in the sexual organ and different areas of the body especially when the infection has already spread and transferred to other body parts.

Hypertension. Blood pressure that reaches up to 140/90, most commonly, hypertension has no obvious signs and symptoms that are why it called 'silent killer.'

Communicable disease can be spread from person to person, either through skin to skin contact or through contaminated materials. There are many types of communicable diseases, with varying symptoms.

Do not always require long term support and treatment

Could occur at any age, though the impact of the disease may differ in each life stage and transmitted in a range of different ways. But the main communicable disease I have chosen is malaria.

What is malaria?

Malaria is an infectious disease caused by a parasite, which infects red blood cells. Malaria is characterized by cycles of chills, fever, pain, and sweating. Historical records suggest malaria has infected humans since the beginning of mankind.

Key facts

Malaria is a life-threatening disease caused by parasites that are transmitted to people through the bites of infected mosquitoes.

Malaria caused nearly one million deaths, mostly among African children and it's preventable and curable. Although malaria can decrease gross domestic product by as much as 1.3% in countries with high disease rates.

Non-immune travellers from malaria-free areas are very vulnerable to the disease when they get infected.

What are the signs and symptoms of malaria?

People with malaria typically have cycles of chills, fever, and sweating that recurs every 1, 2, or 3 days. The attack of the malaria parasites on the person's red blood cells makes the person's temperature rise and the person feel hot. The subsequent bursting of red blood cells makes the person feel cold and have hard, shaking chills.

Nausea,

vomiting,

Diarrhea often goes along with the fever.

The destruction of red blood cells can also cause jaundice (yellowing of the skin or whites of the eyes) and anaemia.

How soon after exposure do symptoms appear?

The time between a mosquito bite and the start of illness is usually 7 to 21 days, but some types of malaria parasites take much longer to cause

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symptoms. When infection occurs by blood transfusion, the time to the start of symptoms depends on the number of parasites in the transfusion.

Causes It?

Malaria is caused by any one of four species of one-celled parasites, called Plasmodium. The parasite is spread to people by the female Anopheles mosquito, which feeds on human blood. Although four species of malaria parasites can infect humans and cause illness, only malaria caused by Plasmodium falciparum is potentially life-threatening.

How is malaria spread?

Malaria is spread when an infected Anopheles mosquito bites a person. This is the only type of mosquito that can spread malaria. The mosquito becomes infected by biting an infected person and drawing blood that contains the parasite. When that mosquito bites another person, that person becomes infected. For example in the world, people who develop malaria are nearly always found to have contracted it while travelling in parts of the world where malaria is common.

Non-communicable disease is disease that is caused by something other than a pathogen. Heart disease is an example of a non-communicable disease. It might result from hereditary factors, improper diet, smoking, or other factors. Although most non-communicable diseases are chronic diseases, which means they are present either continuously off and on over a long time. A person may be born with the disease or a propensity to develop it. The disease may develop as a result of a person's lifestyle behaviours

Usually require long-term support and treatment

Are often linked with different life stage

But the main non-communication disease I have chosen is lung cancer

What is skin cancer?

Skin cancer is a malignant growth on the skin which can have many causes.

Although skin cancer is always one of the easiest forms of the disease to treat, the effectiveness of those treatments depends on how early the disease is caught. Skin cancer treatments can be less radical when the cancer is only in its early stages.

How does it affect the body?

The effects of skin cancer can vary; basal cell carcinoma is the most common form of skin cancer and it will often look like a mark on the skin that could be brown or red. Although it may be raised from the skin or flat to begin with. It generally doesn't spread and is considered to be a benign cancer. It can appear anywhere on the body but mainly on areas that are directly exposed to the sunlight.

For example skin cancer can be incredibly damaging to anyone however, especially if it is left without being seen and untreated for an extended period of time. This is because the longer skin cancer – or any type of cancer for that matter – is left untreated, the longer it is able to negatively affect the body and possibly spread to other parts of the body as well.

What are the symptoms?

