TO MEMBERS

We are able to share this spinal injection competency with members due to the generosity of Helen Challinor, Physiotherapy Lead on the Spinal Injection Service Royal Devon & Exeter NHS Foundation Trust.

Members are able to use these documents, to assist and inform the development of a spinal injection competency, which are based on the clinical work & experience of the training needs & governance required by Helen Challinor & Patrick Hourigan.

We would ask that in using these documents for developing similar pathways in your area that you acknowledge the original source.

INDEX

Royal Devon and Exeter NHS Foundation Trust

# PROPOSAL FOR THE INTRODUCTION OF A NEW CLINICAL PROCEDURE OR TECHNIQUE

*Email or post to your Clinical Director or Matron as appropriate. Copies of all applications should go to the Governance Support Unit*

| Section 1 – Submitting Clinician | |
|---|---|
| Name | **Patrick Hourigan (PH)** |
| Status | Extended Scope Physiotherapist (ESP) |
| Specialty | Musculoskeletal/ Orthopaedics |

| Section 2 – New Procedure/Technique | |
|---|---|
| a) Name of procedure (and any alternative names) | Lumbar nerve root sleeve injections, caudal epidural injections, spinal facet joint injections, sacro-coccygeal joint injections |
| b) Entirely new procedure, new to Trust, or new to you | Spinal injections are new to PH who would be the only ESP carrying out these procedures |
| c) NICE listed or approved? | No |
| d) Similar to, or different from, established procedure | Established procedure |
| e) Which existing procedure/s might it replace? | The intention is that PH will carry out some epidural/ facet joint/ sacro-coccygeal joint/ nerve block procedures that are currently performed by spinal Consultants. These procedures are both therapeutic and sometimes considered diagnostic. |
| f) Brief description of what is involved in the procedure | Corticosteroid and local anaesthetic injections are delivered to relieve pain and increase function from spinal joints and nerves. |

| Section 3 – Clinicians involved | |
|---|---|
| a) Individual names/job titles of clinicians proposed | Patrick Hourigan MCSP, SRP |
| b) Is training required (how will it be obtained)? | Yes. PH has arranged a) visiting a unit that already has a physiotherapist performing some of these procedures b) attendance on a study day run by Stephanie Saunders of Orthopaedic Medicine Seminars in the theory of injection therapy C) attendance at the University of Cardiff Welsh Institute for Minimal Access Therapy Spinal Injection Course on 06/07/10. There will also be observation of the Spinal surgeons performing the procedures, followed by procedures carried out by PH supervised by the spinal consultants. It is estimated that 15 of each sacro-coccygeal joint and facet joint injections, 15 caudal epidurals, and 30 nerve root blocks would need to be supervised. |
| c) Is competence assured (how is it confirmed)? | The spinal consultants will have to give their approval of competency, safety and fitness to practise. |

| Section 4 – Patients | |
|---|---|
| a) Which patients are likely to benefit? | Patients with spinal nerve and joint pathology |
| b) The clinical indications for its use | • Lumbar nerve root irritation |

