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INSTITUTE OF OBSTETRICIANS
& GYNAECOLOGISTS
ROYAL COLLEGE OF PHYSICIANS OF IRELAND

CLINICAL PRACTICE GUIDELINE

MANAGEMENT OF PELVIC GIRDLE PAIN IN PREGNANCY AND POST-PARTUM

Chartered Physiotherapists Women's Health and Continence and
Directorate of Strategy and Clinical Programmes
Health Service Executive

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KEY RECOMMENDATIONS

1. Pelvic girdle pain (PGP) is a specific form of low back pain defined as pain experienced between the posterior iliac crests and gluteal folds particularly in the vicinity of the sacroiliac joints.
2. Risk factors for developing PGP are a history of previous low back pain and/or previous pelvic trauma and multi-parity. No specific preventative measures can be recommended at this time.
3. Care of the woman with PGP should be multi-disciplinary and can involve general practitioners, consultants, physiotherapists, midwives, public health nurses, occupational therapists and other relevant allied health professionals. Early recognition and management can avoid and reduce short and long term physical and psychological morbidity.
4. GP/Primary Care Clinician assessments should include appropriate questions and clinical tests in order to identify and refer these women to the appropriate health professional at the earliest opportunity.
5. The pain and functional disturbances in relation to PGP must be reproducible by specific clinical tests.
6. X-rays, CT, diagnostic injection and diagnostic external pelvic fixation are not recommended.
7. Women with combined symphysis pubis pain and bilateral posterior pain are most disabled with activities of daily living.
8. Best practice would encourage that for women with moderate to severe disability antenatally noted by high scores on disability questionnaires, this should be documented in the obstetric chart by the relevant health professional.
9. During labour and delivery for women with pelvic girdle pain, care should be taken not to exceed the pain free range of hip abduction where possible particularly where epidural or spinal anaesthesia is used, as this may mask pain and increase problems in the immediate postnatal period.
10. For instrumental delivery or suturing when using the lithotomy position, care should be taken to lift both legs together keeping within the pain free range of hip movement.
11. Patient information leaflets should be readily available in healthcare service locations, written in a reader-friendly manner with clear diagrams if necessary (Appendix 2).
12. Appropriate infrastructure should be implemented to facilitate communication between the various service providers.

1.0 Purpose and scope

The purpose of this guideline is to increase awareness among healthcare professionals of pelvic girdle pain (PGP) and to assist all relevant clinicians and trainees working in HSE-funded Hospitals and Primary Care Teams in the diagnosis and management of PGP in pregnancy, labour, delivery and post-partum using an evidence-based multi-disciplinary approach. This guideline is intended to be primarily used by healthcare professionals working with women through pregnancy and the postpartum period which includes obstetricians, anaesthetists, midwives, public health nurses, radiographers, general practitioners, physiotherapists, occupational therapists and other relevant allied health professionals. It aims to describe aetiology, risk factors, prevalence and diagnosis of pelvic girdle pain (PGP) with management options through pregnancy, labour, birth, post-natal and beyond.

These guidelines are designed to guide clinical judgement but not replace it. In individual cases the healthcare professional may decide not to follow a guideline if it is deemed to be in the best interests of the woman.

2.0 Background and Introduction

Pelvic girdle pain is a specific form of low back pain defined as pain experienced between the posterior iliac crests and gluteal folds particularly in the vicinity of the sacroiliac joints. Pain can radiate to the posterior thigh and/or symphysis pubis (Vleeming, 2008). Standing, walking and sitting ability is affected. PGP is common in pregnancy with Stuge (2010) reporting that 25% of pregnant women and 5% after birth seek medical help due to lumbo-pelvic problems with adverse impact on quality of life and socio-economic detriment as a consequence of absenteeism from work (Vermani et al., 2010). There is growing evidence that PGP disorders manifest as a specific subgroup with a unique presentation and a need for specific management (O'Sullivan and Beale 2007). PGP may have a biomechanical origin and be related to non-optimal stability of the pelvic joints.

Long-term morbidity can be reduced if pregnant women presenting with PGP are diagnosed early, given accurate information and managed appropriately. There is a need for increasing the awareness about this condition among healthcare professionals who care for pregnant women, particularly given the high incidence of recurrence in subsequent pregnancies.

3.0 Methodology

A search was conducted of current international guidelines in the UK, Europe, USA, Canada, Australia and New Zealand.

Medline, PubMed, PEDRO, OVID and the Cochrane Library were searched for the time period 1996-2011 using terms relating to pelvic girdle pain, pregnancy-related pelvic girdle pain, symphysis pubis pain, symphysis pubis dysfunction, pregnancy-related lumbo-pelvic pain, labour, delivery, birth, physiotherapy and interventions. Searches were limited to humans and the English language.

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Thank you also to Teresa Costello, Physiotherapist, St. Josephs Care Centre, Longford and colleagues on the CPWHC committee for their input.

This guideline was peer reviewed by the Therapy Professions Committee, CPWHC Committee, Maeve Whelan SMISCP and the Obstetric & Gynaecology Clinical Programme including the Clinical Advisory group.

