



LEARNING MATTERS

## ISSUE 13 OCTOBER 2020

### IN THIS EDITION

Right route of administration of medicines **01**

Patients with ankylosing spondylitis are at increased risk of spinal injury **02**

Ingestion of cleaning chemicals and the importance of assessing risk to protect vulnerable patients **03**

Mycobacterium chimaera (M. chimaera) investigations should be considered in those who have a previous history of cardiac surgery / Incontinence Sheets **04**

Safe gynaecological laparoscopic surgery **05**

Valvular Heart Disease / Retained vaginal swabs in gynaecology patients **06**

Dermatological Emergencies Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis **07**

Get in touch **08**

Link below to previous learning:  
[www.publichealth.hscni.net/publications](http://www.publichealth.hscni.net/publications)  
<http://insight.hscb.hscni.net/safety/>

Welcome to issue 13 of the Learning Matters Newsletter. Health and Social Care in Northern Ireland endeavours to provide the highest quality service to those in its care. We recognise that we need to use a variety of ways to share learning therefore the purpose of this newsletter is to complement the existing methods by providing staff with short examples of incidents where learning has been identified.



## Right route of administration of medicines

A recent SAI occurred when a patient was due to have their medicines in the syringe driver replenished and was also due to have intravenous antibiotics administered.

The nursing staff were replenishing the continuous syringe driver containing pain medication and preparing the intravenous antibiotic medication alongside this. Two nurses checked the drugs, however when reconstituted and ready to administer to the patient, only **one nurse** went to the bedside to complete the checking procedure and administer the drugs.

After confirming patient identity against the prescription on the medicine kardex, the nurse inadvertently selected the syringe containing the medication for replenishment of the continuous syringe driver, which contained 30mg of Diamorphine, 60mg of Ketamine and 1mg Dexamethasone, and injected this intravenously as a bolus via the peripheral cannula - the intention had been to administer the IV antibiotic. The patient complained of feeling unwell.

Upon realising this error, the nurse immediately summoned help. The medical and emergency response team attended the patient. The patient did not at any time lose cardiac output, however they did appear to faint and suffer vivid hallucinations. Naloxone was administered on two

occasions as per attending team to reverse the opioid drugs administered and minimise any potential respiratory depression caused to the patient.

The patient was kept under close observation following the incident and came to no further harm as a result.

### KEY LEARNING

- ✓ The preparation of intravenous medicines and medicines for subcutaneous infusion via a syringe driver should always be carried out as **two separate tasks**.
- ✓ All intravenous medicines and subcutaneous infusions via a syringe driver require bedside checks to be undertaken independently by two registered nurses.
- ✓ The second check must be **an independent, thorough check**. The second check involves checking the prescription, preparation and administration of the medicine(s), including a second check of the patient's identity to ensure the correct patient receives the medicines and should be carried out in accordance with relevant Trust policies and procedures.



LEARNING MATTERS

ISSUE 13  
OCTOBER 2020

## IN THIS EDITION

Right route of administration of medicines **01**

Patients with ankylosing spondylitis are at increased risk of spinal injury **02**

Ingestion of cleaning chemicals and the importance of assessing risk to protect vulnerable patients **03**

Mycobacterium chimaera (M. chimaera) investigations should be considered in those who have a previous history of cardiac surgery / Incontinence Sheets **04**

Safe gynaecological laparoscopic surgery **05**

Valvular Heart Disease / Retained vaginal swabs in gynaecology patients **06**

Dermatological Emergencies Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis **07**

Get in touch **08**

Link below to previous learning:

[www.publichealth.hscni.net/publications](http://www.publichealth.hscni.net/publications)

<http://insight.hscb.hscni.net/safety/>

# Patients with ankylosing spondylitis are at increased risk of spinal injury

**T**wo cases of delayed diagnosis of spinal injury were reported in elderly patients with ankylosing spondylitis. Both cases presented following an unwitnessed fall from standing during which the patient sustained an associated head injury. One patient had a cervical spine fracture with quadriplegia; the other patient had a fracture of cervical and thoracic vertebrae. Both patients underwent spinal surgery but sadly died post operatively.

### Factors associated with delayed diagnosis of the spinal fractures included:

- ▶ Index of suspicion of cervical fracture not sufficiently high given patient's medical history of ankylosing spondylitis, age, history of falls and neck pain.
- ▶ Failure to request cervical spine x-ray as urgent with immediate reporting.
- ▶ Not following the College of Emergency Medicine guidance 'Exclusion of significant cervical spine injury in alert, adult patients with potential blunt neck trauma in the Emergency Department'.<sup>1</sup>
- ▶ Insufficient attention to concerns of family and staff.
- ▶ Not investigating new neurological symptoms adequately.