| | |
|---|---|
| | • Lumbar facet joint pathology<br>• Spinal facet joint pathology<br>• Sacro-coccygeal joint pain<br><br>The injections are aimed at reducing pains spinal pain both in the short and medium term. |
| c) Reason for introducing this particular intervention? | As part of ESP practice, delivery of image guided facet joint, sacro-coccygeal joint, nerve root sleeve injection and caudal epidural injection is being considered as part of waiting list management for the Spinal orthopaedic service. It is also a professional development opportunity for PH. |
| d) What are the intended health benefits? | • Holistic and seamless care for the patient<br>• Cost and efficiency savings from released Consultant time |
| e) Possible adverse effects (and level of risk?)? | Adverse effects are rare and depend on the site injected, technique used and dose of drug administered. Evidence on the incidence of adverse effects is lacking.<br><br>▪ Post injection flare of pain (1 in 20 injections)<br>▪ Subcutaneous atrophy and skin depigmentation<br>• Facial flushing<br>• Bleeding/ bruising at injection site<br>• Deterioration of diabetic glycaemic control<br>• Soft tissue calcification<br>• Uterine bleeding<br>• Nerve damage<br>• Allergic reaction/anaphylactic reaction<br>• Local sepsis<br>• Haemarthrosis<br>• Vascular injury<br>• Joint sepsis (1 in 15, 000 injections) |
| f) Can you estimate numbers/potential impact on NHS? | The number of spinal procedures could be approximately 5 per week. |
| **Section 5 – Evidence base** | |
| a) Is this procedure in use elsewhere? | Spinal injections are performed by physiotherapists at the Agnes Hunt and Robert Jones Hospital in Oswestry and also in Poole General Hospital in Dorset. |
| b) Details of conference proceedings/communications | n/a |
| c) Details of peer reviewed papers | See attached documents |
| **Section 6 – Surveillance** | |
| a) Is the procedure part of a clinical trial? | No |
| b) How will it be audited? | A log will be kept of all injections given, their outcome documented, technical difficulties and complications noted and discussed with the spinal surgeons. |
| c) What patient information will be provided? | Patients undergoing spinal injections will receive information leaflets currently in use in the trust about the procedures (see attached). |

| | |
|---|---|
| d) Confirm patients will be told status of new procedure | Yes |
| e) Confirm adverse events will be incident reported | Yes |
| f) Confirm NICE is aware of procedure/personnel | N/A |
| **Section 7 – Resources** | |
| a) Do devices comply with EC standards? | N/A |
| b) Are devices certified for this use? | N/A |
| c) What are the cost implications (capital/revenue)? | ESP provision of image guided injection and epidural instead of a consultant led service is likely to produce cost saving but at present this cannot be quantified. These procedures are regularly carried out by Consultant and middle grade Surgical staff. It is envisaged a physiotherapist undertaking these procedures will release Surgeon time for increased throughput of surgical procedures, with potential revenue generating potential. |
| d) Is a commercial organisation involved? | No |
| e) How will costs be met? | Image guided and spinal injections will not result in increased cost as they are already being performed, but will be undertaken by a different staff member. |
| **Section 8 – Probity** | |
| a) Could there be any commercial interests? | No |
| b) Could there be any intellectual rights? | No |
| c) Could there be any conflicts of interest? | No |

Interest in entirely new procedures should also be notified to NICE using their web-based form, navigating from http://www.nice.org.uk/page.aspx?o=ip

# APPROVAL FOR THE INTRODUCTION OF A NEW CLINICAL PROCEDURE OR TECHNIQUE

| **Section 1 – Submitting Clinician (from submission)** | |
|---|---|
| Name | Patrick Hourigan |
| Status | Physiotherapist/orthopaedic assistant |
| Specialty | Spinal orthopaedics |
| Directorate | Trauma and Orthopaedics and Professional Services |

| **Section 2 – New Procedure/Technique (from submission)** | |
|---|---|
| a) Name of procedure (and any alternative names) | Lumbar nerve root sleeve injections, caudal epidural injections, spinal facet joint injections, sacro-coccygeal joint injections |

**Section 9 – Approval**

**To be completed for applications from Medical Staff**

**Clinical Director**

Approval Granted? Yes ☐ No ☐

If no, please state reason

Signature: Date:

**Medical Director**

Approval Granted? Yes ☐ No ☐

If no, please state reason

Signature: Date:

**To be completed for applications from non-medical clinical staff**

**Director of Nursing**

Approval Granted? Yes ☐ No ☐

If no, please state reason

Signature: Date:

**To be completed for all applications**

**Directorate Manager**

Approval Granted? Yes ☐ No ☐

If no, please state reason

Signature: Date:

**Comments**

Mr Tony Cox
Divisional Manager
Professional Services Directorate
Room A214

**Royal Devon and Exeter Hospital (Wonford)**
Barrack Road
Exeter
EX2 5DW

Tel: 01392 411611

**MEDICAL DIRECTOR'S OFFICE**

Our Ref: VP/005/hp
21 March, 2017

Direct Dial: 01392 403919
Direct Fax: 01392 403911
E-mail: medical-director@rdeft.nhs.uk

Dear Tony

**Patrick Hourigan (Extended Scope Practitioner: Orthopaedic Assistant Spinal Surgery Team)**

Thank you for your letter of 21st December. I do have a very high regard for Patrick Hourigan and given that you have documentation from Mr Clarke concerning that he is satisfied about Patrick's competence for spinal injections, and that the other spinal consultant support Patrick's extended scope role, and from my own knowledge of his personal skills in spinal disease I have no hesitation in supporting your request for the Trust to recognise his role in this area of clinical practice. I would like to confirm that this is agreeable to the Trust

With kind regards.

