

CMScript

complete 2015 collection



Member of a medical scheme? Know your guaranteed benefits!

CMScript

Cataracts

Cleft Lip and Palate

Brain Tumours

Dystonia

Gaucher Disease

Gall stones

Gastroenteritis

Crohns disease &

Ulcerative colitis



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Foreword

Every year, members of medical schemes look forward excitedly to their benefits for the new year. Some experience worry about the type of cover they will get if they would fall sick.

Traditionally, benefit brochures are sent to members as a way of informing them about their plan types, health-care benefits and how to contact their medical schemes in the event of sickness.

To circumvent any misunderstanding, medical schemes can find ways of communicating benefits to their members in plain and simple language and through other means.

In this era of social media, platforms such as Facebook and Twitter can be explored to communicate with members on a regular basis about issues pertinent to them.

The Council for Medical Schemes (CMS) always seeks better ways to communicate with members of medical schemes. This is to ensure members know their rights and

responsibilities, whilst making them aware that CMS is there to protect their interests.

This collection is an anthology on Prescribed Minimum Benefits (PMBs) as a way of ensuring that members of medical schemes are informed about their benefits entitlements. CMScripts are written regularly on various topics to fulfil this purpose.

The CMS regulates the medical schemes industry to ensure that the entities are properly governed, are responsive to the environment, and beneficiaries are informed and protected.

Over the years, various topics have been covered based on the gaps that were identified from the complaints received. The complaints emanated from the members of medical schemes, providers of health care and certain medical schemes. Some of the complaints were received through a formal complaints process that is in place, whilst others were ad hoc telephonic and e-mail enquiries.

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Prescribed Minimum Benefits

PMBs were established under The Medical Schemes Act 131 of 1998 (the Act) to ensure that members have access to certain minimum health services, regardless of the benefit option they have chosen. Regulations to the Act to provide detail regarding the application of the PMBs.

The Act facilitates access to healthcare by creating a framework for non-discriminatory access to medical schemes. The right to access healthcare, in its preventive and curative forms, is enshrined in the constitution of South Africa. The introduction of legislated PMBs was to satisfy the constitutional obligation of ensuring that every South African has access to basic and adequate healthcare.

PMBs refer to the benefits contemplated in section 29 (1) (o) of the Act, and consist of the provision of the diagnosis, treatment and cost of care.

Emergency medical condition means the sudden and, at the time, unexpected onset of a health condition that requires immediate medical or surgical treatment, where failure to provide medical or surgical treatment would result in serious impairment to bodily functions or serious dysfunction of a bodily organ or part, or would place the person's life in serious jeopardy.

Diagnostic Treatment Pairs (DTPs) are an exclusive list of 270 conditions / groups of conditions, listed by organ-system chapter, in the form of diagnosis and treatment pairs that medical schemes are compelled to pay for, without any limitations.

Chronic Disease List (CDL) entitlements includes the diagnosis, medical management and medication, to the extent that this is provided for by way of a treatment algorithm for the specified condition. Examples of CDL conditions are Asthma, Diabetes Mellitus and Hypertension.

Identification of PMBs

In isolation, ICD-10 (diagnosis) codes alone are seldom enough to correctly identify PMB benefits. The PMB regulations define PMB benefits as a diagnosis with specified severity, in relation to specified treatment. Where additional information is required to validate a PMB diagnosis, the onus is on the treating provider to provide a discharge summary that could be used as additional information to assist in identifying PMB claims.

Registration for PMB benefits

The PMB Code of Conduct published in 2010 explains that considering that many PMB claims cannot be correctly identified as PMB benefits based on ICD-10, procedure or medicine codes, a pre-registration, application or authorisation process may be required by medical schemes. Such pre-registration, application or authorisation process must not place an unnecessary burden on, and must be readily accessible to patients and provider.

Registration for PMB benefits are applicable to benefits which require once-off registration such as CDLs, the chronic elements of DTPs (such as post-transplantation care) and pregnancy. Registration must prevent re-application for benefits in cases where conditions are of a chronic nature or where treatment interventions are spread over a longer period.

Where pre-registrations and authorisations are neither possible nor practical, (as with certain DTPs such as Otitis Media), medical schemes may establish an application process. In the case of emergencies, medical schemes may not deny benefits because authorisation or registration was not obtained prior to the diagnosis, treatment or care intervention.

Payment of PMBs

Any benefit option that is offered by a medical scheme must be paid in full, without co-payment or the use of deductibles, the diagnosis, treatment and care costs of the prescribed minimum benefit conditions. Medical schemes are allowed to have managed care protocols and formularies to manage their financial risk.

PMB benefits should be provided subject to the application of these protocols and formularies, Designated Service Provider (DSP) arrangements, evidence based medicine, cost-effectiveness and affordability of the required interventions. Payment of the PMBs should be from the risk benefit and not from the Medical Savings Account (MSA). Medical schemes that pay PMB benefits from MSA contravenes Regulation 10(6) of the Act.

This Regulation states that the funds in a member's medical savings account shall not be used to pay for the costs of a PMB.

Regularly enquired conditions



Regularly enquired conditions refer to the three conditions that relate to the majority of enquiries. The article will further provide information on how you as a member can manage your financial risk and ensure that out-of-pocket payments are as minimal as possible. This, however, does not extend to the reasons why conditions were not included or were limited in the PMBs. Furthermore, it does not defend or criticise the current regulations.

Osteoarthritis

Osteoarthritis is the most common joint disease. The condition is however not included in the PMB regulations.

Osteoarthritis occurs when the protective cartilage on the ends of your bones wears down over time. Other risk factors of the condition include older age, gender, obesity, joint injuries and trauma, work related repetitive stress on the joint, genetics/inherited tendency, bone deformities and other conditions such as gout or diabetes mellitus.

Although osteoarthritis can damage any joint in your body, the disorder most commonly affects joints in your hands, knees, hips and spine. Treatment of the disease usually focus on decreasing pain and increasing movement of the joint. Medication is often used as pain treatment but when the cartilage is completely worn out and you have bone rubbing against bone, joint replacement surgery may be considered.

Most of the enquiries received at the CMS relate to the surgical intervention and specifically joint replacements. Medical schemes often have strict limits on joint replacement surgery or even exclude funding for joint replacements unless the condition is a PMB.

Joint replacement surgery entails that the affected joint is replaced by an internal prosthesis (artificial joint) to improve function of the joint. The cost of the actual surgery will include the hospitalisation, the orthopaedic surgeon, assistant to the surgeon, the anaesthetist, the joint prosthesis, physiotherapy and medication for pain and antibiotics when necessary (in-hospital and to take home). The surgery can be very expensive and result in large co-payments (payment from your own pocket).

Co-payments can be from any of the accounts mentioned. The following suggestions may assist you to know what your plan

covers, potential co-payment and financial preparedness for your surgery. Make sure exactly what benefits, if any, your specific medical scheme benefit option pay towards joint replacement surgery:

Ask your surgeon for the procedure codes and cost for each code. Make sure that the code for the specific prosthesis is also provided to you.

- Contact your medical scheme and ask what the medical scheme tariff for each of these codes are (medical scheme tariff is the price that the scheme will pay for the specific code).
- Discuss the medical scheme tariff with your surgeon and negotiate the price that you will pay.
- Your surgeon must obtain your written consent for each of the charges before you have the surgery.
- Try to use a scheme designated provider. The scheme may appoint a surgeon, hospital and anaesthetists as designated service providers. These providers usually have agreements with the schemes for non-PMB's as well.
- Ask your scheme to provide you with a designated service provider for the prosthesis if possible.
- Determine if there is a shortfall and make plans how this will be funded.
- As most of the joint replacement surgeries are not an emergency, try to obtain codes from other providers. Your GP or scheme may recommend other surgeons.

The above mentioned information will assist you in calculating how much you will need to pay out of your own pocket.

Hernias

Hernias are caused by a combination of pressure and an opening or weakness of the muscle or fascia (sheet of connective tissue covering or binding together body structures). The pressure pushes an organ or tissue through the opening or weak spot. Sometimes the muscle weakness is present at birth; more often, it occurs later in life.

The most common types of hernias are inguinal (inner groin), incisional (resulting from a cut/incision/operation), femoral (outer groin), umbilical (belly button), and hiatus (upper stomach).

Anything that causes an increase in pressure in the abdomen can cause a hernia, including:

- Lifting heavy objects without stabilising the abdominal muscles
- Diarrhea or constipation
- Persistent coughing or sneezing
- In addition, obesity, poor nutrition, and smoking can all weaken muscles and make hernias more likely.

If left untreated, a hernia may grow larger and become more painful. A portion of your intestine could become trapped, or "incarcerated," in the abdominal wall. This can obstruct your bowel, causing severe pain, nausea, and constipation. If the trapped section of intestine cannot receive enough blood flow, "strangulation" occurs. This can cause the intestinal tissue to become

infected or die (gangrene) and is a life threatening medical emergency.

The treatment of a hernia is determined by the size and the severity of the symptoms that you experience. Small hernias can be treated with dietary changes and medication but larger hernias may need surgical repair.

Hernias are included in the PMB regulations only when:

- You are younger than 18 years
- It is complicated with obstruction and/or gangrene
- Hernia surgery entails that the hole in the abdominal wall is closed. The most common treatment is to patch the hole with surgical mesh. The cost of the actual surgery will include the hospitalisation, general surgeon and his assistant, the anaesthetist and the surgical mesh (an internal prosthesis). The surgery can be very expensive and result in large co-payments (payment from your own pocket).

If your condition does not qualify as a PMB the following suggestions may assist you to know what your co-payments will be and help to keep these at a minimum:

- Ask your surgeon for the procedure codes and cost for each code. Make sure that the code for the specific prosthesis is also provided to you.
- Contact your medical scheme and ask what the medical scheme tariff for each of these codes are (medical scheme tariff is the price that the scheme will pay for the specific code).
- Discuss the medical scheme tariff with your surgeon and negotiate the price that you will pay.
- Your surgeon must obtain your written consent for each of the charges before you have the surgery.
- Try to use a scheme designated provider. The scheme may appoint a surgeon, hospital and anaesthetists as designated service providers. These providers usually have agreements with the schemes for non-PMB's as well.
- Ask your scheme to provide you with a designated service provider for the prosthesis if possible.
- Determine if there is a shortfall and make plans how this will be funded.

The above mentioned information will assist you in calculating how much you will need to pay out of your own pocket.

If your hernia however qualifies for PMB cover the medical scheme should fund the surgery as such. However the Medical Schemes Act allow for certain limits. The medical scheme may:

- Require you to use a designated service provider. If you voluntarily use a non-designated service the medical scheme may implement a co-payment as specified in the scheme rules.
- Fund the mesh (internal prosthesis) in full provided that it is the same type of mesh that would have been used in the public/state sector.
- Fund the mesh from your annual internal prosthesis limit first. If the annual limit is not sufficient the remainder of the cost should be funded from the risk pool.

