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For Action by:

Health Board and NHS Trusts Chief Executives
Nurse Directors (Putting Things Right Executive Leads)
Medical Directors

Action required by: *1 April 2018*

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Enclosure(s): Never Events List 2018

Never Events List 2018 and Assurance Review Process

FOREWORD

Dear Colleagues,

This document confirms the revised list of reportable patient safety incidents to be classed as Never Events from 1April 2018 . This supersedes the previous list published in 2015 and applies to all NHS Wales' health boards and trusts. The revised document includes the addition of two new Never Events. These are:

- **Unintentional connection of a patient requiring oxygen to an air flowmeter**
- **Undetected oesophageal intubation**

I would also like to inform you of a change in the routine follow up actions required following a Never Event reported in Wales.

You will be aware that from October 2014 the Delivery Unit (DU) was asked to carry out assurance reviews of each Never Event reported by NHS organisations to Welsh Government. This request followed presentation of data which demonstrated a significant delay in managing never events to closure and a lack of national learning.

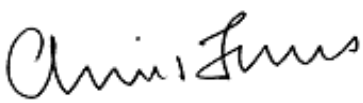
Since this time, the DU has provided extensive feedback to organisations on their management of these incidents. This has helped improve many NHS organisations' arrangements for the timely management of the incident along with robust investigation processes in order to achieve maximum learning. However, it was never intended that DU support would continue long term.

Given the improvements that have been seen and the DU resource deployed for this purpose, we have agreed the current process discontinue from 1 April 2018.

Incidents where the assurance review is ongoing will continue to completion.

Going forward the DU may still be asked to work with organisations on an exception basis in respect of reported serious incidents, including Never Events should problems with assurance of learning occur or in order to maximise opportunities for system wide learning.

Yours sincerely



DR CHRIS JONES

NEVER EVENTS LIST 2018

Introduction

Never Events are defined as Serious Incidents that are wholly preventable because guidance or safety recommendations are available at a national level and should have been implemented by all healthcare providers.

Each Never Event type has the potential to cause serious patient harm or death. However, serious harm or death does not need to have happened as a result of a specific incident for that incident to be categorised as a Never Event.

Never Events require full investigation under the Serious Incident framework. This includes the need to fully and meaningfully engage patients, families and carers at the beginning of and throughout any investigation.

Learning from what goes wrong in healthcare is crucial to preventing future harm.

Surgical

1. Wrong site surgery

An invasive procedure[1] performed on the wrong patient or at the wrong site (e.g. wrong knee, eye, limb, tooth). The incident is detected at any time after the start of the procedure.

Includes: Interventions that are considered to be surgical but may be done outside a surgical environment – for example, wrong site block (including blocks for pain relief), biopsy, interventional radiology procedure, cardiology procedure, drain insertion and line insertion (e.g. peripherally inserted central catheter (PICC)/ Hickman lines). This also includes teeth extracted in error that are immediately reimplanted.

Excludes:

- removal of wrong primary (milk) teeth unless done under a general anaesthetic
- interventions where the wrong site is selected because the patient has unknown/unexpected anatomical abnormalities; these should be documented in the patient's notes
- wrong level spinal surgery*
- wrong site surgery due to incorrect laboratory reports/results or incorrect referral letters
- contraceptive hormone implant in the wrong arm.

[1] The start of an invasive procedure is when a patient's anatomy begins to be permanently altered. For example, this is when the first incision is made that will scar the patient and take time to heal and recover from.

* Excluded from the current list while work is underway with NHS Improvement and the relevant professional organisations to ensure development of robust national barriers to prevent this incident.

Setting: All settings providing NHS-funded care.

National safety requirement:

- Safer Practice Notice – Wristbands for hospital inpatients improves safety (2005). The key points are summarised in Recommendations from National Patient Safety Agency alerts that remain relevant to the Never Events list.
- Safer Practice Notice – Standardising wristbands improves patient safety (2007). The key points are summarised in Recommendations from National Patient Safety Agency alerts that remain relevant to the Never Events list.
- Patient Safety Alert – WHO surgical safety checklist (2009). The key points in the alert are summarised in Recommendations from National Patient Safety Agency alerts that remain relevant to the Never Events list.
- Safe Anaesthesia Liaison Group – Stop before you block (2011).
- The Royal College of Radiologists – Standards for providing a 24 hour interventional radiology service (2008).
- Faculty of Pain Medicine – Safety checklist for interventional pain procedures under local anaesthesia or sedation (2017).
- Royal College of Surgeons (Faculty of General Dental Practice) – Toolkit for the prevention of wrong tooth extraction (2017).
- Wales Deanery (Dental Section) – Mouthcare pre-extraction checklist (2017).
- National safety standards for invasive procedures (NatSSIPs) (2016).
- Patient Safety Notice – Supporting the introduction of the National Safety Standards for Invasive Procedures (2016).