4.0 Clinical guidelines

4.1 Terminology

Some confusion arises from the various nomenclature used to describe what is likely to be a group of conditions causing pelvic girdle pain in pregnancy. In line with the European Guidelines, pelvic girdle pain (PGP) is now the most accurate and accepted terminology to describe pregnancy-related pain in the lumbosacral, sacroiliac and symphysis pubis joints superseding 'symphysis pubis dysfunction' (SPD) (Vleeming et al., 2008).

4.2 Prevalence

The point prevalence of pregnant women suffering from PGP is about 20% (Vleeming et al, 2008) further supported by Kanakaris et al., (2011) who reported a prevalence of between 16-25% for PGP and included only prospective studies with large series of patients with objectively verified symptoms. Clinically persistent PGP from the post-partum stage to two years after childbirth has a reported incidence of 5% to 8.5% (Wu et al, 2004).

It is clear that symptoms of pelvic girdle pain are often mild but can be seriously disabling. Women with persistent pain report high disability and difficulties in returning to work (Hansen et al., 2005). In a 12-year follow-up study of women with some type of lumbo-pelvic pain severe enough to require sick leave while pregnant, 92% reported pain during a subsequent pregnancy and 86% had recurrent pain while not pregnant (Brynhildsen et al., 1998). Pregnancy is thereby a risk factor for persistent pelvic girdle pain requiring long-term sick leave.

4.3 Aetiology

Symptoms of PGP can begin as early as the first trimester, at any stage during the pregnancy, in labour or in the postpartum period. Possible causal factors include hormones, biomechanics, trauma, metabolic factors, inadequate motor control and stress of the ligament structures (Kankaris et al., 2011). In a systematic review of fourteen relevant studies, Mens et al, (2009) found that during the last months of pregnancy and the first 3 weeks after delivery, motion

of the pelvic girdle joints is 32-68% larger in patients with PGP and low back pain than in healthy controls. Damen et al., (2002) in a study of 163 pregnant women, suggested that asymmetrical laxity between the left and right sacroiliac joints was a causative factor. If a woman experiences PGP during one pregnancy she is more likely to experience it in subsequent pregnancies; but the severity cannot be determined. Occasionally the position of the baby can produce symptoms allied to PGP.

4.4 Risk factors

Sometimes there is no obvious explanation for the cause of pregnancy-related PGP. **Evidence for risk factors is contradictory and inconclusive with history of previous low back/pelvic girdle pain or pelvic trauma being the most probable. Bjelland et al., (2010) found the risk of PGP symptoms also increased with number of previous deliveries.** Non-risk factors include contraceptive pills, height, weight, smoking, time interval since last pregnancy and age (Vleeming et al., 2008).

4.5 Presentation and Diagnosis

The onset of PGP varies in pregnancy and can be sudden or insidious with peak of symptoms between 24-36 weeks. Symptoms are often mild but occasionally can be seriously disabling. Pain is usually located posteriorly at the sacroiliac joints and gluteal area and can be anteriorly at the symphysis pubis. It may radiate to the groin, perineum or posterior thigh lacking a typical nerve root distribution (Kankaris et al 2011). Women with PGP and pregnancy-related low back pain find difficulty with normal activities such as getting up from a sitting position, turning over in bed, prolonged sitting, prolonged walking, dressing/undressing and lifting and carrying small weights. Albert et al, 2010 in a cross-sectional study showed that women with combined symphysis pubis pain and bilateral posterior pain had greatest disability and were at a greater risk of requiring crutches for gait. In the majority of cases PGP settles and disappears after the sixth month postpartum but in a minority of cases it can persist becoming a chronic disabling condition.

Physiotherapists with a special interest in Women's Health use a range of pain provocation and functional tests to assist the diagnosis. **For the general practitioner and obstetric medical team, a functional diagnostic approach based principally on clinical history and pain mapping is most useful. X-rays, CT, diagnostic injection and diagnostic external pelvic fixation are not recommended.** MRI may be used to exclude ankylosing spondylitis and in the presence of red flags (Vleeming et al., 2008).

Leadbetter et al, (2006) described a scoring system to guide clinicians in screening the general pregnant patient population. They included five essential symptoms: pain in the pubic symphysis on walking, pain while standing on one leg, pain while climbing stairs, while turning over in bed as well as history of damage to the pelvis or lumbosacral area.

Laboratory tests are usually normal however complete blood count, urinalysis and biochemistry may be needed for differential diagnosis.

4.6 Differential diagnosis of PGP/LBP

A thorough medical history, physical examination and appropriate laboratory tests should be performed to successfully reach the diagnosis of PGP. A multidisciplinary approach may be needed as this syndrome can involve a wide field of related medical specialties. A diagnosis of PGP should be considered after the exclusion of the following pathologies.

- Bone or soft tissue infections (typical or atypical such as tuberculosis or syphilitic lesions of pubis)
- Urinary tract infections
- Femoral vein thrombosis
- Obstetric complications (pre-term labour, abruption, round ligament pain, chorioamnionitis)
- Bone or soft tissue tumours
- Cauda equina syndrome
- Lumbar disc lesion/prolapse

4.7 Assessment of PGP

Assessment and management of the patient with PGP should involve a multidisciplinary team approach. This may involve GP, obstetrician, midwife, physiotherapist, occupational therapist, anaesthetist, public health nurse, psychologist and other allied health professionals as necessary. Treatment and management of PGP ante-natally and post-natally should be provided by a chartered physiotherapist.