Yours sincerely

**Dr Vaughan Pearce**
**JOINT MEDICAL DIRECTOR**

Royal Devon and Exeter NHS Foundation Trust

# PROPOSAL FOR THE INTRODUCTION OF A NEW CLINICAL PROCEDURE OR TECHNIQUE

*Email or post to your Clinical Director or Matron as appropriate. Copies of all applications should go to the Governance Support Unit*

| Section 1 – Submitting Clinician | |
|---|---|
| Name | **Helen Challinor (HC)** |
| Status | Extended Scope Physiotherapist (ESP) |
| Specialty | Musculoskeletal/ Orthopaedics |
| **Section 2 – New Procedure/Technique** | |
| a) Name of procedure (and any alternative names) | Lumbar nerve root sleeve injections, caudal epidural injections, spinal facet joint injections, sacro-coccygeal joint injections |
| b) Entirely new procedure, new to Trust, or new to you | Spinal injections are new to HC who joins Patrick Hourigan as ESPs carrying out these procedures |
| c) NICE listed or approved? | No |
| d) Similar to, or different from, established procedure | Established procedure |
| e) Which existing procedure/s might it replace? | The intention is that HC will carry out some epidural/ facet joint/ sacro-coccygeal joint/ nerve block procedures that are currently performed by spinal Consultants. These procedures are both therapeutic and sometimes considered diagnostic. |
| f) Brief description of what is involved in the procedure | Corticosteroid and local anaesthetic injections are delivered to relieve pain and increase function from spinal joints and nerves. |
| **Section 3 – Clinicians involved** | |
| a) Individual names/job titles of clinicians proposed | Helen Challinor MSc MMACP SRP |
| b) Is training required (how will it be obtained)? | Yes. HC has arranged a) shadowing PH in theatre b) attendance on a study day run by Stephanie Saunders of Orthopaedic Medicine Seminars in the theory of injection therapy. There will also be observation of the Spinal surgeons performing the procedures, followed by procedures carried out by HC supervised by the spinal consultants. It is estimated that 15 of each sacro-coccygeal joint and facet joint injections, 15 caudal epidurals, and 30 nerve root blocks would need to be supervised. |
| c) Is competence assured (how is it confirmed)? | The spinal consultants will have to give their approval of competency, safety and fitness to practise. |
| **Section 4 – Patients** | |
| a) Which patients are likely to benefit? | Patients with spinal nerve and joint pathology |
| b) The clinical indications for its use | • Lumbar nerve root irritation<br>• Lumbar facet joint pathology<br>• Spinal facet joint pathology<br>• Sacro-coccygeal joint pain |