Spot or sore that does not heal within 4 weeks

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A spot or sore that continues to itch, hurt, scab, crust or bleed for more than 4 weeks

Areas where the skin has broken down or forms an ulcer with no obvious cause, and does not heal within 4 weeks.

What causes skin cancer?

Sun exposure is the main cause of malignant melanoma and non-melanoma skin cancers. Other factors that influence the risk of skin cancer are: People with light eyes or hair, who sunburn easily or do not tan, have an increased risk of skin cancer.

People with a lot of moles, unusually shaped or large moles, or a lot of freckles have a higher risk of melanoma.

A history of sunburn doubles the risk of melanoma and also increases the risk of non-melanoma skin cancer.

Use of sun beds, especially by young people, increases the risk of skin cancer.

People with a previous non-melanoma skin cancer have a much higher risk of developing a second one.

People with a close relative diagnosed with skin cancer have a higher risk of developing it themselves.

Comparison of both diseases

Disease

Causative Organism

Type of illness

Malaria

Plasmodium

Serious disease affecting organs and high fever

Skin cancer

epidermis

The skin cancer is only in the top layer of skin

Malaria

Every year between 350 and 500 million people are infected with the disease and 1 million die (predominantly in sub-Saharan Africa).

Malaria affects many organs of people's body. It can affect their brain, heart, lungs, kidneys, and liver, along with harsh side effects. The spleen and the liver enlarge. Malaria can affect many organs in the body, including the brain, lungs, kidneys, and liver.

Skin cancer

More than 3.5 million skin cancers in over two million people are diagnosed annually.

Skin affects many organs people's body. It can affect their brain, bone and lung; due to spread of the cancer cells through the blood

Malaria

Malaria is spread from person to person by (bits from) a mosquito- specifically Anopheles, and in African one main species; anopheles gambiae

Malaria is a tropical disease, affecting 300 million people and causing 1-15.5 million death per year, although such estimates vary. As a global killer it is second only to TB (tuberculosis). It's especially dangerous to young children and pregnant women in sub-Saharan Africa.

Skin cancer

Skin cancer never spread, apart from the slow growth of the rodent ulcer itself. Even in advanced cases, treatment is almost always successful.

Skin cancer is a disease, in which abnormal and potentially cancerous cells are found on the outer layers of the skin. The skin is the largest organ in the body. Many parasites have life-cycles involving two host species, within which they pass through a range of different stages, often alternating between using asexual processes in order to build up numbers when conditions are appropriate and using sexual processes in other stages. This means that when person is bitten by a mosquito, parasites enter the blood and move to the liver where they multiply over the next one to three weeks.

They are then released back into the bloodstream where they infect red blood cells. The parasites grow in the red blood cells until ready for the next

stage of their life cycle. They then cause the host cells to rupture, releasing toxins which can cause malaria symptoms and failure of body mechanisms. Male and female gametes are released into the bloodstream where will be sucked up by the next mosquito to bite.

Malaria is a major killer and deserves respect. Each year between 350 and 500 million people are infected with the disease and 1 million die predominantly in sub-Saharan Africa. This means that many travellers ignore the need to take anti-malarial medication or fail to take it properly. Of 80 million travellers to areas with a high malaria risk, 30, 000 will contract the disease and many remain ignorant of the severity of malaria symptoms and malaria causes.

Skin cancer is the most common form of cancer in the UK and United States also around the world. More than 3. 5 million skin cancers in over two million people are diagnosed annually. Although each year there are more new cases of skin cancer than the combined incidence of cancers of the breast, prostate, lung and colon. However one in five Americans will develop skin cancer in the course of a lifetime.

Over the past 31 years, more people have had skin cancer than all other cancers combined. 4 Nearly 800, 000 Americans are living with a history of melanoma and 13 million are living with a history of no melanoma skin cancer, typically diagnosed as basal cell carcinoma or squamous cell carcinoma

What is diagnosis?

Medical diagnosis refers both to the process of attempting to determine and/or identify a possible disease or disorder and the opinion reached by this process.

For example; the term diagnostic criterion designates the combination of signs, symptoms, and test results that the clinician uses to attempt to determine the correct diagnosis.