A clinical history should be taken that includes details on;

- parity and previous modes of delivery
- previous low back/pelvic girdle pain
- previous pelvic trauma
- aggravating movements and tasks; particularly pain and aggravated disability with standing, walking and/or sitting, activities of daily living, employment / work load and leisure pursuits
- the woman's pain coping strategies
- presence or dominance of avoidant behaviours/ catastrophising due to fear of movement and present and past history of anxiety and depression (O'Sullivan & Beale 2007)
- concurrent presence of continence and or sexual dysfunction disorders

PGP can vary in presentation and is defined by pain experienced between the posterior iliac crest and the gluteal fold, particularly in the vicinity of the sacroiliac joints. The pain may radiate to the posterior and inner thigh and can also occur in conjunction with, or separately in the symphysis pubis. The lumbar spine and hip joints should be ruled out as a source of pain.

To obtain an accurate pain history and ascertain the patient's functional ability, the following are recommended;

- the patient should indicate the area of pain on a pain location diagram (Vleeming et al., 2008)
- the level of pain can be recorded using the Visual Analogue Scale (VAS) 0-10.
- A self-reported patient questionnaire should be completed; Validated questionnaires include the **Oswestry Disability Index (ODI)**, (Fairbank et al., 1980, 2000) and the **Pelvic Girdle Questionnaire (PGQ)** (Stuge et al., 2011, Grotle et al., 2012), (See Appendix 1)
- General observation of posture, gait, mobility getting in and out of bed, mobility from sit to stand and lying to sitting should be noted.

There is no gold standard test for the diagnosis of PGP but pain provocation tests have higher reliability and specificity than palpatory tests. The following tests are recommended for clinical examination of PGP. As eliciting these tests can be very painful for the affected women, these tests should be carried out bearing this in mind. The supine position should be kept for the briefest possible duration in pregnant women to minimize the effects of supine hypotension syndrome on the mother and the baby (Vermani et al, 2009).

Functional Pelvic Clinical tests:

- Active straight leg raise (ASLR) test (Mens et al., 1999)
When there is optimal function of the lumbopelvic-hip region, the leg should rise effortlessly from the table and the pelvis should not move relative to the thorax and/or lower extremity.
The patient lies supine with straight legs and the feet 20 cm apart. The test is performed after the instruction 'Try to raise your legs, one after the other, above the couch for 20 cm without bending the knee'. The patient is asked to score any feeling of impairment (on both sides separately) on a 6 point scale. (0 = not difficult at all; 1= minimally difficult; 2= somewhat difficult, 3= fairly difficult, 4= very difficult, 5= unable to do). The scores on both sides are added so that the sum score can range from 0 to 10.

Sacroiliac Joint Pain clinical tests:

- Posterior pelvic pain provocation (P4) or thigh thrust test (Ostegard et al., 1994)
The test is performed supine and the patient's hip flexed to an angle of 90° on the side to be examined. Light manual pressure is applied to the patient's flexed knee along the longitudinal axis of the femur while the pelvis is stabilized by the examiner's other hand resting on the patients contralateral superior anterior iliac spine. This pressure applies a posterior shearing to the SIJ on that side. The test is positive when the patient feels a familiar well localised pain deep in the gluteal area on the provoked side.
- Faber test
The (Patrick's) FABER Test stands for Flexion, Abduction and External Rotation. These three motions combined result in a clinical pain provocation test to find and isolate pathologies at the hip, lumbar and sacroiliac region

The patient lies supine. One leg is flexed, abducted and externally rotated so that the heel rests on the opposite knee. The examiner presses gently on the superior aspect of the tested knee joint. If pain is felt in the sacroiliac joints or in the symphysis, the test is considered positive.

Symphysis Pubis tests:

- Palpation of the symphysis pubis may reveal antero-posterior or supero-inferior displacement of the upper border of the pubic symphysis or pubic tubercle.

Palpation of the entire anterior surface of the symphysis pubis with the woman supine typically elicits pain that persists for more than five seconds after removal of the examiner's hand

- Pain Provocation of the symphysis by Modified Trendelenburg's test

The patient stands on one leg and flexes the hip and knee at 90 degrees. If pain is experienced in the symphysis, the test is considered positive.

Palpation of the Long Dorsal Sacroiliac ligament:

This structure is commonly tender to palpation in patients with pelvic pain (Vleeming et al., 2002)

➤ **(Testing in pregnancy)**

The patient lies on her side with slight flexion in both hip and knee joints. If palpation of either dorsal ligament directly under the caudal part of the posterior superior iliac spine (PSIS) causes pain that persists for more than 5 seconds after removal of the examiner's hand it is recorded as pain. If the pain disappears within 5 seconds, it is recorded as tenderness.