| | |
|---|---|
| | The injections are aimed at reducing pains spinal pain both in the short and medium term. |
| c) Reason for introducing this particular intervention? | As part of ESP practice, delivery of image guided facet joint, sacro-coccygeal joint, nerve root sleeve injection and caudal epidural injection is being considered as part of waiting list management for the Spinal orthopaedic service. It is also a professional development opportunity for HC. |
| d) What are the intended health benefits? | • Holistic and seamless care for the patient<br>• Cost and efficiency savings from released Consultant time |
| e) Possible adverse effects (and level of risk?)? | Adverse effects are rare and depend on the site injected, technique used and dose of drug administered. Evidence on the incidence of adverse effects is lacking.<br>▪ Post injection flare of pain (1 in 20 injections)<br>▪ Subcutaneous atrophy and skin depigmentation<br>• Facial flushing<br>• Bleeding/ bruising at injection site<br>• Deterioration of diabetic glycaemic control<br>• Soft tissue calcification<br>• Uterine bleeding<br>• Nerve damage<br>• Allergic reaction/anaphylactic reaction<br>• Local sepsis<br>• Haemarthrosis<br>• Vascular injury<br>• Joint sepsis (1 in 15, 000 injections) |
| f) Can you estimate numbers/potential impact on NHS? | The number of spinal procedures could be approximately 5 per week. |
| **Section 5 – Evidence base** | |
| a) Is this procedure in use elsewhere? | Spinal injections are performed by physiotherapists at the Agnes Hunt and Robert Jones Hospital in Oswestry and also in Poole General Hospital in Dorset. |
| b) Details of conference proceedings/communications | n/a |
| c) Details of peer reviewed papers | See attached documents |
| **Section 6 – Surveillance** | |
| a) Is the procedure part of a clinical trial? | No |
| b) How will it be audited? | A log will be kept of all injections given, their outcome documented, technical difficulties and complications noted and discussed with the spinal surgeons. |
| c) What patient information will be provided? | Patients undergoing spinal injections will receive information leaflets currently in use in the trust about the procedures (see attached). |
| d) Confirm patients will be told status of new procedure | Yes |

| | |
|---|---|
| e) Confirm adverse events will be incident reported | Yes |
| f) Confirm NICE is aware of procedure/personnel | N/A |
| **Section 7 – Resources** | |
| a) Do devices comply with EC standards? | N/A |
| b) Are devices certified for this use? | N/A |
| c) What are the cost implications (capital/revenue)? | ESP provision of image guided injection and epidural instead of a consultant led service is likely to produce cost saving but at present this cannot be quantified. These procedures are regularly carried out by Consultant and middle grade Surgical staff. It is envisaged a physiotherapist undertaking these procedures will release Surgeon time for increased throughput of surgical procedures, with potential revenue generating potential. |
| d) Is a commercial organisation involved? | No |
| e) How will costs be met? | Image guided and spinal injections will not result in increased cost as they are already being performed, but will be undertaken by a different staff member. |
| **Section 8 – Probity** | |
| a) Could there be any commercial interests? | No |
| b) Could there be any intellectual rights? | No |
| c) Could there be any conflicts of interest? | No |

Interest in entirely new procedures should also be notified to NICE using their web-based form, navigating from http://www.nice.org.uk/page.aspx?o=ip

# APPROVAL FOR THE INTRODUCTION OF A NEW CLINICAL PROCEDURE OR TECHNIQUE

| **Section 1 – Submitting Clinician (from submission)** | |
|---|---|
| Name | Helen Challinor |
| Status | Extended Scope Physiotherapist |
| Specialty | Spinal orthopaedics |
| Directorate | Trauma and Orthopaedics and Professional Services |
| **Section 2 – New Procedure/Technique (from submission)** | |
| a) Name of procedure (and any alternative names) | Lumbar nerve root sleeve injections, caudal epidural injections, spinal facet joint injections, sacro-coccygeal joint injections |

| **Section 9 – Approval** |
|---|
| **To be completed for applications from Medical Staff** |
| **Clinical Director**<br>Approval Granted? Yes ☐ No ☐<br>If no, please state reason<br>Signature: Date: |
| **Medical Director**<br>Approval Granted? Yes ☐ No ☐<br>If no, please state reason<br>Signature: Date: |
| **To be completed for applications from non-medical clinical staff** |
| **Director of Nursing**<br>Approval Granted? Yes ☐ No ☐<br>If no, please state reason<br>Signature: Date: |
| **To be completed for all applications** |
| **Directorate Manager**<br>Approval Granted? Yes ☐ No ☐<br>If no, please state reason<br>Signature: Date: |
| **Comments** |
| |

To Messrs Chan, Hutton, Khan and Clarke
Consultant Spinal Surgeons
Royal Devon & Exeter NHS Foundation Trust

19/04/12

Dear Colleagues,

Re Spinal injections to be administered by **Helen Challinor**

As you know, I am going through a period of training and supervised clinical practice so as to be able to administer spinal injections to your patients, on your behalf. The injections include lumbar nerve root blocks and lumbar facet joint blocks. There are various agreements that have to be in place to allow me to undertake such procedures.