As the above may cause co-payments it is suggested that you:

- Contact your medical scheme and ask who the designated service provider is.
- Ask your surgeon for the codes that will be charged. This will include the procedure codes and the mesh (internal prosthesis) that will be used.
- Contact your medical scheme and ask whether the specific type of mesh will be funded in full. If not make sure that you know what part of the cost will be for your own pocket.
- Ask your scheme to provide you with a designated service provider for the prosthesis.
- Determine if there is a shortfall and make plans how this will be funded.

Sleep apnoea

Sleep apnoea is a potentially serious sleep disorder in which breathing repeatedly stops and starts. You may have sleep apnoea if you snore loudly and you feel tired even after a full night's sleep.

There are two main types of sleep apnoea:

- Obstructive sleep apnoea, the more common form that occurs when throat muscles relax
- Central sleep apnoea, which occurs when your brain doesn't send proper signals to the muscles that control breathing

Mild cases of sleep apnoea are usually treated with lifestyle changes such as losing weight and smoking cessation. More severe cases however may require the use of continuous positive airway pressure (CPAP) machines during sleep.

Continuous positive airway pressure (CPAP) involves wearing a pressurised mask over your nose while you sleep. The mask is attached to a small pump that forces air through your airway to keep it from collapsing. CPAP may eliminate snoring and prevent sleep apnoea.

The enquiries and complaints received by the CMS are usually that the medical schemes reject funding of the CPAP machine or that only a small amount of money is available.

Sleep apnoea is only included in the PMB regulations if you also suffer from cor pulmonale.

Cor Pulmonale is failure of the right side of the heart (right ventricle failure). It is caused by long-term high blood pressure in the arteries of the lung and right ventricle of the heart.

The medical scheme may therefore request clinical evidence that confirms the diagnosis of cor pulmonale before benefits for the CPAP machine are provided. If there is no clinical evidence that you do not suffer from cor pulmonale, the medical scheme is not legally obliged to pay the sleep studies and CPAP machine as they do not qualify as PMB level of care.



If you are diagnosed with sleep apnoea but do not suffer from Cor Pulmonale, it is suggested that you:

- Contact your medical scheme and ask who the designated service provider is (if any).
- Ask your doctor for the code of the CPAP machine that you should use.
- Contact your medical scheme and ask what benefits are available on your specific benefit option for the CPAP machine prescribed by the doctor.
- Check if your scheme has a designated service provider for CPAP machines.
- Where possible ask the provider to assist you with obtaining codes from several companies. It should be noted that your doctor may have preferences based on your clinical condition. In this instance you as a member will not have sufficient evidence to shop around for better quotations.

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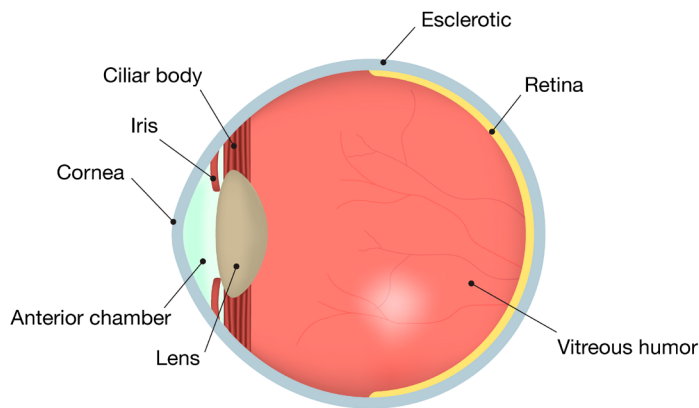
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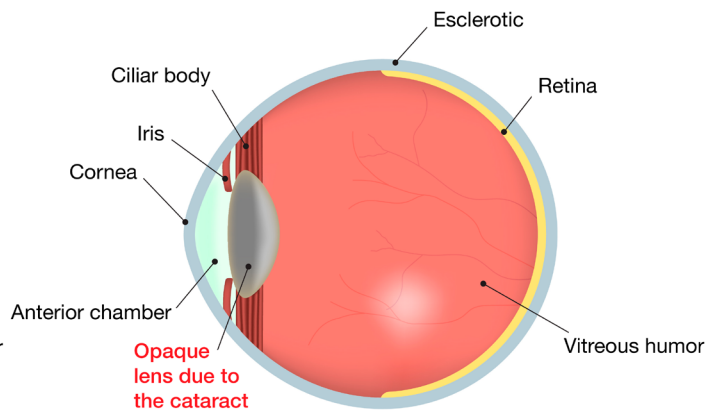
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Cataracts

Healthy eye



Eye with Cataracts



A cataract is the opacity or cloudiness of a lens. The normal lens of the eye is clear. Cataracts can develop in one or both eyes, at any stage in life as a result of many causes. They vary from extremely small areas of cloudiness to large opaque areas causing blurred or loss of vision. They can develop slowly over many years or may form rapidly in a matter of months but some cataracts never progress to the point that they need to be removed. The condition is common in people over the age of 60, more than half of the people over 65 years have some degree of cataract development. Cataracts may also be occasionally found in younger people, including newborns.

What causes cataracts?

The most common cause is related to aging. Other factors include genetic inheritance; medical problems such as diabetes mellitus; medications such as steroids; eye injuries; radiation; long-term unprotected exposure to sunlight; and previous eye surgery. There is also an inconclusive association between cataract formation and low levels of antioxidants such as vitamin C, vitamin E, carotenoids.

Signs and symptoms

Cataracts develop without pain or redness. Some of the indications that a cataract may be forming include blurred or hazy vision, double vision in one eye, needing brighter light to read, poor night vision, fading or yellowing of colours, the appearance of spots in front of the eyes, or the feeling of having a film over the eyes. The hallmark symptoms of cataract are decreased vision and increased pro-blems with glare.

Diagnosis

A comprehensive eye examination by an optometrist or ophthalmologist (eye specialist) can determine if a cataract is forming. A thorough eye examination with an instrument called a slit lamp microscope can detect the presence and extent of a cataract, as well as any other conditions that may be causing blurred vision or discomfort. Examination of the eye involves identifying the nature and severity of the cataract and assessing any other diseases that might contribute to symptoms or limit the potential for good vision following cataract surgery.

Elements of the eye examination may include, but are not limited to the following:

- Measurement of visual acuity
- Biomicroscopy with pupillary dilation
- Stereoscopic fundus examination with dilation of the pupils
- Assessment of ocular motility (ability of the eyes to move)
- Assessment of binocularity (ability of both eyes to focus on an object in a coordinated manner)
- Visual fields screening
- Evaluation of pupillary responses
- Refraction to rule out refractive shift as a cause for the decreased vision
- Measurement of intraocular pressure (fluid pressure inside the eye)

Treatment

In the early stages of a cataract, where vision is only minimally affected, the optometrist or ophthalmologist can prescribe new lenses to give the best possible vision. There are no medications, eye drops, exercises or glasses that will cause cataracts to disappear once they have formed. When the cataracts start to interfere with daily activities and glasses cannot improve vision, an eye specialist may recommend the surgical removal of cataracts. Consideration should be given to the vision needs of the patient as they relate to his or her lifestyle, occupation and hobbies. During cataract surgery, a lens is removed from the eye and replaced with an artificial one (Intra-Ocular Lens Implant) so

that a person may see again. The surgery is relatively uncomplicated and successful.

Three types of medicines namely antibiotics, corticosteroids and non-steroidal anti-inflammatory drugs (NSAIDs) are generally prescribed after surgery. The medicines are given to prevent infections, prevent raised intraocular pressure and to control pain. Within these classes, there are multiple medications from which to choose, including generics.

Spectacles are needed after cataract surgery with Intra-Ocular Lens Implant to correct any residual refractive errors. Residual refractive errors may be due to planned or unexpected undercorrection or overcorrection by the Intra-Ocular Lens power and/or due to pre-existing corneal astigmatism or induced corneal astigmatism caused by suturing of the incision.

Post cataract surgery

The most common complication of cataract surgery is clouding of the part of the lens covering (capsule) that remains after surgery, called posterior capsule opacification. YAG posterior capsulotomy may be recommended to correct the problem.

Prevention

Currently, there is no proven method to prevent cataracts from forming. Wearing sunglasses is beneficial in protecting the eyes from harmful ultraviolet rays of the sun. An antioxidant-rich diet of fresh fruits and vegetables and added supplements such as vitamins A, C and E, and lutein have also been shown to be beneficial. A diet low in carbohydrates (sugars) may also decrease the risk of cataracts. Eating fish that is high in omega-3 fatty acids has also been linked to a reduced risk of cataracts and their progression.

What must be funded under the PMB?

Cataract is a Prescribed Minimum Benefit condition under Diagnostic Treatment Pair (DTP) code 901B. The DTP refers to Cataract; aphakia. The treatment component of this DTP is specified as extraction of cataract; lens implant.

The diagnosis, treatment and care costs of cataracts should be paid according to the PMB regulation. The interpretation of the PMB's should follow the predominant public hospital practice.

PMB treatment and care cover includes:

- All consultations for diagnosis and follow-up of cataract
- In and out of hospital care
- Pathology, radiology and other investigative and monitoring services
- Medication: pre-operative and post-operative medication which may include anti-inflammatory, antibiotics, steroids.
- Appliances, devices – subject to managed care protocols
- Spectacles

Managed Care arrangements that the Scheme has with Designated Service Providers (DSPs) for the diagnosis, treatment and care of the condition should be communicated with the member and the provider.

The PMB code of conduct stipulates that communication in respect of benefits must be clear, in plain language and must be readily available. The schemes must ensure the following information is available to all members:

- The process by which members can apply or register for PMB coverage must be made available to providers and members.
- The outcome of the application or registration process must be communicated to members.
- The location and contact details of DSPs.
- The way in which claims will be covered if the member does not make use of the DSPs or baskets of care.
- The applicable process and procedure to be followed if there are no available services or beds within the DSP at the time of request, and where such clinical services should be obtained by the member. Furthermore, the obligations of the scheme to ensure that the member is facilitated in obtaining those services from an alternative service provider and that such facilitation should be timeously done and with due regard to the member's clinical needs.
- It should be noted that the Medical Schemes Act prohibits schemes from funding of any care associated from their medical savings account (MSA). Therefore, members must ensure that care associated with cataracts is not funded from their MSA and follow the process of registration outlined above for the care to be funded from the risk pool or what is commonly and loosely known as "hospital benefits".