➤ **(Testing post-partum)**

The patient lies prone and is tested for tenderness on palpation of each of the long dorsal ligaments directly under the caudal part of the posterior superior iliac spine (PSIS). A skilled examiner scores the pain as positive or negative on a 4 point scale (0= no pain, 1= mild, 2= moderate, 3= unbearable). The scores on both sides are added so that the sum score can range from 0-6

A physiotherapist may also evaluate sacral, pubic and iliac crest levels to assess for pelvic asymmetry along with muscle function testing of the pelvic floor, abdominal wall, back muscles, iliopsoas, quadratus lumborum, gluteal muscles and piriformis. **Pain-free range of hip abduction and flexion should also be recorded.**

4.8 Management in Pregnancy

The aims of treatment for PGP are to relieve pain, to improve functional ability and to prevent recurrence and chronicity (Vleeming et al., 2008). In conjunction with detailed assessment, management of women with PGP should be

multidisciplinary and multifactorial. Significant pain in the early stages (more than 7/10 on Visual Analogue Scale) is a major predictor of chronicity so effective pain relief, reassurance and management early on is crucial (ACPDWH, 2010). There is not one specific treatment for PGP but the following recommendations are based on the European Guidelines for diagnosis and treatment of PGP (Vleeming et al., 2008).

- Pain control is the most important aspects of management. Effective pain relief at an early stage is vital to prevent the vicious cycle of chronic pain and depressed mood (Keriakos et al 2011). Regular analgesia in the form of paracetamol and codeine-based preparations may be prescribed during pregnancy with close monitoring of effectiveness and side effects. Non-steroidal anti-inflammatory drugs (NSAIDS) should only be used after delivery (Jain et al., 2006).
- Individualised Physiotherapy tailored programmes are recommended based on the findings of an individual assessment as above.
- Exercise is recommended during pregnancy either in an individual or group setting. Exercise should focus on adequate advice concerning activities of daily living and avoidance of maladaptive movement patterns.
- Manipulation or mobilisation of pelvic joints may be used to test for symptomatic relief but should only be used for a few treatments.
- Pelvic belts may give symptomatic relief but they should not be used as a single treatment for PGP and should only be applied for short periods. Application of a pelvic belt significantly decreases mobility of the sacroiliac joints and provides force closure (Hu et al, 2010). There is a greater reduction in mobility with the belt positioned just caudal to the anterior superior iliac spines than at the level of the pubic symphysis (Mens et al., 2006). In some women with sacroiliac joint malalignment, application of a pelvic belt can aggravate pain so individual assessment is important. When wearing the pelvic belt, the woman should notice a marked difference in the ability to transfer load through the pelvic girdle and a reduction in the effort required to lift the leg in either supine or standing (Lee and Lee, 2004).
- Evidence suggests that acupuncture seems to alleviate LBP and PGP during pregnancy.
- Massage may be a useful treatment if used in conjunction with an multifactorial individualised physiotherapy program
- The patient should be provided with adequate education, patient information leaflets and reassurance that PGP is common and is not dangerous to mother or foetus.

Physiotherapists trained in the assessment and treatment of PGP may use any or all of the following in the management of patients with PGP; advice and education, joint mobilisations, myofascial and trigger point techniques, muscle energy techniques, acupuncture, TENS, massage, specific individualised exercise

programmes and pelvic belts. Mobility aids such as crutches should be given to patients who have abnormal gait patterns and/or pain on mobilising and weight bearing.

Other mobility equipment and aids to daily living may also be necessary in severe cases. A referral may need to be made to an Occupational Therapist to maximise the woman's functional independence as required. Good communication with the patient, family members, Obstetrician, Midwives and if necessary, the Anaesthetic department is essential.

Management of PGP in labour and delivery

No studies or research were found during our literature review on the management of labour in women with PGP. The Association of Chartered Physiotherapists in Women's Health (ACPWH, 2010) has produced guidelines for the management of labour in women with PGP based on available evidence, expert opinion, patient experience and best practice. Keriakos et al, (2011) recommends thorough planning and discussion with the Consultant and Midwife regarding timing of delivery and birthing options.

Rost et al, (2006) in a follow up study of 598 women suggests attention be given to the prevention of extreme pain during delivery and even more to the duration of the labour. The longer the duration of the labour the greater risk of being symptomatic at 18 months follow up.

The woman's preference and suitability for the following recommended positions in the first and second stages of labour are to be considered by the Obstetric team and the physiotherapist.

Criteria for identifying women that require attention to their management of PGP in labour:

- Women with PGP involving bilateral posterior pelvic pain and symphysis dysfunction usually have a greater disability than women with unilateral posterior pelvic pain and symphysis dysfunction (Robinson et al, 2010)
- Women with restricted hip movement, impaired gait and decreased bed mobility may require more specific advice for management of labour than women with pain alone (Vleeming et al., 1997).
- Prophylactic low molecular weight heparin should be considered where there is restricted mobility (Keriakos et al., 2012).

Disability measurements recommended for delivery

The following measurements should be noted for women with high disability scores in their obstetric chart.

- Range of movement of the lumbar spine (if necessary)
- Pain free range of hip abduction in sitting, supine and side lying
- Pain free range of hip flexion in sitting, supine and side lying

Positions of comfort, bed mobility and gait pattern should also be recorded.

Consideration needs to be given with regard to position for delivery for women with PGP. This should also apply for vaginal examinations.