Firstly, I will need to consent your patients for the proposed procedure. The RD+E consent policy allows a non-doctor to consent and I have a copy if you would like to see it. The key points for me are outlined below and taken from the policy.

***5. WHO IS AUTHORISED TO OBTAIN CONSENT?***

5.1 The health professional carrying out the procedure is ultimately responsible for ensuring that the patient is genuinely consenting to what is being done: it is they who will be held responsible in law if this is challenged later.

5.3 **Completing consent forms**

The standard consent form provides space for a health professional to provide information to patients and to sign confirming that they have done so. **The health professional providing the information must be competent to do so: either because they themselves carry out the procedure, or because they have received specialist training in advising patients about this procedure, have been assessed, are aware of their own knowledge limitations and are subject to audit.**

**5.3** Completing consent forms

5.3.2 Health professionals should not take consent unless it is indicated that they are allowed to do so on the directorate profile **and** they have been trained and feel competent to do so.

5.4.1 The consultant accountable for the patient's care is responsible for ensuring that access to appropriate colleagues is available at all times to the health professionals 'confirming' the patient's consent to answer any remaining questions to which they personally feel unable to respond.

Mr Clarke and Patrick Hourigan have kindly agreed to train, supervise and ensure my competency to consent. I will need each of you to agree in writing that you are happy with my competence to do so at the end of this period.

Secondly, if and when the RD+E gives permission for me to carry out spinal injection procedures, as a non-doctor/non-independent prescriber, there is a problem with my mixing local anaesthetic and steroid solution in a syringe prior to administering it to a patient. To allow me to mix local anaesthetic and steroid, an independent prescriber, i.e. you, has to give a written instruction to do so. This is known as a Patient Specific Directive (PSD). In practice, this means that any patient you list for an injection procedure, has to have a written instruction in the medical notes, that you want the

patient given local anaesthetic and steroid together, for a specific injection, to a specific target. The patient must be named, and you need to date and sign the instruction. This means you are taking legal responsibility for the mixing of the drugs by a non-medical, non-independent prescriber. There is no leeway on this, but as this is already in place for Patrick's patients it should not be an issue.

If I have listed the patient for a procedure, and you are the named consultant in charge, again, I will need a written instruction in the notes from you, again listing patient's name, the procedure, and the drugs required, the target tissue, signed and dated from you. I will come to you on a case by case basis for such permission.

If you have listed a patient for example, for a root block, but when they come for the procedure, the symptoms have changed and they have facet joint dominant symptoms instead, I will not be able to just change the proposed injection from one to another. A different injection will require a new PSD and so the patient is likely to be sent home with no procedure performed on that day, and again, I will come and discuss such circumstances with you on a case by case basis.

I hope this is clear. I am sorry if it sounds bureaucratic but it is the law, and there is no way around it. Thank you for your help in this matter.

I will need a written reply from each of you confirming your acceptance of the consent and PSD issues described above.

Kind regards.

Helen Challinor

**Princess Elizabeth**
**Orthopaedic Centre**
Barrack Road
Exeter
EX2 5DW

Tel: 01392 411611

Direct Dial: 01392 403591
Fax: 01392 403505

To Mrs Helen Challinor
Orthopaedic Assistant

Dear Helen

REF:
Hospital Number:

I would be grateful if you could arrange for the above named patient to have a therapeutic L5 nerve root block on the right side

Please use a combination of local anaesthetic and steroid. Local anaesthetic to the skin is to be Lignocaine 1% up to 5mls. Injectate for the injection is to be a mix of local anaesthetic (3mls of Marcaine 0.25% and Kenalog 40mgs in 1ml).

Please take this as the patient specific directive to perform the above named procedure on this patient.

Yours sincerely

Mr Hutton
Consultant Orthopaedic Spinal Surgeon

# Spinal Injection Training for Physiotherapists

This document is designed to provide a framework for clinicians and extended scope practitioners wishing to expand their range of professional practice to include the administration of lumbar spinal injections.