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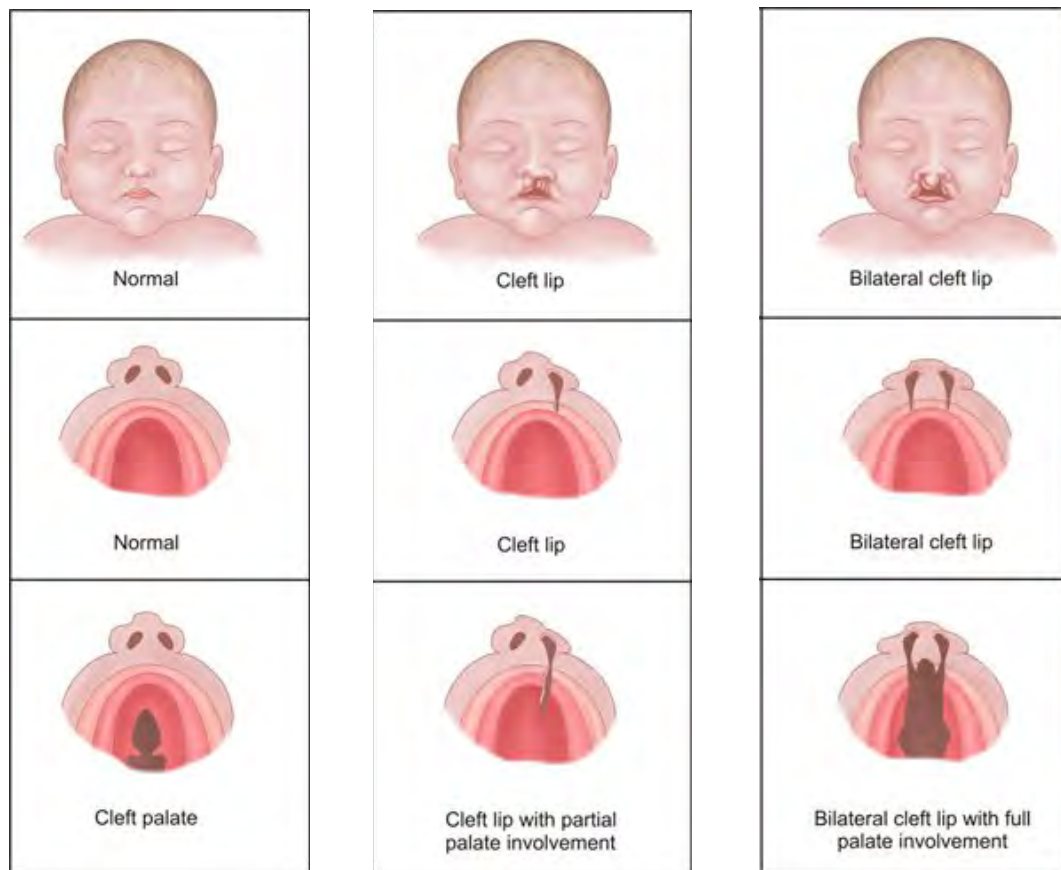
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Cleft lip and cleft palate



During the second and third months of pregnancy, the tissues that form the lip and palate fuse together. However, in certain instances the fusion does not take place or only does partially. This leaves an opening in the lip and/or cleft.

What is the difference between a cleft lip and cleft palate?

Cleft Lip

An unborn baby's lips form between the fourth and seventh weeks of pregnancy. A cleft lip occurs when the tissue that makes up the lips does not join completely before birth. This results in an opening in the upper lip. Such an opening in the lip can vary from a small slit to a large opening that goes through the lip into the nose. A cleft lip can occur on one or both sides of the lip or in the middle of the lip.

Cleft Palate

An unborn baby's roof of the mouth (palate) is formed between the sixth and ninth weeks of pregnancy. A cleft palate occurs when the tissue that makes up the roof of the mouth does not join together completely during pregnancy. Only part of the palate can be involved and left open on both the front and the back parts of the palate are open.

It is also possible that both a cleft lip and palate can occur on one or both sides of the mouth.

Risk factors and causes of a cleft lip and/or palate

- Family history - couples with a family history of cleft lip or cleft palate face a higher risk of having a baby with a cleft. If the first born had a cleft lip or palate the risk that following siblings may also have a cleft lip or palate increases.
- Gender - males are twice as likely to have a cleft lip with or without cleft palate. Cleft palate without cleft lip is however more common in females.
- Exposure to certain substances during pregnancy – the deformity may be more likely to occur in pregnant women who smoke cigarettes, drink alcohol or take certain medications.
- Obesity during pregnancy - some evidence indicates that babies born to obese women may have an increased risk of cleft lip and palate.

Unfortunately a cleft lip and/or cleft palate also forms part of more than 400 syndromes (conditions) including Waardenburg, Pierre Robin, and Down's syndromes.

How is a cleft lip and/or palate diagnosed?

The diagnosis of a cleft lip and/or palate is quite obvious at birth as all newborn babies are screened (assessed) fully to ensure that both the hard and soft palate are completely closed. Diagnosis prior to birth is possible as the malformation of the upper lip, nasal openings and palate may be seen on the ultrasound. Since the malformation may be associated with other deformities and syndromes, specialised investigations may be recommended.

Other birth defects that may occur with a cleft lip and/or palate include:

- Common heart defects
- Narrowing of the stomach where it connects to the small intestine (pyloric stenosis)
- Club foot

Complications caused by cleft lip and/or palate

A cleft lip or palate may have some complications that include:

- Feeding problems – the abnormal split in the upper lip makes it difficult for the newborn to get a good lip and/or palate seal during breastfeeding or routine nipples used in bottle feeding. Specialised bottles and nipple systems are available that will assist in effective feeding. Newborn babies with a cleft palate are generally fitted with removable artificial palate very early. The artificial palate prevents the liquids passing through the defect and into the nostrils. It also facilitates the baby's ability to suck efficiently.
- Ear infections and hearing loss may occur as babies with a cleft palate have a higher risk of fluid accumulating inside the eardrum. These children may require myringotomy and tympanostomy tubes (grommets) to be fitted at an early age.
- Speech problems often occur due to the malformation's impact on articulation of words. Although the corrective surgery may lessen the speech problem, most children will benefit from speech therapy.
- Dental problems occur quite often as children with the malformation frequently have issues with missing and malformed teeth. Orthodontic treatment and in certain occasions surgery to the upper jaw bone (maxilla) may be required because a cleft sometimes involves the gums and jaw, affecting the proper growth of teeth, and alignment of the jaw

How is a cleft lip and/or palate treated?

Unfortunately the only treatment is surgical repair of the malformation. Multiple surgeries and long-term follow-up are often necessary. As cleft lips and palates can interfere with physical, language and psychological development, treatment is recommended as early as possible.

The first surgery to repair a cleft lip is usually done between 10 and 12 weeks of age. However, a cleft palate is repaired/reconstructed through a procedure called palatoplasty, which is done between nine and 18 months.

Additional surgeries are often needed to achieve the best results. In addition to surgery, the child may receive follow-up care from members of the multidisciplinary team on issues of speech, hearing, growth, dental, and psychological development.

Depending on the severity of the malformation, the surgical repairs may take place over several years and orthodontic treatment will only be provided where necessary.

What must be funded under the PMB?

The PMB regulations specify that the diagnosis, treatment and care of the PMB conditions must be funded in full providing that a designated service provider is used and that the treatment is not less than what would have been provided in the state sector.

The diagnosis done with the ultrasound as part of normal antenatal care is not included in the PMB care of pregnancy. In cases where the scan however indicates a malformation of the upper lip or palate, the treating provider should provide a medical motivation for further scanning.

Specialised investigations to exclude other malformations that may be related to the cleft lip or palate will however not be included under the PMBs.

The surgical repair of the malformation as well as future orthognathic surgery and orthodontic treatment is included in the PMB level of care as these services are all provided in the state sector.

It is important for the member and the treating doctor to confirm with the medical scheme PMB cover in relation to the diagnosis, treatment and care of the condition.

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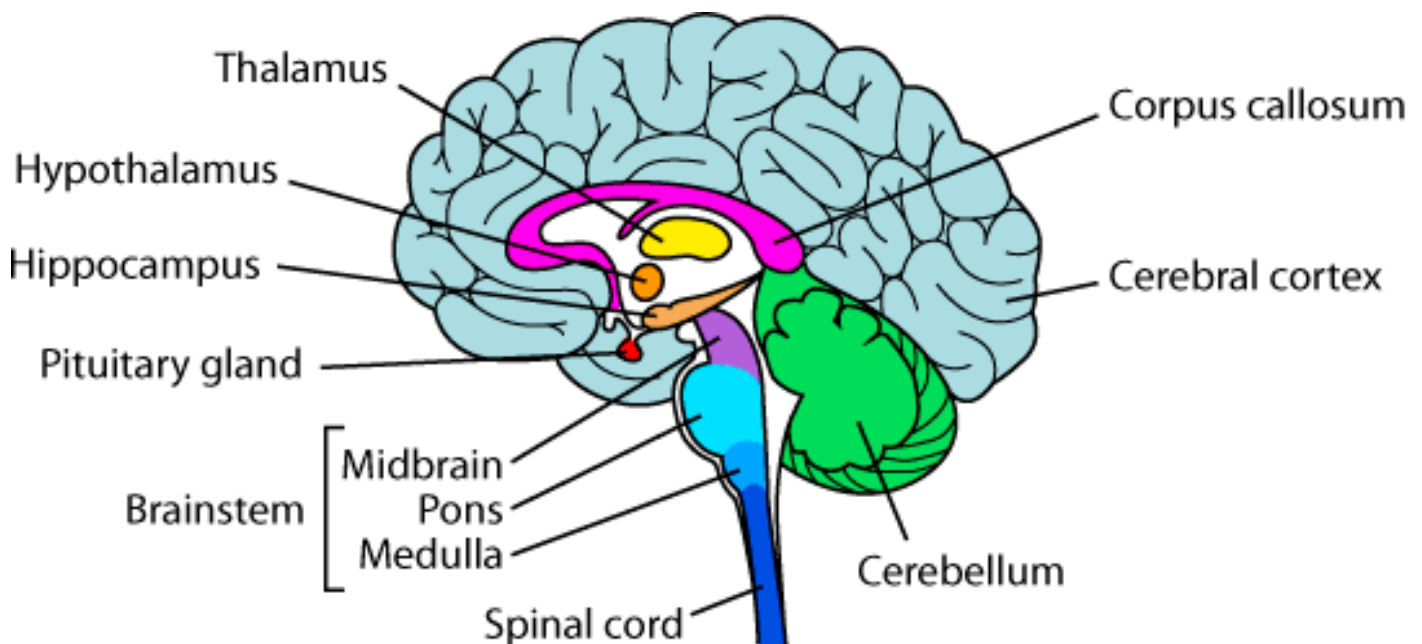
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Brain tumours



Brain tumours are included in the Prescribed Minimum Benefits (PMB) regulations as one of the Diagnostic Treatment Pairs. This article will provide information on the condition and treatment types and ends with a brief general guide on how treatment will be funded according to the PMB Regulations.

Brain Tumours

Primary brain tumours can be malignant (contain cancer cells) or benign (do not contain cancer cells). A primary brain tumour begins in the brain. If a cancerous tumour which starts elsewhere in the body sends cells that end up growing in the brain, such tumours are called secondary or metastatic brain tumours. This discussion is focused on primary brain tumours.

Both benign and malignant tumours are included in the PMB regulations. Malignant tumours spread to adjacent brain structures and rarely to other organs outside the cranial cavity, whilst benign tumours have clearly defined borders and usually are not deeply rooted in brain tissue.

Types of brain tumours

There are a wide variety of types of brain tumours. They are generally named after the type of cell they developed from or the area in the brain where the tumour is growing. Most brain tumours develop from the cells that support the nerve cells of the brain called glial cells.