The distance between the inside of the knees can be measured as an indication of the pain free range of abduction available at the hips. Forced abduction and movement beyond this pain free range should be avoided where possible. It is

important to minimise any intra-partum strain to the pelvic girdle joints (ACPWH, 2010; Jain et al., 2006).

Recommended positions of labour for PGP/LBP

Recent Cochrane reviews have found that women who utilise upright positions during labour have a shorter duration of the first and second stage of labour, experience less intervention, report less severe pain and report increased satisfaction with their childbirth experience compared with women in a semi recumbent or supine/lithotomy position. Increased blood loss during third stage is the only disadvantage identified but this may be due to increased perineal oedema associated with upright positions (Lawrence et al., 2009, Priddis et al., 2011).

During labour and delivery, any simple procedure which alleviates pain without danger to the mother or to the child, such as shifting from a horizontal to a vertical position or a more upright posture, should be promoted and employed (Melzack et al., 1991, Gupta et al., 2000).

Positions in labour for PGP

First stage of labour	Positions	Pictures
	<ul style="list-style-type: none"> • If pain and disability with gait, adopt an upright position and restrict unnecessary movement • Avoid asymmetrical postures that compromise the sacroiliac joints • A birthing pool or exercise ball can be recommended (Boissonault, 2001) 	

Second stage of labour		
<p>The following positions can aid in maintaining pelvic balance during delivery.</p>	<ul style="list-style-type: none"> • Upright and forward leaning. • 4 point kneeling. • Assisted squatting. • Lying on the back, flexed position of the lower limbs with the patient supporting her own legs helps to increase the pelvic outlet (Rost et al., 2006, Engelen et al., 1995) 	
With Epidural:	<ul style="list-style-type: none"> • Semi-reclined with legs supported on bed is acceptable within the pain free range of hip abduction. • Side-lying with the leg supported as long as the top leg is not too widely abducted. 	 <p>(AVE beds, ProgressiveSurgical Ltd) www.progressivesurgical.com</p>

Obstetric considerations for PGP

Pain relief options are unchanged by PGP and there is no evidence that epidural / spinal techniques or regional anaesthesia are contraindicated.

Normal vaginal delivery (NVD) is the best option for most women if it can be achieved. Ideally there would be;

- Spontaneous onset of labour
- A comfortable birthing position e.g. high supported kneeling or left lateral position
- Avoidance of hip abduction beyond pain free range and squatting position where possible
- Avoidance of positions that involve putting the woman's feet on the hips or shoulders of attending staff or support partners where possible

Induction, if indicated for reasons other than PGP

- Induction for labour is occasionally offered to those who are in extreme pain or who are severely limited in their activities, however the risks for induction often outweigh the benefits (Jain et al., 2006)

Assisted vaginal delivery

- Ventouse is preferred and may be possible in a left lateral position
- If placing the patient in the lithotomy position, it should only be for a minimum duration of time and ideally the lower extremities should not be moved beyond the available range of hip movement.
- **When using the lithotomy position for instrumental delivery or suturing, care should be taken to lift both legs passively and simultaneously into and out of position keeping within the pain free range** (Boissonnault., 2001).

Epidural analgesia

- Care should be taken not to exceed the pain free range of hip abduction and flexion if epidural or spinal anaesthesia is used, as this might mask pain and increase likelihood of problems in the immediate post-natal period.
- If a woman has chosen to use epidural analgesia she should be encouraged to make small adjustments to her position during labour.

Elective Caesarean section (CS)

There is no evidence that a CS is beneficial for women with PGP or confers any benefit to recovery, prognosis or recurrence of PGP. However, very rarely when hip abduction and flexion are severely restricted and a comfortable birthing position cannot be maintained, this may be necessary (Jain et al., 2006, ACPWH, 2010). In CS for women with severe disability due to PGP, the following care must be taken into account:

- Know the range of flexion of the lumbar spine for epidural or spinal. If the woman is unable to flex in sitting, they need to be aligned with the side of the bed in side-lying for the anaesthesia.
- Do not abduct or laterally rotate the hips further than the pain free range of hip abduction during catheterisation of the bladder.

4.9 Documentation

Positions in labour for patients flagged with a high disability rating due to PGP should be documented in the labour notes in the woman's obstetric chart. These positions are recommended for use by the obstetric team if required and if they are suitable for the woman during delivery management. In rare cases the obstetric team may liaise with the physiotherapist regarding positions for use in the management of the labour.

4.10 Management in the post partum period

Women with PGP have greater needs and often have longer hospital stays. Jain et al., (2006) have recommended that women with moderate to severe PGP rest in bed for 24–48 hours until discomfort subsides. Thrombo-embolism is a risk of immobilisation and in selected women with added risk factors, a policy of regular analgesia, thrombo-embolism deterrent stockings and heparin, along with gradual mobilisation and individualised physiotherapy treatment should be instituted early.