Prior to undertaking training the individual must fulfil the following criteria:

1. Be a highly experienced member of the multidisciplinary healthcare team in Spinal orthopaedics or Neurosurgery
2. Have Clinical Director permission to undertake this training
3. Be governed by a professional code of conduct and/or have a registered professional qualification.
4. Work in an area where there is a sufficient volume of spinal injections performed to enable the individual to attain and maintain competence.
5. Have a mentor identified who is willing and able to oversee the training

The following documentation must be in place before the training begins:

| **Documentation** | **Date Completed** |
|---|---|
| Proposal For The Introduction Of A New Clinical Procedure Or Technique (Trust Approval) | |
| Medical Director Approval (from Spinal CD) | |
| Confirmation of Liability & Indemnity from the Local NHS Trust | |
| Spinal Consultant Approval of all consultants who have patients that may be injected by the trainee | |
| Change to Job Description to reflect new role | |
| Safe Surgery Policy | |
| Consent Policy | |
| Management of Anaphylaxis | |
| Immediate Life Support Training | |
| Patient Specific Directives for each separate injection procedure | |

All of these documents and processes will be specific to each individual health care trust. However if you would like to obtain copies of the documents approved at the Royal Devon & Exeter NHS Trust or would like further advice/information, please contact Helen Challinor helenchallinor@nhs.net

# Aims and Objectives of this Spinal Injection Protocol

## Aim

To assess the training of a clinician to ensure their competency to safely deliver fluoroscopically- guided lumbar spine transforaminal epidural steroid injections (nerve root blocks), facet joint injections and non-image-guided manipulation under anaesthetic and injection of the sacrococcygeal joint in an operating theatre environment.

## Objectives

After a period of appropriate supervised training the clinician will be able to:-

- Meet the requirements to complete the NHS Trust documentation and safety training, and understand the policies listed below.
- Demonstrate appropriate clinical reasoning and patient selection for each procedure.
- Clearly communicate to patients the rationale and evidence for each procedure.
- Give clear explanations of risks associated with each procedure
- Understand and adhere to the local consent policy
- Understand and adhere to the local safe surgery policy
- Provide leadership to the theatre and recovery team including Anaesthetics, Nursing staff, ODP, Radiographer
- Safely administer the following spinal injections, with intra-operative images saved for review
    - Lumbar spine transforaminal epidural steroid injections (nerve root blocks- NRB)
    - Lumbar spine facet joint injections
    - non-image-guided manipulation under anaesthetic and injection of the sacrococcygeal joint
- Adhere to local post procedure protocol and provide immediate post-procedure advice
- Manage peri-operative or post-operative adverse events

## Accountability

Before undertaking additional roles it is important that clinicians have an understanding of accountability in practice. Each registered health care professional will have a code of conduct that must be adhered to. A list of these codes can be obtained from:

- http://www.hpc-uk.org/publications/standards

- http://csp.org.uk/publications/code-members-professional-values-behaviour

## Ignorita Juris Non Exusat – Ignorance of the Law Does Not Excuse

It is strongly recommended that the clinician reads more around this subject, paying particular attention to the issues surrounding negligence and liability.

The legal position is, and always has been, that each individual is responsible for his/her own actions. The patient is entitled to expect the same standard of care from a junior healthcare practitioner as from a senior healthcare practitioner. It is essential, therefore, that staff work within their scope of competence and that work requiring greater competence is performed by those with the appropriate skills, or that those lacking in experience have adequate supervision to ensure the task is safely undertaken.