What is clinical diagnosis?

Clinical diagnosis is occurs when an individual usually a doctor or another health care workers is able to establish the nature of disease mainly by giving the condition a name, such ad meningitis,

What is differential diagnosis?

The differential diagnosis are a few conditions which may appears to a similar and the doctor cannot provide a cline diagnosis he or she may unable to distinguish one from the other. This means that consists of a more generic label or name, for example chest infection or kidney infections.

Type of diagnosis and referrals:

Self diagnosis, is when individuals diagnose an illness for themselves, such as headache, pain or sort throat, individuals may be masking more serious illness by treating the condition with over the counter medications. Unless the individuals contact local health services, investigations will not be carried out and support will not offered.

For example in some circumstances may have serious consequences and a correct treatment diagnosis will be made too late for correct treatment and support

Although self diagnosis and treatment of minor ailments will release more time for doctors, or laboratory technicians and support personnel devote to individuals suffering from more serious complains.

GP diagnosis, means when an individual feels that he or she is unable to deal with a health problem, an appointment is made with GP or practice nurse in the local health centre. Most service users expect to get a diagnosis and medication as a consequence of this visit. Also the appointment can be subject to one or two days delay when the matter is not deemed to be urgent. For example GP may refer a patient to a hospital for a variety of reasons. Some of these are;

When a patient has a serious non communicable disease that needs specialist care, such as heart and renal failure, cancers and some inherited disease,

When a patient is ill and has nobody at home to act as care. Also if patient has serious infection, such as tuberculosis or malaria, requiring specialist care and treatment

For more detailed investigations such as X-rays, scans, ultrasound scans, electrocardiograms, special laboratory investigation to test about the disease. Also for closer monitoring and care.

Referral to hospital for specialist treatment. There are many common conditions which can be diagnosed and treated by the affected individuals without the need for appointments with the family doctor or hospital visits.

For example there are more over the counter preparations for treating common illness and service users may use NHS direct or internet to assist them with a diagnosis and treatment.

Methods of diagnosing disease can be a different type of diagnoses those includes are many more specialised investigative techniques that can used if diagnosis may never be reached and the patients gradually recovers, probably due to an immune response.

Facilities to support individuals with disease as well as the key medical personnel in general practice and hospitals, although there are many other agencies that provide support to individuals, and particularly those people with non communicable disease may need long term support. As support may be of the self help type because where information is or to provide information. For example some agencies aim to improve the equality of life by the provision of social activities, including fund- raising events and outings.

Usually assistance with every day living task may be too provided by groups, such as social services.

Support from domestic care this may involves with family, relative and friends there are also people employed by other agencies, which will support people with illness such as malaria and skin cancer.

Patients can be tested by their doctor who may do blood test and when testing for malaria is done the test results can be influenced by the duration of the illness the concentration of malaria parasites in the blood as well as the expertise of the lab technician and the methodology used in the test procedure.

Although anti-malarial drugs are not a 100% guarantee in preventing the disease, but it does help if the patients are infected by malaria and a milder and less severe infection is experienced.

A local legend states that taking anti-malarial drugs hide the symptoms of malaria, but this is simply a myth. Types of tests to determine malaria infections

Home testing with a test kit

Laboratory testing

Other tests that could assist when malaria infection is suspected

General information

Patients can be tested by their doctor who may remove a small sample of suspicious-looking skin for laboratory testing. An examination of tissue from a living body to determine the cause can determine whether person have skin cancer and, if so, what type of skin cancer they have. Although the determining the extent of the skin cancer if patient's doctor determines they have skin cancer, he or she may recommend additional tests to determine the extent, or stage, of the skin cancer. Because superficial skin cancers

such as basal or squamous cell carcinoma rarely spread, an examination often is the only test needed to determine the cancer stage.

But if person have a large growth or one that's existed for some time, their doctor may recommend further tests to determine the extent of the cancer

Skin cancer is generally divided into two stages:

Local. In this stage, cancer affects only the skin.

Metastatic. At this point, cancer has spread beyond the skin.