In the early post partum phase;

- Patients with moderate to severe PGP should be given adequate pain relief (first choice: paracetamol, second choice: NSAIDs). Appropriate treatment should focus on management of symptoms including adequate rest, ice to reduce inflammation, pelvic supports for instability and muscle weakness, aids for mobility and gait re-education if necessary, family support and nursing staff support to look after the new baby and mother.
- Consider pelvic x-ray and orthopaedic referral if the woman remains in severe pain.
- Breastfeeding will not slow the rate of recovery from PGP. Following birth, the mother should be assisted in finding a comfortable position for feeding such as side-lying or supported sitting. Most NSAIDs and opiates are considered safe while breastfeeding. It is the prescriber's responsibility to ensure safety of any medication.
- Involvement of other team members such as the public health nurse, specialist continence nurse (woman may need prolonged catheterisation or self intermittent catheterisation if mobility severely disabled), occupational therapist, social worker or psychologist may be required. Continued care in the community after discharge and additional support at home should be ensured.

In the later post-partum phase after discharge;

- If symptoms persist post-partum, out-patient physiotherapy should be resumed if the woman is able to attend. Individualised assessment and treatment are recommended, focusing on specific stabilising exercises as part of a multifactorial treatment for PGP postpartum (Vleeming et al, 2008).
- The woman should be encouraged to avoid provoking activities such as heavy lifting, twisting, resistance activities to one leg, e.g. kicking a ball. Normal movement and pacing of activities should be encouraged within activities of daily living.
- There can be a small sub-group of patients with PGP who develop chronic pain leading to high disability with resistance to physical interventions. Management of these women must be multidisciplinary involving medical and psychological intervention. Functional rehabilitation should aim to enhance normal body function and address abnormal pain behaviours without a focus on pain. Passive treatments and rehabilitation that focuses on specific muscle control strategies may reinforce abnormal pain behaviours and hyper vigilance (O'Sullivan & Beale 2007).

- If pain persists despite a period of rehabilitation, an Orthopaedic review should be sought. There is no recommended timescale for this but imaging should be carried out when there is concern about recovery. Stork X-rays may be needed if a diastasis pubis symphysis is suspected (>1cm separation) (Keriakos et al., 2011). MRI imaging can assess inflammation around the symphysis pubis and sacroiliac joints. A surgical option should only be offered as part of a comprehensive management protocol and mostly as an end-stage alternative (Kankaris et al, 2011).

4.11 Prognosis

PGP is mostly a self-limiting condition in which symptoms settle in the majority of women within the first three months of delivery. By the first year after delivery only 1-2% of women report the persistence of pain and these are usually women who have had more severe symptoms during their pregnancies (Albert et al, 2001). Several related studies have identified certain risk factors for worse prognosis including; a high number of positive provocation tests, multiparity, prolonged duration of labour, lack of education and/or unskilled work history and age >29 years (Albert et al. 2001, To & Wong, 2003, Grotle et al, 2005). Vollestad and Stuge (2009) found that a positive ASLR test and the woman's belief in improvement were clinically significant predictors of recovery.

4.12 Further Pregnancies

There is a high risk of recurrence during subsequent pregnancies but if treated early and well managed, may not be as severe (Leadbetter et al, 2004). There is no advantage to leaving a long gap between pregnancies although some abdominal muscles may not have recovered by 12 months postpartum. The woman may consider becoming fully fit, losing excess weight and waiting until other toddlers can walk before another pregnancy (ACPWH, 2010).

5.0 Implementation Strategy

- Distribution of guideline to all HSE-funded Maternity Hospitals/Units, Primary Care Teams, Professional bodies and other interested parties.
- Implementation through HSE Obstetrics and Gynaecology Clinical Programme local implementation boards.

6.0 Qualifying Statement

These guidelines have been prepared to promote and facilitate standardisation and consistency of practice, using a multidisciplinary approach. Clinical material offered in this guideline does not replace or remove clinical judgment or the professional care and duty necessary for each woman. Clinical care carried out in accordance with this guideline should be provided within the context of locally available resources and expertise.

This Guideline does not address all elements of standard practice and assumes that individual clinicians are responsible to:

- Discussing care with women in an environment that is appropriate and which enables respectful confidential discussion.
- Advising women of their choices and ensuring informed consent is obtained.
- Meeting all legislative requirements and maintaining standards of professional conduct.
- Applying standard precautions and additional precautions as necessary, when delivering care.
- Documenting all care in accordance with local and mandatory requirements.

7.0 References

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APPENDICIES

APPENDIX 1a

The Pelvic Girdle Questionnaire

Appendix 1.

Pelvic Girdle Questionnaire (English Version)^a

To what extent do you find it problematic to carry out the activities listed below because of pelvic girdle pain? For each activity tick the box that best describes how you are today.

How problematic is it for you because of your pelvic girdle pain to:	Not at all (0)	To a small extent (1)	To some extent (2)	To a large extent (3)
1. Dress yourself				
2. Stand for less than 10 minutes				
3. Stand for more than 60 minutes				
4. Bend down				
5. Sit for less than 10 minutes				
6. Sit for more than 60 minutes				
7. Walk for less than 10 minutes				
8. Walk for more than 60 minutes				
9. Climb stairs				
10. Do housework				
11. Carry light objects				
12. Carry heavy objects				
13. Get up/sit down				
14. Push a shopping cart				
15. Run				
16. Carry out sporting activities*				
17. Lie down				
18. Roll over in bed				
19. Have a normal sex life*				
20. Push something with one foot				

* If not applicable, mark box to the right.