## Changes to Job Description

Changes should reflect the autonomy, competency and increase in risk to which the clinician is exposing him/herself to by undertaking this role. It should include the key elements of the local 'Safe Surgery Policy', 'Consent Policy' and additional mandatory training requirements. An example of suggested Job Description changes is as follows:

### Theatre Safety – Spinal Injection Lists

1. To safely lead the operating theatre suite when undertaking spinal injection lists, assuming responsibility for all aspects of safe surgery practice.
2. To ensure patients undergoing spinal injections are treated safely throughout the perioperative journey.
3. To take full responsibility for ensuring correct patient identification, correct site surgery and correct examination or treatment is performed on the patient.
4. To assess each patient pre-operatively for appropriateness for the listed procedure including an assessment of the patient's fitness for the procedure (eg co-morbidities, allergies, if taking anti-coagulation medication, psychosocial issues).
5. To comply with the Trust's Consent for Examination or Treatment Policy, ensuring that consent to treatment is valid including discussing the intended procedure with the patient and accurately documenting patient consent.
6. To ensure that when they require colleagues to seek consent on their behalf they are confident that the colleague is competent to do so, is working within their own competency and is not agreeing to perform tasks which exceed their competency.
7. To accurately skin mark all patients with laterality and level.
8. To ensure pre-operative screening for pregnancy is completed.
9. To take responsibility for and ensure compliance to the 5 steps to safe surgery: Briefing, Sign in, Time out, Sign out, Debriefing)
10. To ensure that the Team Briefing and Debriefing Checklists are completed in every theatre list, with any concerns, list changes or allergies discussed and documented. Is this not a nursing task?
11. To ensure that time out is performed prior to commencing any procedure.
12. To carry out lumbar facet joint and lumbar and first sacral nerve root block injections within the remit of the spinal surgery team.
13. To perform manipulation under anaesthetic and injection of the sacro-coccygeal joint and surrounding soft tissues within the remit of the spinal surgery team.

14. To ensure that appropriate training and competencies are maintained, including Safe Surgery and Interventional Procedures Policy e-learning.
15. To maintain an open and professional working environment and communication with all members of the theatre team and referring clinicians.
16. To ensure agreed procedures are in place prior to commencing theatre lists ie anaesthetic cover within the hospital, for emergency events.

## Patient Specific Directive (PSD)

The use of medication/injectates is covered by a patient specific directive (PSD) issued for each patient. This is organised by the spinal secretaries prior to patient admission and is a signed document from the referring Consultant. The PSD defines the volume and concentration of local anaesthetic and steroid to be administered, and allows the mixing of the two medications in theatre. It is useful to be aware of the safe dosages for the administration of local anaesthetic and steroid. This can be found in the British National Formulary.

An example PSD is as follows:

*Dear Helen*

*REF:*
*Hospital Number:*

*I would be grateful if you could arrange for the above named patient to have a therapeutic L5 nerve root block on the right side*

*Please use a combination of local anaesthetic and steroid. Local anaesthetic to the skin is to be Lignocaine 1% up to 5mls. Please use a mix of local anaesthetic 3mls of Marcaine 0.25% and Kenalog 40mgs in 1ml for the injection.*

*Please take this as the patient specific directive to perform the above named procedure on this patient.*

*Yours sincerely*

*Mr Hutton*
*Consultant Orthopaedic Spinal Surgeon*

## Assessment of Competence: Supervised Practice and Reflection

Supervised practice is the most important element of skill development for spinal injections. There is no 'set' amount of times that supervision should take place. However, at the RD&E we were each supervised for 50-100 injection procedures (this varied on speed of aptitude/skill acquisition and proximity to assistance if needed).

Initial learning should focus on interpretation of imaging and the ability to give concise instructions to the radiographer to obtain optimum imaging.

The complexity of cases should evolve from simple procedures. For example, an L5 NRB in a young patient with normal spinal anatomy apart from the pathology inducing pain,, through to more complex procedures such as a NRB in a spine which has a degenerate spondylolisthesis, facet joint hypertrophy and grossly narrowed exit foramen. This evolution of skill acquisition is gradual & should be expected to take several months. Once a clinician is deemed competent to perform 'simple' cases and can be given an independent theatre list, it is important to have supervision close-by in case of difficulty. A final workplace assessment, undertaken by your mentor/supervisor, will decide when the clinician is deemed competent to safely conduct independent spinal injection lists.

A database of procedures performed should be maintained and intra-operative imaging saved for review outside of the theatre with the mentor to adhere to clinical governance & allow for critique of practice and reflection. Initial or on-going audit of clinical outcomes is beneficial to benchmark treatment response.