Patients with ankylosing spondylitis are susceptible to injury following minor trauma, with spinal fractures being up to four times more common than in the general population. Delays in diagnosis of spinal fracture and subsequent neurological

injury have been reported in the literature. Fractures in this population are associated with a high incidence of neurological complications and increased mortality risk.

## KEY LEARNING

- ✔ Careful consideration should be given to the mechanism of injuries and the urgency of the investigation and reporting when selecting the appropriate imaging modality. If a cervical spine injury is a possibility and plain cervical x-ray does not fully visualise the cervical spine, a cervical CT scan should be carried out.
- ✔ Staff should familiarise themselves with College of Emergency Medicine guidance 'Exclusion of significant cervical spine injury in alert, adult patients with potential blunt neck trauma in the Emergency Department', including high risk categories such as age over 65 years and known vertebral disease.<sup>1</sup>
- ✔ Staff should familiarise themselves with the NICE guideline on *Spinal injury: assessment and initial management* (NG41).<sup>2</sup>
- ✔ Any neurological deterioration in a patient should prompt immediate reassessment by a senior clinician.

1 <https://www.rcem.ac.uk/docs/College%20Guidelines/5z17.%20Cervical%20Spine%20Management%20of%20alert,%20adult%20patients%20with%20potential%20cervical%20spine%20injury%20in%20the%20ED.pdf>

2 <https://www.nice.org.uk/guidance/ng41/>



LEARNING MATTERS

ISSUE 13  
OCTOBER 2020

## IN THIS EDITION

Right route of administration of medicines **01**

Patients with ankylosing spondylitis are at increased risk of spinal injury **02**

Ingestion of cleaning chemicals and the importance of assessing risk to protect vulnerable patients **03**

Mycobacterium chimaera (M. chimaera) investigations should be considered in those who have a previous history of cardiac surgery / Incontinence Sheets **04**

Safe gynaecological laparoscopic surgery **05**

Valvular Heart Disease / Retained vaginal swabs in gynaecology patients **06**

Dermatological Emergencies Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis **07**

Get in touch **08**

Link below to previous learning:

[www.publichealth.hscni.net/publications](http://www.publichealth.hscni.net/publications)

<http://insight.hscb.hscni.net/safety/>

# Ingestion of cleaning chemicals and the importance of assessing risk to protect vulnerable patients

In a recent one-year period there were 18 incidents<sup>3</sup> where patients ingested cleaning chemicals. One patient died, one became critically ill and received treatment in ITU/ICU, and three required assessment in an emergency department. The products involved included floor and toilet cleaners, limescale remover, cleaning sprays, cream cleaner, glass cleaner, and kitchen and laundry detergents.

In most cases the cleaning items were either left in areas easily accessible to patients (wards/bedrooms/toilets) or removed by patients from unattended and/or unsecured cleaning trolleys or cupboards. The incidences were across acute, mental health and community settings.

There is also a risk that cleaning chemicals could be ingested accidentally if food or hands are contaminated.

Groups at particular risk include children, and patients with mental health conditions, addictions, dementia and learning disability. The risk for vulnerable groups is further increased in community settings, including the home so community staff should also be included in awareness raising.

The needs of staff with low literacy and for whom English is not their first language must be considered when delivering COSHH safety training and preparing instructions and procedures.

## KEY LEARNING

- ✓ Cleaning products must be safely and securely stored when not in use.
- ✓ The measures taken to secure them must be regularly checked, for example locks must be fit for purpose and keys must be removed.
- ✓ When in use cleaning products must not be left unattended or in unsecured areas/trolleys/cupboards.
- ✓ Guidance on decanting and dilution of cleaning products must be followed, for example only using a labelled secondary container expressly used for that purpose and never using drinking vessels.
- ✓ Never re-use a concentrate container and always dispose of them safely.
- ✓ Work techniques must be followed that avoid contact with harmful cleaning chemicals and minimise leaks and spills.
- ✓ Information, training and instructions for employees must be provided appropriate to their job role and in a suitable style of delivery and language.
- ✓ Good washing facilities should be provided to enable prompt and safe removal of spillages.