The most common types of primary brain tumours in adults include astrocytoma, meningioma and oligodendroglioma. The most common types of primary brain tumours in children include medulloblastoma, grade I or II astrocytoma, ependymoma and brain stem glioma.

Cause of brain tumours

The precise cause of brain tumours are not clear and currently there are several studies investigating possible causes of brain tumours.

Symptoms of brain tumours

Brain tumours have a wide variety of symptoms and not all symptoms may occur at the same time. The symptoms for malignant (cancerous) and benign (non-cancerous) tumours are similar. The symptoms are dependent on the size of the tumour, the area where the tumour is situated and the type of tumour.

Symptoms may be caused when a tumour presses on a nerve or specific brain structure. It may also be caused when the tumour blocks the flow of fluid through and around the brain. This can cause the brain to swell due to the build-up of fluid and pressure.

Common symptoms of brain tumours include:

- Headaches that does not respond well to normal treatment
- Seizures
- Changes in smell, taste, speech, vision or hearing
- Balance problems
- Problems with walking
- Numbness or tingling in the arms or legs
- Memory problems
- Personality changes



- Problems and inability to concentrate
- Weakness and paralysis in a specific part of the body
- Mood changes

These symptoms can be caused by a number of other diseases therefore if you experience any of these it does not necessarily mean that you have a brain tumour.

Diagnosis of brain tumours

As with most illnesses the diagnosis of brain tumours start with the doctor taking a detailed personal and family history. The doctor will ask a range of questions about your symptoms. A physical examination including a neurological examination will be performed.

A neurological examination includes checks of your vision, hearing, smell and taste, alertness, muscle strength, coordination, and reflexes. The doctor will also examine your eyes to look for swelling caused by a tumour pressing on the nerve that connects the eye and the brain.

The initial examination may be performed by a general practitioner who will refer you to a neurosurgeon if he/she suspects that you may have a brain tumour.

A CAT (CT) scan will be done first and if there is evidence of a tumour the neurosurgeon will order a MRI scan. A MRI scan provides more detail on soft tissue and will give the neurosurgeon a clearer picture of the tumour.

The doctor may perform a spinal tap also called a lumbar puncture. During this procedure a small amount of spinal fluid (the fluid surrounding the spinal cord) is removed. The laboratory will check for any cancer cells that may occur in the spinal fluid as this fluid surrounds the brain and spinal cord.

If there is evidence of a tumour the neurosurgeon will probably decide to do a biopsy. During this procedure a small part of the

tumour is removed and sent to the laboratory where it will be checked for cancer cells. A biopsy is the only definitive manner to diagnose a brain tumour. Biopsies can be performed separately or as part of the treatment.

This means that the neurosurgeon may either do the biopsy first and then decide on treatment or decide to surgically remove the tumour and send all the tissue that was removed to the laboratory. If the tumour is situated in a part of the brain that is not easily accessible or where surgical removal can damage other areas of the brain e.g. the brain stem, the neurosurgeon will depend on the MRI and other investigation results.

The provider may also do an angiogram where dye is injected into an artery and a series of x-rays is taken as the dye flows through the blood vessels of the brain. Angiogram investigations are however rarely used.

Grading of malignant brain tumours

Grade I (low-grade)

The tumour grows slowly, has cells that look a lot like normal cells, and rarely spreads into nearby tissues. Grade I brain tumours may be cured if they are completely removed by surgery.

Grade II

The tumour grows slowly, but may spread into nearby tissue and may recur (come back). Some tumours may become a higher-grade tumour.

Grade III

The tumour grows quickly, is likely to spread into nearby tissue, and the tumour cells look very different from normal cells.

Grade IV (high-grade)

The tumour grows and spreads very quickly and the cells do not look like normal cells. There may be areas of dead cells in the tumour. Grade IV tumours usually cannot be cured.

Treatment of brain tumours

The prognosis and treatment options for primary brain tumours depend on the following:

- The type and grade of the tumour
- The area in the brain where the tumour is located
- If the tumour can be removed by surgery
- If a part of the tumour or any cancer cells remain after surgery
- If the cancer is newly diagnosed or if it is a recurring tumour
- Patient's general health

The treatment options available for the treatment of brain tumours include watchful waiting, surgery, radiation therapy, chemotherapy and targeted therapy. Many people get a combination of treatments.

Watchful waiting involves close monitoring of a patient's condition but no active treatment is provided. Neurosurgeons see these patients regularly to determine how the tumour is growing. In case of benign tumours, if surgery is not viable, medication like steroids may be prescribed to assist with decreasing the swelling of the brain.

Surgery is used in both the diagnosing and treatment of brain tumours. During surgery the skull is opened and the tumour is removed. If the tumour is situated in an area that is difficult to reach it may not be possible to remove the entire tumour. In this case the patient receives further care i.e. chemotherapy and/or radiation therapy.

Even in cases where the entire tumour that can be seen at the time of the surgery is removed patients may receive further chemotherapy and radiation therapy to kill any remaining cancer cells.

Radiation therapy uses high-energy x-rays and other types of radiation to kill cancer cells or to prevent the tumour from growing further. Two types of radiation exist viz. external beam radiation therapy and internal radiation therapy.

During external beam radiation, the radiation is sent to the body from a machine that is situated outside of the body. During internal radiation however the radiation is provided as radioactive substances that are implanted in the form of seeds that are placed into the cancer tumour. The type of radiation is determined by the type of tumour and where it is situated in the brain.

Radiation can be delivered in ways that cause less damage to the healthy tissue around the tumour. These types of radiation include 3-dimensional conformal radiation therapy, intensity-modulated radiation therapy (IMRT) and stereotactic radiosurgery.

Chemotherapy is treatment provided with drugs or medicine that stop the growth of the cancer cells. This is done by either killing the cancer cells or stopping the cells from dividing and multiplying. Chemotherapy can be provided in the form of tablets taken by mouth, injections into a blood vessel (vein) or into the muscle,

or it can be delivered directly into the cerebrospinal fluid (fluid that surrounds the spinal cord).

Chemotherapy can also be delivered in other forms i.e.:

- A wafer that dissolves and deliver an anticancer drug directly to the tumour
- Intrathecal where the drug is injected into the fluid-filled space that surrounds the brain and spinal cord

New forms of targeted therapy is available i.e. monoclonal antibody therapy (biological medicine). The therapy uses antibodies that can differentiate between substances on cancer cells versus normal cells. The antibodies attach to the substances on the cancer cells and kill, block the growth or keep the cells from spreading.

Tyrosine kinase inhibitors blocks the action of a specific enzyme called tyrosine kinases. This prevents the cancer cells from growing.

What must be funded under the PMB?

We already indicated that brain tumours are included in the PMB regulations. This means that your medical scheme must fund the cost of the diagnosis, treatment and care of your condition.

It is however important to understand that the PMBs specify the absolute minimum that medical scheme must fund. The Regulations to the Medical Schemes Act 131 of 1998 specify that all PMB treatment must be cost effective and affordable. As such not all the treatments for this condition forms part of the PMB level of care.

It is important that members who are diagnosed with a brain tumour discuss the detailed treatment plan with their medical scheme to ascertain if their treatment qualifies for funding.

Very few complaints with regards to brain tumours are received at the Council for Medical Schemes. Cases that are received are adjudicated on a case by case basis to ensure fair treatment of all medical scheme members.

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Illustration sourced from: <http://askabiologist.asu.edu/whats-your-brain>

Dystonia

Dystonia is a neurological condition characterised by involuntary and sustained muscle spasms as a result of incorrect signals from the brain. These muscle spasms tend to force affected parts of the body into abnormal movements or postures. The condition may affect speech, sight and mobility but not intellect. Living with dystonia can be painful and debilitating, as well as embarrassing and stigmatising.

Causes

Causes vary and include gene mutations, brain injuries and tumors, inborn errors of metabolism, exposure to drugs or chemicals.

Classification

Dystonia syndromes are classified along three axes, namely, cause, age of onset and body distribution

Causes

- Inherited dystonias are genetic in origin through gene mutations.
- Acquired dystonia have a specific cause such as brain injury and tumors, encephalitis, exposure to drugs or chemicals.
- Some of the causes are idiopathic (meaning that the cause is unknown)

Age at onset

Symptoms may first appear in infancy (birth to 2 years), childhood (3–12 years), adolescence (13–20 years), early adulthood (21–40 years), or late adulthood (>40 years)

Body distribution

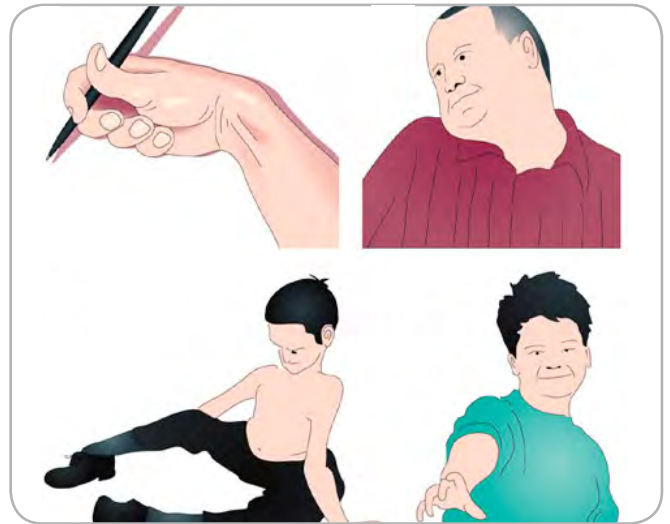
The classification of involvement is:

- Focal – involves a single body part such as blepharospasm (forceful closure of the eye), oromandibular dystonia (forceful contractions of the face, jaw, and/or tongue), and dystonia of neck muscles, laryngeal dystonia, and writer's cramp.
- Segmental – affects two or more adjacent parts of the body. For example, cranial dystonia (blepharospasm with lower facial and jaw or tongue involvement).
- Multifocal - affects two or more unrelated body parts
- Generalized - affects most or the whole body
- Hemidystonia – half of the body is affected

The body distribution may change over time with progression to the involvement of previously uninvolved sites.

Diagnosis

Dystonia can be difficult to diagnose because of its variable presentation, variation of causes and coexistence with other movement disorders. The diagnosis includes making sure that common treatable causes of abnormal body movement are ruled out. That is, one may need to do electrolytes, calcium and magnesium, thyroid functions and stop medication to ensure that Dystonia is not from a treatable cause. The core manifestation



of this condition is abnormal postures and involuntary muscle spasms with or without tremors. The diagnosis is therefore primarily based on clinical presentation or signs and symptoms related to dystonia.

Structural brain imaging (MRI) is required in generalised or hemidystonia and if there are any features to suggest that there may be an identified neurological condition, such as a focal brain lesion (abnormal tissue in the brain).

Neurophysiological tests are not routinely recommended for the diagnosis or classification of dystonia. However, multiple simultaneous electromyography (EMG) which is a test done to record the electrical activity of the muscles may contribute to the clinical assessment by showing characteristic features of dystonia.