Reflection on practice should be undertaken regularly throughout the training period. Reflection and recording of your actions should be discussed regularly with the mentor.

**External Assessment:**

There may be merit in seeking a formal, external accreditation, for example the Cadaveric Spinal Injection Course currently run by the Welsh Institute for Minimal Access Therapy, Cardiff University , prior to or shortly after embarking on the training.

The Society of Orthopaedic Medicine have allowed clinicians to join the first day of the Injection Training Module taught for peripheral joint and soft tissue injections to learn the principles, safe practice, risks and complications of injection therapy.

**Competency Assessment:**

Suggested checklists of Risks and Complications and a Training Log are detailed below. It is recommended that the clinician has all aspects approved prior to practising independently.

**Please Note:**

**This document and assessment of competence structure has been produced for guidance only by Helen Challinor & Patrick Hourigan, Advanced Orthopaedic Practitioners at the Royal Devon & Exeter NHS Trust. Please contact** helenchallinor@nhs.net **for further information.**

## Risks of Spinal Injections: checklist prior to administering an injection

| Potential Risks to Injection | Evidence of Understanding |
|---|---|
| Allergy to iodine | |
| Allergy to Local Anaesthtic | |
| Warfarin or other anti-coagulant therapy | |
| Clotting/bleeding disorders | |
| Current infection- local or systemic | |
| Diabetes | |
| Pregnancy | |
| | |
| Anxiety/Phobia | |

## Potential Complications From Spinal Injection

| Potential Complication Checklist | Evidence of Understanding |
|---|---|
| Anaphylaxis | |
| Vaso-vagal event | |
| Dural puncture | |
| Bleed (epidural haematoma) | |
| Neural impairment/injury | |
| Altered glycaemic control in diabetics | |
| Infection | |
| Altered menstruation | |
| Facial red-ness | |
| Fat atrophy | |
| Post injection pain | |
| Injection site skin bleaching | |
| Local anaesthetic toxicity | |
| Complete spinal anaesthetic | |
| Cauda equina syndrome | |

## Training Log

| Procedure | Complexity | Number completed | Approval |
|---|---|---|---|
| Hand Washing Technique | | | |
| Sterile Field Awareness/Technique | | | |
| Interpretation of fluoroscopic imaging | Views:<br>AP<br>Oblique<br>Lateral<br>Cephalad/caudad | | |
| Interpretation of fluoroscopic imaging | Anatomical landmarks | | |
| Interpretation of fluoroscopic imaging | Segmentation anomalies | | |
| Interpretation of fluoroscopic imaging | Post-contrast anaylsis | | |
| Facet joint injection | Minor changes<br>Normal alignment | | |
| Facet joint injection | Moderate changes<br>Normal Alignment | | |
| Facet Joint Injection | Moderate & Severe changes in the presence of deformity | | |
| Nerve Root Block L2-4 | Minor changes<br>Normal alignment | | |
| Nerve Root Block L2-4 | Moderate changes<br>Normal Alignment | | |
| Nerve Root Block L2-4 | Moderate & Severe changes in the presence of deformity | | |
| Nerve Root Block L5 | Minor changes<br>Normal alignment | | |
| Nerve Root Block L5 | Moderate changes<br>Normal Alignment | | |
| Nerve Root Block L5 | Moderate & Severe changes in the presence of deformity<br>Scoliosis / Spondylolisthesis | | |
| Nerve Root Block S1 | Minor changes<br>Normal alignment | | |
| Nerve Root Block | Moderate changes | | |

| | | | |
|---|---|---|---|
| S1 | Normal Alignment | | |
| | | | |
| **Procedure** | **Complexity** | **Number completed** | **Approval** |
| Nerve Root Block S1 | Moderate & Severe changes in the presence of deformity | | |
| MUA & Injection of Sacro-Coccygeal Joint | | | |
| Interpretation of Segmental Anomaly | | | |
| Management of Discogram | | | |
| Management of Myelogram | | | |
| PARS Blocks (If applicable) | | | |
| Caudal epidural if applicable | | | |
| | | | |
| | | | |
| | | | **Final Approval :** |