3 National Reporting and Learning System (NRLS), England, Scotland and Wales



LEARNING MATTERS

ISSUE 13  
OCTOBER 2020

## IN THIS EDITION

Right route of administration of medicines **01**

Patients with ankylosing spondylitis are at increased risk of spinal injury **02**

Ingestion of cleaning chemicals and the importance of assessing risk to protect vulnerable patients **03**

Mycobacterium chimaera (M. chimaera) investigations should be considered in those who have a previous history of cardiac surgery / Incontinence Sheets **04**

Safe gynaecological laparoscopic surgery **05**

Valvular Heart Disease / Retained vaginal swabs in gynaecology patients **06**

Dermatological Emergencies Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis **07**

Get in touch **08**

Link below to previous learning:

[www.publichealth.hscni.net/publications](http://www.publichealth.hscni.net/publications)  
<http://insight.hscb.hscni.net/safety/>

# Mycobacterium chimaera (M. chimaera) investigations should be considered in those who have a previous history of cardiac surgery

**A** patient was admitted with a primary diagnosis of an acute presumed ischaemic stroke. Previous history included aortic valve replacement surgery in 2006 and further emergency surgery for aortic dissection in 2014.

Following admission the patient was noted to have a pyrexia. Several specialties reviewed the patient and a wide range of investigations were undertaken to identify the cause of the pyrexia. The patient failed to respond to conventional antibiotic therapy and was diagnosed with a pyrexia of unknown origin (PUO).

Approximately nine weeks later Mycobacterium chimaera (M. chimaera) infection, an extremely rare new infection linked to the use of heater cooler units used during cardiac surgery, was diagnosed. Despite expert advice on treating the infection the patient succumbed to the infection and died.

## KEY LEARNING

- ✓ M. chimaera investigations should be undertaken in individuals with a pyrexia of unknown origin, possible endocarditis, chronic sternal wound infection or where a diagnosis of sarcoidosis is being considered and who have a previous history of cardiac surgery.<sup>4</sup>
- ✓ If a patient is to be investigated for M. chimaera, the Mycobacterial Laboratory at the Belfast Health and Social Care Trust should be contacted for mycobacterial culture bottles. These are only available from the Mycobacterial Laboratory at the Belfast Health and Social Care Trust. Referring clinicians should clearly identify the patient's symptoms and any previous history of cardiac surgery.

## Incontinence Sheets

**Incontinence sheets (inco sheets) and 'Puppy Pads' must not be left under patients as the risk of skin breakdown is high.**

Procedure sheets, more commonly known as 'inco sheets' are a temporary absorbable pad which are designed to protect furniture and laundry during a clinical procedure such as taking blood or a catheter related procedures or similar. They must not be used in place of (or as well as) a continence consumable.

**The Problem:** Procedure pads (in hospital and community) are regularly left under patients to protect bedding.

In community, patients and families often purchase 'puppy pads' for the same reason. This is poor practice due to the fact that procedure sheets and puppy pads:

- ▶ Have a limited ability to lock any fluid they absorb away from the skin and therefore increase the risk of moisture related skin damage.
- ▶ Can become cold against the patient's skin when wet causing discomfort.
- ▶ Become creased if left insitu, which will increase the risk of tissue damage and pressure ulceration.
- ▶ Increase perspiration due to the waterproof backing, which may not allow air or water vapour to pass through it, which in turn may increase the prevalence of moisture lesions. This may also escalate the risk of a fungal infection of the skin.

A recent review of these consumables was undertaken by the NHS Clinical evaluation team.<sup>5</sup>

4 Guidance on the clinical features and necessary investigation can be found at: <https://www.gov.uk/government/publications/mycobacterium-chimaera-infections-guidance-for-secondary-care>.  
5 'Clinical review: Procedure underpads (V2) 09.2017' <https://www.nhs.uk/sites/default/files/2017-09/Clinical%20review%20-%20Procedure%20underpads%20%28V2%29%2009.2017.pdf>



LEARNING MATTERS

ISSUE 13  
OCTOBER 2020

## IN THIS EDITION

Right route of administration of medicines **01**

Patients with ankylosing spondylitis are at increased risk of spinal injury **02**

Ingestion of cleaning chemicals and the importance of assessing risk to protect vulnerable patients **03**

Mycobacterium chimaera (M. chimaera) investigations should be considered in those who have a previous history of cardiac surgery / Incontinence Sheets **04**

Safe gynaecological laparoscopic surgery **05**

Valvular Heart Disease / Retained vaginal swabs in gynaecology patients **06**

Dermatological Emergencies Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis **07**

Get in touch **08**

Link below to previous learning:

[www.publichealth.hscni.net/publications](http://www.publichealth.hscni.net/publications)

<http://insight.hscb.hscni.net/safety/>

## Safe gynaecological laparoscopic surgery

**A**lthough uncommon, life-threatening injuries to the bowel, blood vessels or urological structures can occur during routine day case laparoscopic surgery.

The majority of injuries occur during the 'set-up' phase, while inserting needles, trocars and ports through the abdominal wall.