Treatment

Oral medication

These medicines are often used in the treatment of dystonia. Drugs such as anticholinergics, dopamine depleting agents, benzodiazepines, anti-epileptics and baclofen are used in the treatment of the condition. However, patients may be addicted to benzodiazepines.

Chemical denervation

Botulinum toxin (Botox) injections are injected into the affected muscles and are considered to have revolutionised the treatment of dystonia. The effect of the toxin wears off, therefore the injections are repeated every 12 weeks. Treatment is symptomatic.

Surgical options

These include peripheral denervation, intrathecal baclofen and deep brain stimulation (DBS). Where all other surgical treatments have failed to provide adequate improvement, DBS is considered a good option. In this procedure, two fine electrodes are inserted into the brain powered by a battery implanted in the chest. The electrodes send a pulse that changes the signals from the brain that cause the involuntary muscle spasms.

Cognitive Behavioural Therapy (CBT)

Currently, CBT is considered an experimental treatment as there is little research evidence about the use of this therapy in dystonia. The principles on which CBT is based suggest that it may be helpful in managing the condition.

Referrals

Physiotherapy

In focal dystonia's, the use of rehabilitative physiotherapy in treating the condition is well developed and structured. It aims to give patients as much independence as possible and also helping in correcting the affected function through specific interventions. Despite therapeutic handling methods being useful for generalised dystonia's, the dystonic posture or movement tends to return when the therapist stops the treatment.

Pain management

Pain resulting from dystonia can be in the muscles affected by spasms, or in joints where bone surfaces rub together due to twisting of posture and limbs. The resulting intractable pain sometimes dominates the patient's life and might be unresponsive to medication. Sometimes such patients are referred to a pain specialist for pain management.

Speech and language therapy

For patients with oromandibular and generalised dystonia's with articulation difficulties, mouth and swallowing exercises help to reduce the risk of choking. For those with spasmodic dysphonia, techniques to help them speak include breathing exercises and ways to make best use of the voice and sound, albeit with limited effect.

Occupational therapy

Occupational therapy can help people with dystonia with practical ways of dealing with everyday tasks allowing them to live as independently as possible at home, at work or in their studies. Support includes identifying ways of dealing with difficult tasks and recommending alterations or adaptations in the home, school or workplace environment.

Podiatry

Patients may experience gait problems and struggle to look after their own feet because of poor mobility, poor dexterity or problems caused by uncontrollable muscle spasms. Podiatrists help them to address these problems using foot orthotics to assist with gait problems.

Psychiatrist / psychologist / counsellor

Dystonia is not a mental health condition but it can precipitate severe depression and anxiety due to pain, stigma, employment difficulties and social isolation. Psychological therapies and counselling therefore play an important role in managing the condition.

Genetic Counselling

Adults with genetic forms of dystonia who are considering having children may have concerns about their children also developing dystonia. They may decide to seek genetic counselling to help inform their decision making.

What must be funded under the PMB?

Dystonia is a PMB condition under Diagnostic Treatment Pair (DTP) code 341A. The DTP refers to Basal ganglia, extra-pyramidal disorders; other dystonia's NOS. The treatment component specified for this DTP is initial diagnosis; initiation of medical management.

All medical schemes are required by law to pay for the diagnosis, treatment and care costs of PMB conditions as prescribed. In case of dystonia, the medical schemes are required to pay for the initial diagnosis; initiation of medical management as PMB level of care.

Initial diagnosis includes all the tests done to confirm or exclude the condition whilst initiation of medical management applies to the first prescription of medication.

Whilst the disease is debilitating and requires continuous care to improve functionality, it is covered as a prescribed minimum benefit for initial diagnosis and initiation of medical management. Some schemes may fund for continuation of care from discretionary risk pool benefits, day to day benefits or from the medical savings account. In cases where members do not have cover and cannot afford out of pocket payments for continuation of care, state hospitals must be considered for continuation of care. It is very important to confirm with the medical scheme about the benefits available for the condition. If the doctor deems it necessary for the medication, tests or procedures to be done that the medical scheme does not normally fund, the doctor should write a clinical motivation to the scheme for payment to be considered as PMB only if the requests relate to the initial diagnosis and initiation of medical management.

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Rehabilitation of PMB conditions



The Clinical Review Committee receives a wide variety of enquiries and complaints with regards to the physical rehabilitation of members who suffered a Prescribed Minimum Benefit (PMB) condition requiring therapy. In order to provide guidance on what treatment is included as PMB level of care, it is important to understand the definition of physical rehabilitation and the provisions in the Medical Scheme Act 131 of 1998.

Rehabilitation of PMB Conditions

Physical rehabilitation is an area of medicine that aims to enhance and restore the functional ability and quality of life for people who suffer from physical impairments and / or disabilities. Rehabilitation may assist in regaining and improving many bodily functions, including bowel and bladder problems, chewing and swallowing, problems with thinking or reasoning, movement or mobility, speech, language, emotional and social adaptation to new circumstances, and coping with daily activities.

The goal of rehabilitation therapy may not be to regain full functionality as before the incident while the goals may be small or large. Each patient has an individual treatment plan that is developed to address the specific needs of the patient. It is also important to acknowledge that the treatment plan will focus on reaching the best functionality for the specific patient. In certain cases a patient may need to learn how to take care of themselves as much as possible by performing tasks such as eating, bathing, using the bathroom and moving themselves from a wheelchair to a bed. In other cases the patient may regain full functionality of body parts.

Conditions that may require rehabilitation

A multitude of conditions may affect your ability to function adequately. The conditions that are included in the PMB regulations that may necessitate physical rehabilitation include but are not limited to:

- Brain disorders and injuries such as stroke, multiple sclerosis, intracranial haemorrhage (bleeding)
- Chronic pain caused by cancer or any other condition
- Major bone and joint surgery necessitated by fractures, trauma or limb amputation
- Severe rheumatoid arthritis
- Severe weakness after recovering from a serious illness e.g. heart attacks, respiratory failure or infections
- Spinal cord injuries
- Major trauma after an accident such as a motor vehicle accident
- Difficulty in breathing, eating, swallowing, bowel, or bladder control due to non-progressive neurological (including spinal) condition or injury

How is physical rehabilitation requirements measured?

Rehabilitation experts use many tests to evaluate a patient's problems and monitor their recovery including achievement of functional benefit where necessary.

All cases of physical impairment need to be evaluated by a multidisciplinary team. The team will record a detailed assessment evaluation and may also use a scoring chart to detail the patient's current physical, cognitive (thinking, reasoning, or remembering) and mental capability.

The scoring chart that is used most often in the industry is the Functional Independence Measure (FIMTM) score.

The FIMTM score chart provides a uniform system of measurement for disability and is based on the International Classification of Impairment, Disabilities and Handicaps. It measures the level of disability and indicates how much assistance is needed for the specific patient to carry out daily activities. The FIMTM score chart can be used in different diagnoses and conditions.

In South Africa functionality is coded according to the International Classification of Functioning, Disability and Health (ICF). ICF is the World Health Organisation (WHO) framework for measuring health and disability. ICF was officially endorsed by all 191 WHO Member States in the Fifty-fourth World Health Assembly on 22 May 2001 as the international standard to describe and measure health and disability.

A multitude of other scoring systems exist in the world. However, all scoring systems have both positive and negative aspects based on comments by users of these scoring charts. The choice of scoring chart used to measure disability and functioning is not as important as long as the same scoring chart is used to determine the member's progress throughout his/her rehabilitation.

What must be funded under the PMB?

The PMB Regulations do not clearly articulate what qualifies as rehabilitation and at which point the rehabilitation treatment should be completed.

As such the Office of the Registrar has implemented a directive that rehabilitation must be funded whilst there is functional benefit in the therapy for the member (member still improves in functionality).

Physical rehabilitation include the following types of therapy:

- **Physiotherapy** – Physiotherapy rehabilitation aims to improve physical function and well-being so that the patient can integrate back into their lifestyle activities whether at home or work. Physiotherapy should focus on changes to functional disability and lifestyle restrictions based on the patient's own goals for functional improvement. Some of the techniques used include hydrotherapy, exercise and massage therapy.
- **Occupational therapy (OT)** – OT focuses on increasing the function and independence of patients by enabling them to perform tasks and activities alone that they struggle with after an incident. This can include teaching patients thinking, reasoning, or remembering (cognitive processes). OT further focuses on adapting the patient's environment, modifying tasks, teaching skills that were lost (such as holding eating utensils) and also education of the patient and family to increase their involvement and performing of daily activities.
- **Speech therapy** – Speech therapists teach patients communication skills, speech and also swallowing. Communication skills is imperative to prevent the patient from being isolated into his/her own little world. Swallowing ability prevents malnutrition of the patient therefore regaining this functionality is important to prevent further complications with feeding.
- **Nursing** – Rehabilitation nurses mainly provide education-

and instructions on how to use medicines and devices, comfort care, health promotion and prevention of complications. Nurses are often involved in end-of-life care and will ensure that the patient is comfortable and pain free.

- **Psychologists/Social Workers** – Patients very often need to adapt to a completely new lifestyle where they are not able to do everything they were previously capable of. Patients usually go through the entire grieving process and often need help to work through their emotions and physical losses. Psychologists and social workers assist patients and their families to work through these emotions and to adapt to the new life.

The PMB regulations determine that all these therapists must be funded. As rehabilitation often goes on indefinitely, once the patient reaches a plateau, therapy often changes to prevent further complications such as muscle spasms.

All the healthcare providers must submit the initial clinical assessment report to the scheme along with a treatment plan, desired goals and estimated duration to maximise functionality. After the patient reached the plateau the treatment focus must shift from intensive to maintenance treatment. Family members, care givers and patients must be educated to continue with regular treatment at home to maintain functionality. Often, this approach is cost-effective and has the desired outcomes.

It is understandable, that depending on the condition a member suffers from there will be deterioration that requires intensive treatment for a period (e.g. muscle spasm etc.). The provider must submit a report and motivate for funding as PMB. Unfortunately weekly visits to all the therapists may not be affordable to medical schemes and as such the scheme may discontinue funding once a patient reached the plateau. Periodic follow up to assess functionality and support the family to continue therapy may be necessary at periods agreed by the medical scheme and provider. Please note that the need is always based on the patient's clinical circumstances and progress.