The skin cancer's stage helps determine which treatment options will be most effective. The impact of my two chosen diseases on society and the individuals are;

Malaria is one of the most severe public health problems worldwide. It is a leading cause of death and disease in many developing countries, where young children and pregnant women are the groups most affected.

3. 3 billion people (half the world's population) live in areas at risk of malaria transmission in 109 countries and territories

35 countries (30 in sub-Saharan Africa and 5 in Asia) account for 98% of global malaria deaths.

In 2008, malaria caused an estimated 190 – 311 million clinical episodes, and 708, 000 – 1, 003, 000 deaths.

89% of the malaria deaths worldwide occur in Africa.

Malaria is the 5th cause of death from infectious diseases worldwide (after respiratory infections, HIV/AIDS, diarrheal diseases, and tuberculosis) in low-income countries.

Malaria is the 2nd leading cause of death from infectious diseases in Africa, after HIV/AIDS

Malaria imposes substantial costs to both individuals and governments. This means the costs to individuals and their families include:

Purchase of drugs for treating malaria at home;

Expenses for travel to, and treatment at, dispensaries and clinics;

Lost days of work; absence from school;

Expenses for preventive measures;

Expenses for burial in case of deaths.

Costs to governments include: the act of maintaining of health facilities; purchase of drugs and supplies; public health interventions against malaria, such as insecticide spraying or distribution of insecticide-treated bed nets; lost days of work with resulting loss of income; and lost opportunities for joint economic ventures and tourism.

Skin Cancer affects millions of UK and around the world because is ranked as one of the top ten deadly cancers. Unlike many other cancers, the number of new cases continues to increase, as does its impact on younger patients. UV radiation is a known factor in skin cancer development and the most

effective method of lowering one's risk is to prevent unnecessary exposure, such as use of tanning beds.

One in five UK and the around the world will develop skin cancer in their lifetime.

The incidence of melanoma, the deadliest kind of skin cancer, has been steadily increasing for the past 30 years. Since 1992, melanoma has increased 3.1% annually in non-Hispanic Caucasians, but in recent years is increasing more rapidly in young white women (3.8% since 1995) and men age 65 and older (8.8% since 2003).

Melanoma is the most common form of cancer for young adults 25-29 years old and the second most common form of cancer for adolescents and young adults 15-29 years old.

Comparison of skin cancer and malaria about the diagnosis and impact

The diagnosis and the impact of both diseases are very common because Skin cancer is one of the main cancer concerns of the world when the area is very warming. This means that people with skin cancer get most is melanoma. Although the most curable which can even be prevented. Early discovery is very important. If person have moles that are bothering them or are doing weird things such as changing size, shape, colour, or if they bleed constantly, they should consult a doctor.

Malaria is a disease that will increase when the area is very warming. It is one of the earliest recorded human diseases, and is spread by the bite of a

female mosquito. Mosquitoes breed in warm, wet places. With the increase of rain and warmth during the warming, the population of mosquitoes will increase, making the risk of getting this disease also increase when people are bitten by an infected mosquito, it sends parasites into their bloodstream. These parasites keep reproducing, making the disease more devastating. Symptoms are fever and chills that come and go, headache, weakness, and an enlarged spleen. An enlarged spleen could rupture, or require surgery to remove. People can live without a spleen, but not having one increases the risk of infections or other problems.

Tests and diagnosis

Tests and diagnosis

To diagnose malaria, the individual's doctor may:

To diagnose skin cancer, the individual's doctor may:

Examine their blood tests can help tailor treatment by determining:

Examine their skin. Their doctor may look at their skin to determine whether their skin changes are likely to be skin cancer. Further testing may be needed to confirm that diagnosis.

Whether they have malaria and which type of malaria parasite is causing their symptoms

Local. In this stage, cancer affects only the skin.

If they infection is caused by a parasite resistant to certain drugs or whether the disease is affecting any of their vital organs

Metastatic. At this point, cancer has spread beyond the skin.

Some blood tests can take several days to complete, while others can produce results in less than 15 minutes.

The skin cancer's stage helps determine which treatment options will be most effective.