In a recent case which resulted in significant vascular injury, it was noted that the intra-abdominal pressure was lower than recommended, the patient had been in the Trendelenburg position during insertion of the secondary port and that it had not been inserted under fully direct vision.

Suboptimal positioning of the operator to allow for trainee supervision might also have contributed.

The RCOG Green-top Guideline No. 49 summarises the evidence for techniques which minimise the risk of intra-operative injury.<sup>6</sup>

### KEY LEARNING

#### RCOG:

- ✓ The operating table should be horizontal at the start of the procedure.
- ✓ An intra-abdominal pressure of 20-25 mmHg should be achieved before inserting the second trocar and reduced to 12-15 mmHg only once insertion of trocars is complete.
- ✓ Secondary ports must be inserted under direct vision.

#### Local recommendations:

- ▶ Clinicians should also consider insertion of the secondary ports with the operating table horizontal. Tilting the patient "head down" brings the great pelvic vessels potentially closer to the trocars at insertion and may increase risk of injury.
- ▶ Consider transition to blunt trocars for secondary cannulation of the abdominal wall.
- ▶ The surgeon should be in the optimum position for performing the procedure, even when teaching or supervising others.

6 <https://www.rcog.org.uk/en/guidelines-research-services/guidelines/gtg49/>



LEARNING MATTERS

ISSUE 13  
OCTOBER 2020

## IN THIS EDITION

Right route of administration of medicines **01**

Patients with ankylosing spondylitis are at increased risk of spinal injury **02**

Ingestion of cleaning chemicals and the importance of assessing risk to protect vulnerable patients **03**

Mycobacterium chimaera (M. chimaera) investigations should be considered in those who have a previous history of cardiac surgery / Incontinence Sheets **04**

Safe gynaecological laparoscopic surgery **05**

Valvular Heart Disease / Retained vaginal swabs in gynaecology patients **06**

Dermatological Emergencies Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis **07**

Get in touch **08**

Link below to previous learning:

[www.publichealth.hscni.net/publications](http://www.publichealth.hscni.net/publications)

<http://insight.hscb.hscni.net/safety/>

## Valvular Heart Disease

**A**n SAI was received from a Trust which had noted that a small number of patients with valvular heart disease presenting for assessment/treatment had been diagnosed at some time in the past, but had subsequently not been followed-up.

Having reviewed other patients with the condition, where longer-term surveillance may have been appropriate, it emerged that some patients who had been diagnosed or treated by two different teams, including those referred between Trusts, were not getting appointments from either clinical team.

Letters to patients' GPs may have been copied to another hospital consultant but it was not always clear whether that was for information only or the intention was that the responsibility for long-term follow-up was expected to transfer.

### KEY LEARNING

**For all clinical staff who are involved in diagnosis or treatment of patients requiring ongoing follow-up:**

- ✓ When communicating with clinical colleagues you should set out clearly in discharge or clinic letters the plan as to which team will review any investigations which are being organised and/or the management plan for ongoing follow-up.
- ✓ It is particularly important that if your intention is to discharge a patient, or refer a patient to a consultant team for ongoing care closer to their home, that should be clearly stated in the letter.

## Retained vaginal swabs in gynaecology patients

**A** patient underwent a vaginal hysterectomy during which a vaginal pack was inserted for removal 24 hours post-op. A nurse and two doctors reviewed the patient and were unable to visualise the pack and so removed the vaginal pack armband.

The tail of the pack was not visible. Staff were not aware of the appropriate action to be taken in the event of being unable to visualise the pack. Two weeks later the patient spontaneously passed the pack.

### KEY LEARNING

- ✓ Documentation at time of surgery should indicate that a pack has been placed and instructions for removal. Removal should also be documented.
- ✓ Consider generic small sized swab with raytex markings.
- ✓ Pack should have tie.
- ✓ Tie should be taped to thigh (not folded inside vagina).
- ✓ Check pack removed at time of catheter removal.
- ✓ Trusts should develop guidance on what to do when the pack cannot be retrieved i.e. escalation and ensuring red armband remains in place until absence confirmed.