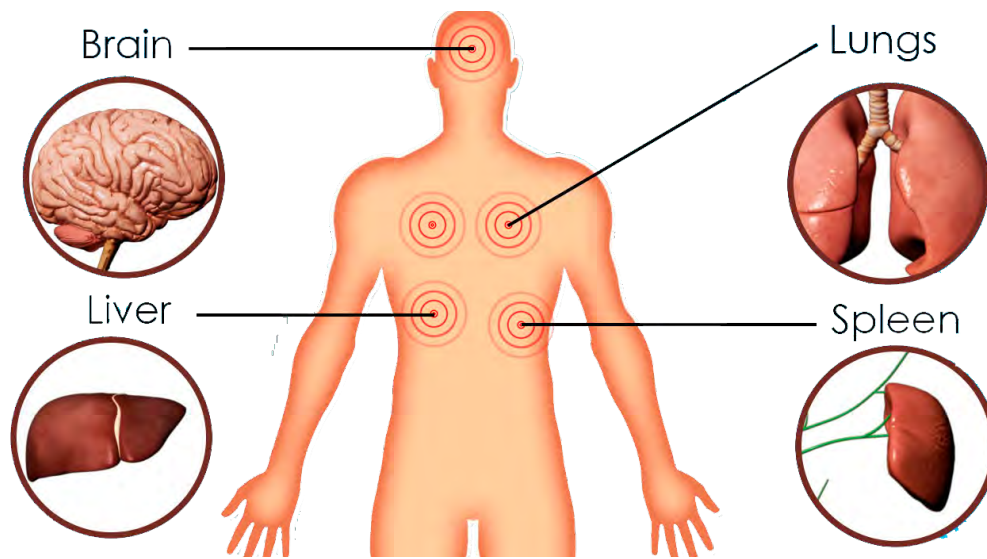
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Gaucher disease



Gaucher disease (GD) is a rare genetic disorder (1 in 75,000 births World-wide), an inborn error of metabolism due to a deficiency of the lysosomal enzyme acid β -glucosidase (glucocerebrosidase). Gaucher's Disease is a Prescribed Minimum Benefit condition under Diagnostic Treatment Pair (DTP) code 901K.

Gaucher disease

This enzyme deficiency results in accumulation of glycosphingolipid-laden macrophages (Gaucher cells) throughout the liver, spleen, bone marrow, skeleton and occasionally the lung. There are 3 types of GD. In types 2 and 3 pathology also occurs within the brain.

- Type 1 GD - constitutes 94% of all cases and is usually considered to be non-neuronopathic. The onset of the disease may occur at any age in type 1 GD.
- Type 2 GD - the onset is in infancy (so-called neuronopathic infantile, cerebral, or perinatal lethal GD) and, accounts for 1% of all GD. It is characterised by a short life expectancy of 2-3 years or less due to severe neurological consequences related to the disease.
- Type 3 GD - presents in early childhood and accounts for approximately 5% of all patients. The range of neurological involvement in this group is quite broad.

Gaucher disease has been demonstrated to occur in all ethnic groups in South Africa. Some population groups such as the Ashkenazi Jews have a higher incidence.

Signs and symptoms

The signs and symptoms of Gaucher disease are a result of the progressive accumulation of Gaucher cells in the body. It includes an enlarged liver and spleen, anaemia, easy bruising and bleeding caused by low blood platelets (thrombocytopenia), diseases of the lungs, excessive fatigue, bone abnormalities such as bone pain, fractures, and arthritis. The diagram above depicts signs and symptoms of Gaucher disease.

Diagnosis

The diagnosis of Gaucher disease is based on history, clinical evaluation, laboratory investigations and diagnostic imaging. The diagnosis is preferably confirmed by enzyme analysis together with DNA gene mutational analysis.

Diagnostic and follow-up imaging

- Magnetic resonance imaging (MRI) may be done to assess structural bone abnormalities.
- Dual energy X-ray absorptiometry (DEXA) is required at baseline and as needed for identification of patients at risk of fractures, and prior to and at follow-up of patients requiring antiresorptive or anabolic bone therapy.
- Plain radiology is done when clinically indicated for acute bone crisis or diagnosis of a fracture and chest X-ray (CXR) for suspected pulmonary (lung) involvement.
- Ultrasound is necessary for organ measurement (liver and spleen size when volumetric MRI is not available), gall stones, portal hypertension (high blood pressure) or chronic liver disease and renal (kidney) involvement. Heel ultrasound if indicated is needed to assess bone involvement if evaluation at other sites are not possible by DEXA scans.

Treatment

- Enzyme replacement therapy (ERT) is the treatment of choice for types 1 and 3 Gaucher disease.
- Supportive therapy is indicated for those patients who decline ERT, usually elderly patients and require symptomatic supportive intervention with blood products, bisphosphonate therapy, and/or analgesia.

- Mobility aids such as crutches and wheelchairs to aid mobility for everyday living.
- Monitoring is important for patients identified with Gaucher disease mutations, who may be asymptomatic and do not require treatment at present, but must be monitored regularly (6-monthly) for disease progression according to the goals of treatment and indications to start therapy.
- Bone marrow transplantation may still be considered under certain circumstances for type 3 patients when a matched, unaffected sibling donor has been identified.
- Other therapies such as substrate reduction therapy is currently used in some patients with mild disease.
- Genetic counselling is an important component of supportive care for any family and best provided by a healthcare professional well versed in these aspects of care. Parents of affected individuals, individuals themselves when they reach an age of understanding, siblings of carriers or affected individuals, and spouses/potential spouses should be included. Genetic counselling aims to enable the patients and their families to understand the medical facts, role of inheritance, strategies to prevent recurrence and to make the best possible adaptation to the disorder.

Other treatment considerations

Vitamin D, calcium; specific pain medication; seizure/neurological management; and pulmonary hypertension (high blood pressure) management.

Surgical treatment

Orthopaedic surgical intervention is commonly required to restore function and correct deformity such as in cases of subchondral bone collapse due to avascular necrosis where joint replacement may be required.

Gallstone disease is also common in Gaucher disease.

Prescribed Minimum Benefits

Gaucher's Disease is a Prescribed Minimum Benefit condition under Diagnostic Treatment Pair (DTP) code 901K. The DTP refers to life-threatening congenital abnormalities of carbohydrate, lipid, protein and amino acid metabolism. The treatment component of this DTP is specified as Medical management.

The interpretation of the PMB's should follow the predominant public hospital practice.

In terms of PMB surgical treatment, the appropriate DTP code will apply. For example, avascular necrosis will qualify for PMB benefits if there is a hip fracture under DTP code 178H. The treatment component specified for this DTP is reduction; hip replacement.

In relation to gallstones, calculus of bile duct with cholecystitis is a PMB diagnosis under DTP code 910G. The treatment component specified for this DTP is Medical management; cholecystectomy; other open or closed surgery.

What must be funded under the PMB?

- Pathology, radiology and other investigative and monitoring services
- Acute and chronic medication
- Prosthesis, appliances, devices – subject to managed care protocols
- Allied and supplementary health services such as physiotherapy, occupational therapy and speech therapy

Due to the rare nature of the condition combined with the scarcity of the specialist expertise required to manage this disease, it comes as no surprise that the expertise often reside in State Central Hospitals, depending on the region of the country. For this reason the Council for Medical Schemes has accepted arrangements where patients are managed in State Central Hospitals as well as private service providers. These arrangements are subject to terms negotiated on a case-by-case basis and are acceptable on merit. The member, therefore, might end up with a combination of private and public healthcare services where necessary.

Enzyme Replacement Therapy: Whilst specialist care maybe provided in the State, the scheme is responsible for funding ERT. It should be noted that Central hospitals may not have sufficient ERT for insured and non-insured patients. Therefore, schemes are to fund ERT dispensed at private pharmacies.

Out-hospital auxiliary services, PMB cover does not restrict a setting. As the state has overburdened auxiliary services, CMS does not encourage medical schemes to refer members for auxiliary services to the State. The medical scheme should fund treatment according to the PMB regulation. This service is not unlimited and is subject to continuous improvement with skills transfer to the caregiver.

The Physiotherapist, Occupational Therapist, Speech Therapist should ensure transfer of skills to the caregiver. The providers should ensure that the scheme is provided with progress reports to enable the scheme to apply managed care principles in allocating benefits for the requested services. The providers should note that even if a condition is included in the PMB regulations, unlimited sessions cannot be approved.

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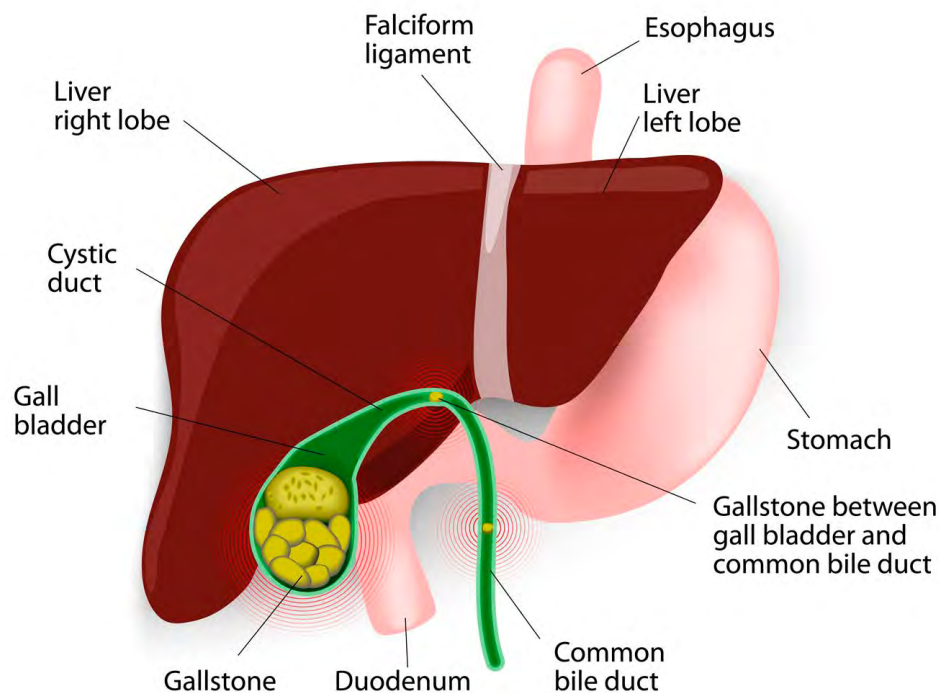
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Gallstones and Cholecystitis



The Council for Medical Schemes regularly receives enquiries and complaints with regards to unpaid or short-paid accounts for the treatment of gallstones. In this article we will provide information on the condition itself as well as clarity on the Prescribed Minimum Benefits (PMB) for the condition.

What are gallstones and what is cholecystitis?

The gallbladder is located on the right side of your abdomen just beneath the liver. It holds digestive fluids called bile (which is produced by the liver) that is released into your digestive system (small intestine) to help with the digestion of fatty foods.

Cholecystitis is inflammation of the gallbladder. In most cases cholecystitis is caused by gallstones that are blocking the tubes that lead out of the gallbladder into the small intestines. This causes the build-up of bile in the gallbladder, which in turn can cause inflammation. There are other causes of cholecystitis such as bile duct problems and tumours. Untreated cholecystitis can cause serious or life-threatening complications such as gallbladder ruptures. Cholecystitis can be acute or a chronic disease.

Gallstones (calculus of bile duct) are caused by substances in the bile that crystallise and form small stones of approximately 0.5cm (almost like sand or grain) or large stones (often only one very large stone) that can be up to 5cm in diameter.

Symptoms of gallstones and cholecystitis

Gallstones are present in approximately 8% of the population and many people have small gallstones without experiencing any symptoms. Only 10 – 20% of these people will develop symptoms.