How much pain do you experience:	None (0)	Some (1)	Moderate (2)	Considerable (3)
21. In the morning				
22. In the evening				

To what extent because of pelvic girdle pain:	Not at all (0)	To a small extent (1)	To some extent (2)	To a large extent (3)
23. Has your leg/have your legs given way?				
24. Do you do things more slowly?				
25. Is your sleep interrupted?				

^a Scoring procedure: the scores were summarized and recalculated to percentage scores from 0 (no problem at all) to 100 (to a large extent).

APPENDIX 1b

Oswestry Low Back Pain Disability Questionnaire

Instructions

This questionnaire has been designed to give us information as to how your back or leg pain is affecting your ability to manage in everyday life. Please answer by checking ONE box in each section for the statement which best applies to you. We realise you may consider that two or more statements in any one section apply but please just shade out the spot that indicates the statement which most clearly describes your problem.

Section 1 – Pain intensity

- I have no pain at the moment
- The pain is very mild at the moment
- The pain is moderate at the moment
- The pain is fairly severe at the moment
- The pain is very severe at the moment
- The pain is the worst imaginable at the moment

Section 2 – Personal care (washing, dressing etc)

- I can look after myself normally without causing extra pain
- I can look after myself normally but it causes extra pain
- It is painful to look after myself and I am slow and careful
- I need some help but manage most of my personal care
- I need help every day in most aspects of self-care
- I do not get dressed, I wash with difficulty and stay in bed

Section 3 – Lifting

- I can lift heavy weights without extra pain
- I can lift heavy weights but it gives extra pain
- Pain prevents me from lifting heavy weights off the floor, but I can manage if they are conveniently placed eg. on a table
- Pain prevents me from lifting heavy weights, but I can manage light to medium weights if they are conveniently positioned
- I can lift very light weights
- I cannot lift or carry anything at all

Section 4 – Walking*

- Pain does not prevent me walking any distance
- Pain prevents me from walking more than 2 kilometres
- Pain prevents me from walking more than 1 kilometre
- Pain prevents me from walking more than 500 metres
- I can only walk using a stick or crutches
- I am in bed most of the time

Section 5 – Sitting

- I can sit in any chair as long as I like
- I can only sit in my favourite chair as long as I like
- Pain prevents me sitting more than one hour
- Pain prevents me from sitting more than 30 minutes
- Pain prevents me from sitting more than 10 minutes
- Pain prevents me from sitting at all

Section 6 – Standing

- I can stand as long as I want without extra pain
- I can stand as long as I want but it gives me extra pain
- Pain prevents me from standing for more than 1 hour
- Pain prevents me from standing for more than 3 minutes
- Pain prevents me from standing for more than 10 minutes
- Pain prevents me from standing at all

Section 7 – Sleeping

- My sleep is never disturbed by pain
- My sleep is occasionally disturbed by pain
- Because of pain I have less than 6 hours sleep
- Because of pain I have less than 4 hours sleep
- Because of pain I have less than 2 hours sleep
- Pain prevents me from sleeping at all

Section 8 – Sex life (if applicable)

- My sex life is normal and causes no extra pain
- My sex life is normal but causes some extra pain
- My sex life is nearly normal but is very painful
- My sex life is severely restricted by pain
- My sex life is nearly absent because of pain
- Pain prevents any sex life at all

Section 9 – Social life

- My social life is normal and gives me no extra pain
- My social life is normal but increases the degree of pain
- Pain has no significant effect on my social life apart from limiting my more energetic interests eg, sport
- Pain has restricted my social life and I do not go out as often
- Pain has restricted my social life to my home
- I have no social life because of pain

Section 10 – Travelling

- I can travel anywhere without pain
- I can travel anywhere but it gives me extra pain
- Pain is bad but I manage journeys over two hours
- Pain restricts me to journeys of less than one hour
- Pain restricts me to short necessary journeys under 30 minutes
- Pain prevents me from travelling except to receive treatment

Scoring instructions

For each section the total possible score is 5: if the first statement is marked the section score = 0; if the last statement is marked, it = 5. If all 10 sections are completed the score is calculated as follows:

Example: 16 (total scored)
 50 (total possible score) x 100 = 32%

If one section is missed or not applicable the score is calculated:

 16 (total scored)
 45 (total possible score) x 100 = 35.5%

Minimum detectable change (90% confidence): 10% points (change of less than this may be attributable to error in the measurement)