LEARNING MATTERS

ISSUE 13  
OCTOBER 2020

## IN THIS EDITION

Right route of administration of medicines **01**

Patients with ankylosing spondylitis are at increased risk of spinal injury **02**

Ingestion of cleaning chemicals and the importance of assessing risk to protect vulnerable patients **03**

Mycobacterium chimaera (M. chimaera) investigations should be considered in those who have a previous history of cardiac surgery / Incontinence Sheets **04**

Safe gynaecological laparoscopic surgery **05**

Valvular Heart Disease / Retained vaginal swabs in gynaecology patients **06**

Dermatological Emergencies Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis **07**

Get in touch **08**

Link below to previous learning:

[www.publichealth.hscni.net/publications](http://www.publichealth.hscni.net/publications)

<http://insight.hscb.hscni.net/safety/>

# Dermatological Emergencies Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis

**A** patient was started on the ACE inhibitor Ramipril for nephropathy. Several weeks later the patient attended the GP with red and white blotches on the skin, which was initially diagnosed as erythema multiforme and treated with antibiotics.

Following further attendances at GP and ED, the Ramipril was stopped but the patient deteriorated and was admitted two days later with toxic epidermal necrolysis. The patients sadly passed away six months later.

Erythema multiforme (EM), Stevens Johnston syndrome (SJS) and toxic epidermal necrolysis (TEN) share common clinical features. EM is associated with certain infections whereas SJS and TEN are associated with reactions to certain medications.

The reaction begins within a few days to two months after starting the drug and includes:

- ▶ Prodrome 2-3 days, including symptoms like an upper respiratory tract infection such as fever, pharyngitis, conjunctivitis and pains.
- ▶ Mucus membrane involvement is early and may precede other symptoms.
- ▶ Rash: ill-defined red 'burning/painful' macular or papular rash then develops, spreading from the face or the upper trunk.
- ▶ Bullae then form and coalesce with Nikolsky's sign. They generally increase in number over 3-4 days (sometimes hours).
- ▶ Epidermal sloughing in sheets occurs as progression with hyperpyrexia, hypotension and tachycardia.

## KEY LEARNING

- ✓ When a serious skin reaction develops always consider any newly prescribed medications. Check the BNF, Summary of Product Characteristics or contact Dermatology for advice.
- ✓ If a drug is thought to be the cause of a skin reaction, it should be stopped as soon as possible - stopping early improves outcomes.
- ✓ Contact the primary care clinician or specialist primarily responsible for starting/supervising use of the medication at the earliest stage possible.
- ✓ Consider completing the BMJ e-Learning module 'Dermatological Emergencies - a guide to diagnosis and management'.

List of medication most commonly involved in SJS and TEN:

- Sulfonamides (e.g. co-trimoxazole (Septrin))
- Ampicillin
- Quinolones (e.g. ciprofloxacin, moxifloxacin)
- Cephalosporins
- Anticonvulsants - phenobarbital, phenytoin, carbamazepine, lamotrigine and valproate
- Allopurinol
- Antiretrovirals
- Corticosteroids
- Non-steroidal anti-inflammatory drugs, especially 'oxicam' derivatives such as piroxicam and meloxicam

However, it is also important to recognise that this is an uncommon side effect of many other medications, including commonly used medications such as ACE inhibitors (e.g. Ramipril).



LEARNING MATTERS

ISSUE 13  
OCTOBER 2020

## IN THIS EDITION

Right route of administration of medicines **01**

Patients with ankylosing spondylitis are at increased risk of spinal injury **02**

Ingestion of cleaning chemicals and the importance of assessing risk to protect vulnerable patients **03**

Mycobacterium chimaera (M. chimaera) investigations should be considered in those who have a previous history of cardiac surgery / Incontinence Sheets **04**

Safe gynaecological laparoscopic surgery **05**

Valvular Heart Disease / Retained vaginal swabs in gynaecology patients **06**

Dermatological Emergencies Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis **07**

Get in touch **08**

Link below to previous learning:

[www.publichealth.hscni.net/publications](http://www.publichealth.hscni.net/publications)  
<http://insight.hscb.hscni.net/safety/>

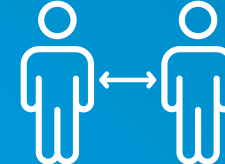
## STAY SAFE SAVE LIVES



WASH YOUR HANDS



WEAR A MASK



2 METRES APART

You can spread the virus even if you don't have symptoms.

## COVID-19

# WHO IS CONSIDERED A "CLOSE CONTACT"?



If you have any comments or questions on the articles in the newsletter please get in contact by email at [learningmatters@hscni.net](mailto:learningmatters@hscni.net)

Learning Matters is available on:

[www.publichealth.hscni.net/publications](http://www.publichealth.hscni.net/publications)  
<http://insight.hscb.hscni.net/safety/>

### Editorial Team Health and Social Care Board

Anne Kane  
Matthew Dolan  
Sally Kelly  
Liz Fitzpatrick

### Public Health Agency

Dr Jackie McCall  
Denise Boulter  
Anne-Marie Phillips  
Dr Brid Farrell  
Brieger Quinn