The most common symptoms of gallstones and cholecystitis include:

- Sudden severe pain in the upper part of your right abdomen (biliary colic) just below the ribcage;
- Pain that radiates to your right shoulder or back;
- Pain that prevents you from breathing deeply;
- Tenderness of your abdomen when it is touched (palpitated);
- Pain that lasts 15 minutes to 24 hours. Pain that is continuous for 1 to 5 hours is a common occurrence; and/or
- Pain that start after meals, especially fatty meals, or that begin during the night and is so severe that it wakes you up.

In cases where there is already inflammation of the gall bladder (cholecystitis) these additional symptoms might occur:

- Nausea;
- Vomiting; and/or
- Fever

In cases where the bile duct (tube that lead to the small intestines) is blocked these additional symptoms might occur:

- Jaundice (yellowing of the skin and the white part of your eyes);
- Dark coloured urine;
- Light-coloured stools; and/or
- Fever and chills.

If you experience the above symptoms and are extremely uncomfortable it is best that you seek immediate medical attention.

Risk factors for gallstones and cholecystitis?

Risk factors for gallstones include a high fat, high sugar diet; obesity; lack of exercise; rapid weight loss; hormone replacement specifically oestrogen replacement; diabetes mellitus; high cholesterol and high blood pressure. Gallstones and cholecystitis are both more frequent in women than in men.

How are gallstones and cholecystitis diagnosed?

The following tests may be performed to diagnose gallbladder stones and cholecystitis:

- **Abdominal ultrasound:** An ultrasound is a noninvasive test in which a probe on the skin bounces high-frequency sound waves off structures in the belly. Ultrasound is an excellent test for gallstones and to check the gallbladder wall.
- **HIDA scan (cholescintigraphy) / Gallbladder scan:** This is a nuclear medicine test during which a radioactive tracer (like a dye) is injected into a vein in your arm (intravenously) and is secreted into the bile. Cholecystitis is likely if the radioactive tracer is not seen in the gallbladder.
- **Endoscopic retrograde cholangiopancreatography (ERCP):** A flexible tube is inserted through the mouth, through the stomach, and into the small intestine, a doctor can see through the tube and inject dye into the bile system ducts. Tiny surgical tools can be used to treat some gallstone conditions during ERCP.
- **Magnetic resonance cholangiopancreatography (MRCP):** An MRI scan takes images of the bile ducts, pancreas, and gallbladder. MRCP images help guide further tests and treatments.
- **Abdominal X-ray:** Although they may be used to look for other problems in the abdomen, X-rays generally cannot diagnose gallbladder disease. However, X-rays may be able to detect gallstones.
- **Blood tests:** A full blood count (FBC) and liver function tests may assist the doctor to verify if your symptoms are caused by a condition other than gallstones.

Treatment of gallstones and cholecystitis

If you are diagnosed with gallstones but do not have any symptoms it is not necessary to receive any specific treatment.

If you have symptoms for the first time you and your doctor may decide that the best decision is to wait and see if your symptoms go away on their own (watchful waiting). It is usually safe to wait until you have had another attack before you consider having surgery. Watchful waiting is however only safe if:

- This is your first episode of gallstone pain
- The pain is mild. If you have severe pain, surgery may be considered to prevent future attacks and possible complications
- You do not have any complications such as a blocked bile duct
- You are not at high risk for future problems

In most cases however the treatment for gallstones and cholecystitis is surgery. Open surgery where the doctor makes an incision in the abdomen is lately only used in very complicated cases. Most surgery is laparoscopic, in other words the doctor makes 3 to 4 small cuts (5-10mm each) in the abdomen and insert instrumentation through these openings. The gallbladder and gallstones are then removed into a retrieval bag or pouch.

Medical management in the form of a drug which helps to prevent the formation of gallstones and that also decreases the size of some gallstones is available. However, there is no significant evidence that the drug is effective in the long term. The lack of long-term effectiveness of the drug and the recurrence of most episodes of gallstones and /or cholecystitis eventually lead to surgical intervention.

What must be funded under the PMB?

PMB level of care may never be less than the diagnostic tests, treatment and care offered by the state sector. Gallstones and cholecystitis are included in the PMB regulations in the following categories:

- Calculus of bile duct with cholecystitis
- Gallstone with cholecystitis and/or jaundice

The inclusion in the PMB regulations means that the medical scheme is compelled to fund the diagnosis, treatment and care of the conditions.

It is important to note that gallstones are only included in the PMB regulations if there is confirmed cholecystitis and/or jaundice. If only gallstones are diagnosed the condition is not included in the PMB regulations.

The diagnostic tests that are included in the PMB regulations include the list below. It is however important that you find out if your medical scheme has specific protocols for the specific test that is requested by your doctor.

- Abdominal ultrasound
- Endoscopic retrograde cholangiopancreatography (ERCP) – medical schemes may have specific criteria that will determine when this test will be funded. The medical scheme may further request a motivation from the treating doctor to verify if the test meets the criteria of the scheme
- Magnetic resonance cholangiopancreatography (MRCP) – medical schemes may have specific criteria that will determine when this test will be funded. The medical scheme may further request a motivation from the treating doctor to verify if the test meets the criteria of the scheme
- Abdominal X-ray
- Blood tests

The treatment component is specified as medical management; cholecystectomy; other open or closed surgery. Closed surgery is laparoscopic surgery. Medical schemes may not have rules that exclude laparoscopic surgery if you suffer from gallstones and cholecystitis.

Care after your initial treatment will include lifestyle changes, for example a low fat, low sugar content diet. If your doctor refers you to a dietician to assist you with a diet plan, this should be funded as PMB level of care as well.

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Gastroenteritis



Gastroenteritis is the inflammation of the stomach and intestines (gut). It is a common condition. Many children (from birth to 12 years) have more than one episode in a year. The severity can range from a mild, upset tummy with mild diarrhoea for a day or two, to severe diarrhoea and vomiting for several days or longer. This article is mainly for all types of diarrhoeal diseases.

Causes of gastroenteritis

Infection - gastro-enteritis can be a symptom of infections caused by many viruses, bacteria and other microbes (germs) most of which are spread by stools (faeces) contaminated water. Infection is more common when there is a shortage of adequate sanitation hygiene and safe water for drinking, cooking and cleaning. Rotavirus and Escherichia coli are the two most common germs that cause diarrhoea in developing countries.

Diarrhoeal disease can spread from person-to-person, aggravated by poor personal hygiene. Food is another major cause of diarrhoea when it is prepared or stored in unhygienic conditions. Water can contaminate food during irrigation. Fish and seafood from polluted water may also contribute to the disease.

Malnutrition - Children who die from diarrhoea often suffer from underlying malnutrition which makes them more vulnerable to diarrhoea. Each episode of diarrhoea makes their malnutrition even worse.

Other causes – Other non-infectious causes of gastroenteritis include irritating foods or fluids (allergy-like reactions), congenital (inborn) disease and stress.

Signs and symptoms

The main symptom is diarrhoea. Diarrhoea means loose or watery stools, usually at least three times in a 24 hour period. Blood or mucus can appear in the stools with some infections. Vomiting is also another symptom. Crampy pains in the tummy (abdomen) are common. Pains may ease for a while each time some diarrhoea is passed. A high temperature (fever), headache and aching limbs sometimes occur. The greatest danger presented by gastroenteritis is dehydration.

Symptoms of dehydration in children include passing little urine; a dry mouth; a dry tongue and lips; fewer tears when crying; sunken eyes; weakness; being irritable or lacking in energy (lethargic). In infants a sunken fontanelle (taught in antenatal clinics to all new mothers) is an important sign!

Symptoms of severe dehydration in children include drowsiness; pale skin; cold hands or feet; very few wet nappies; fast (but often shallow) breathing. Severe dehydration is a medical emergency and immediate medical attention is needed. Death can follow severe dehydration if body fluids and electrolytes are not replenished, either through the use of oral rehydration salts (ORS) solution, or through an intravenous drip.

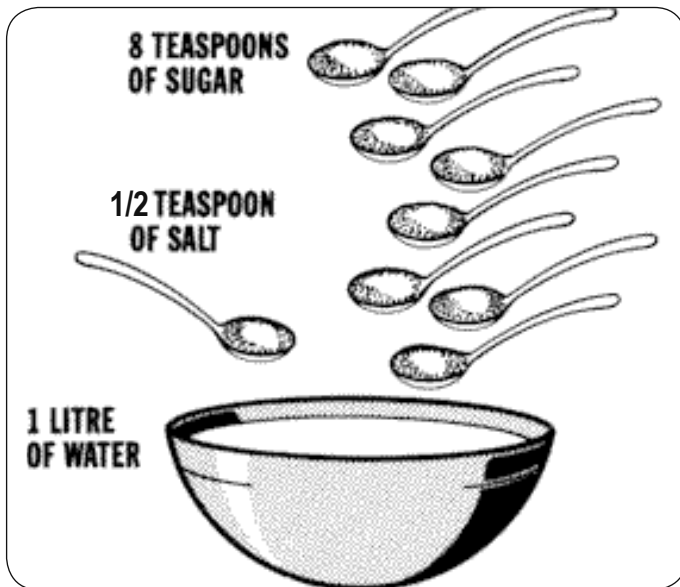
Diagnosis

The symptoms of gastroenteritis are usually enough to identify the illness. Parents and caregivers should suspect gastroenteritis if there is a sudden change in stool consistency to loose or watery stools, and/or a sudden onset of vomiting. It is important to find the cause as different types of the condition respond to a variety of treatments. Health professionals make a diagnosis based on the history provided by parents/caregivers and physical examination. In certain cases, stools and blood tests may be needed to establish the cause of the gastro-enteritis.

Treatment

Oral rehydration therapy (ORT) - should be given as first step treatment for the management of children with acute gastroenteritis with mild to moderate dehydration. ORT is a means of fluid replacement to treat and prevent dehydration. The treatment is cost-effective and can be continued at home. There are

various types available in the market. The picture below shows how to prepare ORT at home, with water that has been boiled and then cooled:



Nutrition and feeding - Early nutritional intervention is important to avoid malnutrition, persistent diarrhoea and death. At first, it may be necessary to give smaller amounts of feeds more frequently to avoid vomiting. The child may initially be unable to take full feeds and may lose weight, but the aim is to achieve full-volume feeding within 1 - 2 days. There is no need to dilute or otherwise modify the usual feeds, provided that they are tolerated. Breast-fed babies should continue to be breast-fed if they are able to take it. Bottle-fed babies should be fed with their normal full-strength feeds if they will take them. Fruit juices or fizzy drinks should be avoided as these can make diarrhoea worse.

Micronutrients - These are nutrients needed by the body in small amounts. Zinc supplements reduce the duration of a diarrhoea episode. There are various products in the market. Avoid iron supplements or supplements containing iron.