Interpretation of scores

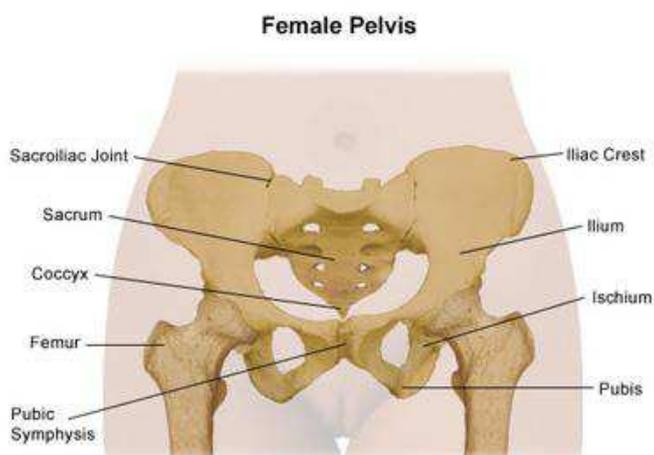
0% to 20%: minimal disability:	The patient can cope with most living activities. Usually no treatment is indicated apart from advice on lifting sitting and exercise.
21%-40%: moderate disability:	The patient experiences more pain and difficulty with sitting, lifting and standing. Travel and social life are more difficult and they may be disabled from work. Personal care, sexual activity and sleeping are not grossly affected and the patient can usually be managed by conservative means.
41%-60%: severe disability:	Pain remains the main problem in this group but activities of daily living are affected. These patients require a detailed investigation.
61%-80%: crippled:	Back pain impinges on all aspects of the patient's life. Positive intervention is required.
81%-100%:	These patients are either bed-bound or exaggerating their symptoms.

APPENDIX 2: PATIENT INFORMATION LEAFLET

PREGNANCY-RELATED PELVIC GIRDLE PAIN

Anatomy of the Pelvic Girdle

The pelvic girdle consists of the sacrum bone at the back, which is a continuation of the spine, and the two ilium or hip bones. At the back, the ilium and sacrum form the **sacroiliac joints**, one on each side. Both ilia are connected by cartilage at the front, to form the **symphysis pubis joint**. These joints are also reinforced by strong ligaments.



www.mainlinehealth.org/stw/images/125826.jpg

What is Pelvic Girdle Pain?

Pelvic Girdle Pain (PGP) is the term given to pain in the joints that make up your pelvic girdle. It is common but not normal and can affect 1 in 5 women during pregnancy. There are many causes of PGP and may include:

- Uneven movement of the pelvic joints
- Changes in the activity of the tummy, pelvic girdle, hip and / or pelvic floor muscles can affect the stability of the pelvic girdle
- Previous injury to the pelvis
- Hormonal changes that occur during pregnancy
- The position of the baby can cause symptoms related to PGP in some women

Signs and Symptoms

- Pain can vary from mild to severe. It may affect the symphysis pubis joint, groin, inner thighs, sacroiliac joints, lower back and / or perineum
- You may feel a clicking or grinding sensation in the pelvic area
- You may have tenderness over the pubic area
- Difficulty walking
- Difficulties with activities requiring standing on one leg (climbing stairs, dressing)
- Difficulties with movements requiring separation of the legs (getting in or out of the car, bed or bath)
- Limited or painful hip movements (difficulty turning in bed)
- Pain and difficulty with sexual intercourse

Management during your pregnancy

To manage your PGP you will need general advice and may need referral to a Physiotherapist from your GP, Consultant or Midwife. If your local HSE Physiotherapist cannot be accessed quickly, you may wish to consider a private Chartered Physiotherapist.

Your Physiotherapist will conduct a thorough assessment of the spine and pelvis and can recommend a range of treatment options and advice. Manual therapy may be required to ensure your spinal, pelvic and hip joints are functioning normally. Exercises to strengthen the muscles that are essential to maintain control of the pelvis may be given and a pelvic belt may be given to provide added stability if appropriate. Elbow crutches may be used if pain is severe on weight bearing.

General advice tips during pregnancy:

- Be as active as possible within the limits of pain
- Avoid activities that make the symptoms worse
- Rest when you can
- Sit to get dressed and undressed
- Stand with equal weight through both legs
- Avoid / reduce non-essential weight bearing activities – stairs, shopping, lifting or asymmetrical activities such as carrying toddlers on one hip
- Go up stairs one leg at a time leading with the pain-free leg first.
- If painful, try to keep your legs together when getting in and out of the car – placing a plastic bag on the seat may help you to swivel
- Lie on the less painful side while sleeping– use a pillow under your bump and between your legs and feet
- When turning in bed, it can help to keep both knees together and try to ‘turn under’ rather than over on your back in one smooth movement

Management during labour and delivery

Most women with PGP have a normal vaginal delivery. Make sure that your Consultant/Midwife is aware of your symptoms. Keep upright for as long as possible during labour. Measure how far apart your knees will open before pain is experienced – keep your legs within this pain-free range as much as possible during labour and delivery.

Management after your baby is born

It is important that pain relief is effective and given regularly if required. Continue to use aids to assist your mobility if necessary also. PGP may persist after delivery in a small percentage of women and may require follow up with your local Physiotherapist. Recurrence of symptoms around the time of your period can also occur.

Useful Resources

- Chartered Physiotherapists in Women’s Health & Continence (CPWHC) - www.iscp.ie
- Association of Chartered Physiotherapists Women’s Health UK-- www.acpwh.org.uk

- Pelvic Partnership (a volunteer support group of women who have all had personal experience of PGP)- www.pelvicpartnership.org.uk
- Pelvic Instability Network Scotland –www.pelvicinstability.org.uk

This information is based on the ACPWH 'Pregnancy-related Pelvic girdle pain'- Patient Information Leaflet (2009) and HSE Patient Information Leaflets

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