When to seek medical advice

Most children who have gastroenteritis have mild symptoms which will get better in a few days. The important thing is to ensure that they have plenty of liquids to drink. However medical advice should be sought in the following situations:

- The child is under the age of 6 months
- There is an underlying medical condition (for example, heart or kidney problems, diabetes, and history of premature birth)
- The child has a high temperature (fever)
- Lack of fluid in the body (dehydration) is suspected or developing
- The child appears drowsy or confused
- The child is being sick (vomiting) and unable to keep fluids down
- There is blood in the diarrhoea or vomit
- The child has severe tummy (abdominal) pain
- Infections caught abroad or whilst visiting other countries
- The child has severe symptoms, or if you feel that their condition is getting worse

- The symptoms are not settling (for example, vomiting for more than 1-2 days, or diarrhoea that does not settle after 3-4 days)

Prevention

- Full and exclusive breast-feeding on demand. It protects against intestinal infections and prevents exposure to environmental contamination.
- Access to safe water for drinking and food preparation, and use of proper sanitation facilities.
- Proper hand-washing hygiene with soap and water after toilet use, playing with pets, before food preparation and feeding.
- Full immunisation including rotavirus vaccines. The new rotavirus vaccines are safe and reduce the severity of infection and prevent deaths.

What must be funded under the PMB?

Gastroenteritis is a Prescribed Minimum Benefit condition under Diagnostic Treatment Pair (DTP) code 901F. The DTP refers to gastroenteritis and colitis with life-threatening haemorrhage (bleeding) or dehydration, regardless of cause. The treatment component of this DTP is specified as Medical management.

Regarding medical management, it means that the medical scheme should pay for the diagnosis, treatment and care of gastroenteritis according to the PMB regulation. Treatment and care includes medication, pathology (blood tests), radiology (abdominal x-ray and sonar) and other investigative and monitoring services.

In case of children not admitted to the hospital, medical management should still be funded as PMB. Payment of PMBs from the Medical Savings Account (MSA) contravenes Regulation 10 (6) of the Medical Schemes Act. It is important for the treating provider to register the member with the medical scheme for services rendered to allow payment of health services from the correct benefit. The members must still take the responsibility to ensure that the form to be completed by the treating health provider is obtained from the medical scheme. Once it is completed, the member must ensure that the form is submitted to the medical scheme. The medical scheme should however assist the members with the registration process regarding PMBs.

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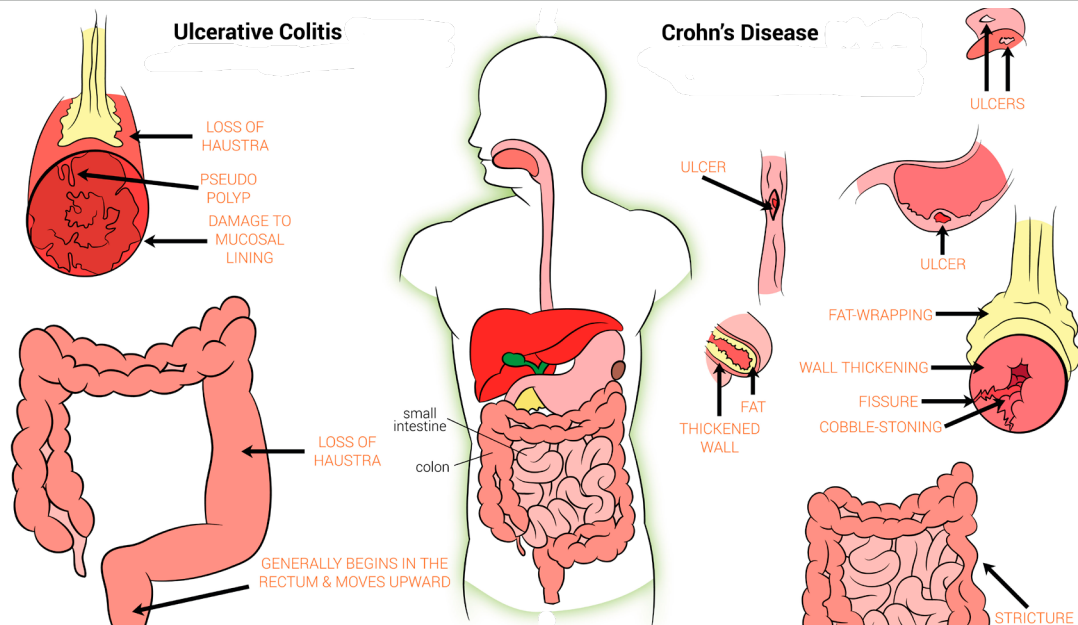
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Crohn's disease & ulcerative colitis



Crohn's disease and ulcerative colitis are the two main forms of inflammatory bowel diseases. The conditions are characterised by chronic inflammation of the digestive tract. Ulcerative colitis is usually limited to the colon (the large bowel) and rectum, while Crohn's disease may involve the stomach but typically involves the small bowel and beginning of the large bowel. In Crohn's disease, there are healthy parts of the intestine mixed in-between inflamed areas. Ulcerative colitis, on the other hand, is continuous inflammation of the colon. Ulcerative colitis only affects the innermost lining of the colon while Crohn's disease can occur in all the layers of the bowel walls.

What causes Crohn's disease and ulcerative colitis?

The causes of Crohn's disease and Ulcerative colitis are still unknown, but there are theories that the disease is caused by a combination of environmental, genetic and, as yet, undetermined factors.

Who is affected?

Both diseases often develop in teenagers and young adults although the disease can occur at any age. Ulcerative colitis and Crohn's disease affect men and women equally.

Signs and symptoms

The symptoms of ulcerative colitis and Crohn's disease are very similar. The main symptoms include abdominal pain, excessive diarrhoea, loss of appetite, fever, weight loss, anaemia, rectal bleeding and small tears in the anus. Some people may have diarrhoea 10 to 20 times a day. Crohn's disease may cause blood in stools, but not always. Ulcerative colitis may cause a sense of urgency to defecate but inability to defecate despite urgency. Failure to grow in children may also occur. Because manifestations of Crohn's disease and ulcerative colitis involve the immune system, symptoms outside the digestive tract may also occur. These may include joint pain, eye problems, a skin rash, mouth sores or liver disease.

Types of Crohn's disease

- **Ileocolitis:** affects the end of the small intestine (the ileum) and the large intestine (the colon). This type is often accompanied by significant weight loss.
- **Ileitis:** affects only the ileum, complications may include fistulas or inflammatory abscess in right lower quadrant of abdomen.
- **Gastroduodenal Crohn's disease:** affects the stomach and the beginning of the small intestine (the duodenum).
- **Jejunioileitis:** is characterised by patchy areas of inflammation in the upper half of the small intestine (the jejunum).
- **Crohn's (granulomatous) colitis:** affects the colon only.

Types of ulcerative colitis

- **Ulcerative Proctitis:** inflammation is limited to the rectum and tends to be a milder form of ulcerative colitis.
- **Proctosigmoiditis:** affects the rectum and the sigmoid colon, the lower segment of colon located right above the rectum. Moderate pain on the lower left side of the abdomen may occur in active disease.
- **Left-sided Colitis:** inflammation begins at the rectum and extends as far as a bend in the colon near the spleen.
- **Pan-ulcerative (total) Colitis:** affects the entire colon. Potentially serious complications include massive bleeding and acute dilation of the colon, which may lead to an opening in the bowel wall.

Diagnosis

The diagnosis of Crohn's disease and ulcerative colitis is based on history, clinical evaluation, laboratory investigations and diagnostic imaging. Laboratory investigation of stools can also be tested for signs of bleeding or inflammation, and to check whether diarrhoea is caused by an infection. If inflammation is confirmed, an examination to look inside the body may be conducted using imaging modalities such as endoscopy, x-ray or scan.

Diagnostic imaging

Imaging modalities that may be used include:

- Endoscopy to confirm the diagnosis of Crohn's disease and ulcerative colitis and to assess disease location, or obtain tissue for pathological evaluation.
- Magnetic resonance imaging (MRI) to confirm disease location and intestinal complications.

Treatment

Treatment for Crohn's disease and ulcerative colitis usually involves drug therapy or, in certain cases, surgery. There is currently no cure for the diseases, and there is no one treatment that works for everyone. Doctors use one of two approaches to treatment—either “step-up,” which starts with milder drugs first, or “top-down,” which gives people stronger drugs earlier in the treatment process. Therapeutic recommendations depend on the disease location, disease severity, and disease-associated complications. Therapeutic approaches are individualised according to the symptomatic response and tolerance to medical intervention. The goal of medical treatment is to reduce the inflammation that triggers signs and symptoms. It is also to improve long-term prognosis by limiting complications. In the best cases, this may lead not only to symptom relief but also to long-term remission.

Medical treatment

- Anti-inflammatory agents: aminosalicylates (5-ASA) are used to treat mild to moderate inflammation in Crohn's disease.
- Immunosuppressive agents: some patients take corticosteroids to control inflammation. These drugs non-specifically suppress the immune system and are used to treat moderate to severe Crohn's Disease. They treat the acute stages of disease by dramatically reducing fever and diarrhoea, relieving abdominal pain and tenderness, and improving appetite and general sense of well-being.
- Antibiotics: can reduce the amount of drainage and sometimes heal fistulas and abscesses.
- Other medications: anti-diarrheals, pain relievers, iron supplements, vitamin B-12, calcium and vitamin D supplements.
- Biologicals: these drugs stop the body from overproducing a protein known as tumor necrosis factor-alpha (TNF-alpha) which is believed to cause inflammation associated with these conditions.

Surgical treatment

The most common indication for surgery in Crohn's disease is the presence of neoplastic/preneoplastic (a new, often uncontrolled growth of abnormal tissue) lesions, obstructing stenosis, suppurative (causing pus) complications or medically intractable disease. In ulcerative colitis the most common indications for surgi-

cal resection are refractory disease despite medical therapy or side effects of medication.

Absolute indications for surgery are excessive haemorrhage, perforation, and documented or strongly suspected carcinoma. Surgical intervention is required in up to two thirds of patients to treat intractable haemorrhage, perforation, persisting or recurrent obstruction, abscess (not amenable to percutaneous drainage), dysplasia or cancer, or unresponsive severe disease. Surgery may also be used to close fistulas (abnormal openings) and drain abscesses.

Monitoring of disease

Because Crohn's disease and ulcerative colitis are chronic diseases, monitoring of disease is indicated. Monitoring includes bone mineral density in young people with risk factors such as low body mass index (BMI), low trauma fracture or continued or repeated glucocorticosteroid use.

What must be funded under the PMB?

Crohn's disease and ulcerative colitis are PMB conditions covered under the list of chronic diseases. The conditions are also listed under the Diagnostic Treatment Pair code 292F. The treatment component specified for this DTP is medical and surgical management. The PMB regulations explain that subject to the provisions of this regulation, any benefit option that is offered by a medical scheme must pay in full, without co-payment or the use of deductibles, the diagnosis, treatment and care costs of the prescribed minimum benefit conditions. The diagnostic tests and treatment cover includes:

- Consultations
- Pathology tests
- Radiology and other investigative and monitoring services
- Acute and chronic medication
- Surgery

Biological treatment is not included in the current PMB algorithm for Crohn's disease and ulcerative colitis. In instances where this treatment is recommended, the treating provider must confirm with the medical scheme benefits available for the member regarding the condition to allow managed care protocols to be applied. The PMB regulation states that provision must be made for exceptional circumstances where drugs in the formulary have been ineffective or cause or would cause adverse reaction in a beneficiary, without penalty to that beneficiary.

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