2. Wrong implant/prosthesis

Placement of an implant/prosthesis different from that specified in the procedural plan, either before or during the procedure. The incident is detected any time after the implant/prosthesis is placed in the patient.

Excludes:

- placed implant/prosthesis is intentionally different from that specified in the surgical plan, based on clinical judgement at the time of the procedure
- specified implant/prosthesis is placed as planned but later found to be suboptimal
- implant/prosthesis is different from the one specified due to incorrect preprocedural measurements or incorrect interpretation of the preprocedural data – for example, wrong intraocular lens placed due to wrong biometry or using wrong dataset from correct biometry.

Includes:

- implantation of an intrauterine contraceptive device different from the one in the procedural plan.

See **Appendix A** for examples of correct application of this Never Event definition.

Setting: All settings providing NHS-funded care.

National safety requirement:

- Safer Practice Notice – Wristbands for hospital inpatients improves safety (2005). Key points are summarised in Recommendations from National Patient Safety Agency alerts that remain relevant to the Never Events list.
- Safer Practice Notice – Standardising wristbands improves patient safety (2007). Key points are summarised in Recommendations from National Patient Safety Agency alerts that remain relevant to the Never Events list.
- Patient Safety Alert – WHO surgical safety checklist (2009). Key points are summarised in Recommendations from National Patient Safety Agency alerts that remain relevant to the Never Events list.
- National safety standards for invasive procedures (NatSSIPs) (2016).
- Patient Safety Notice – Supporting the introduction of the National Safety Standards for Invasive Procedures (2016).

3. Retained foreign object post procedure

Retention of a foreign object in a patient after a surgical/invasive procedure.

'Surgical/invasive procedure' includes interventional radiology, cardiology, interventions related to vaginal birth and interventions performed outside the surgical environment – for example, central line placement in ward areas.

'Foreign object' includes any items subject to a formal counting/checking process at the start of the procedure and before its completion (such as for swabs, needles, instruments and guidewires) except where items:

- not subject to the formal counting/checking process are inserted any time before the procedure, with the intention of removing them during the procedure but they are not removed
- subject to the counting/checking process are inserted during the procedure and then intentionally retained after its completion, with removal planned for a later time or date as clearly recorded in the patient's notes
- are known to be missing before completion of the procedure and may be inside the patient (e.g. screw fragments, drill bits) but action to locate and/or retrieve them is impossible or more damaging than retention.

See **Appendix B** for examples of correct application of this Never Event definition.

Setting: All settings providing NHS-funded care.

National safety requirement:

- Patient Safety Alert – WHO surgical safety checklist (2009). Key points are summarised in Recommendations from National Patient Safety Agency alerts that remain relevant to the Never Events list.
- Safer Practice Notice – Reducing the risk of retained throat packs after surgery (2009). Key points are summarised in Recommendations from National Patient Safety Agency alerts that remain relevant to the Never Events list.
- Patient Safety Alert – Reducing the risk of retained swabs after vaginal birth and perineal suturing (2010). Key points are summarised in Recommendations from National Patient Safety Agency alerts that remain relevant to the Never Events list.
- National safety standards for invasive procedures (NatSSIPs) (2016).
- Patient Safety Notice – Supporting the introduction of the National Safety Standards for Invasive Procedures (2016).

Medication

4. Mis-selection of a strong potassium solution

Mis-selection refers to:

- when a patient is intravenously given a strong[2] potassium solution rather than the intended medication.

Setting: All settings providing NHS-funded care.

National safety requirement:

- Patient Safety Alert – Potassium chloride concentrate solutions (2002; updated 2003). Key points are summarised in Recommendations from National Patient Safety Agency alerts that remain relevant to the Never Events list.

5. Administration of medication by the wrong route

The patient is given one of the following:

- intravenous chemotherapy by the intrathecal route
- oral/enteral medication or feed/flush by any parenteral route
- intravenous medication that was intended to be administered by the epidural route.

Setting: All settings providing NHS-funded care.

[2] ≥10% potassium w/v (e.g. ≥0.1 g/mL potassium chloride, 1.3 mmol/mL potassium chloride).

National safety requirement:

- Patient Safety Alert – Promoting safer measurement and administration of liquid medicines via oral and other enteral routes (2007). Key points are summarised in Recommendations from National Patient Safety Agency alerts that remain relevant to the Never Events list.
- Patient Safety Alert – Safer practice with epidural injections and infusions (2007). Key points are summarised in Recommendations from National Patient Safety Agency alerts that remain relevant to the Never Events list.
- Patient Safety Alert – Update to National Patient Safety Agency (NPSA) alert for safer spinal (intrathecal), epidural and regional devices (2016).
- Patient Safety Notice – Managing risks during the transition period to new ISO connectors for medical devices used for enteral feeding and neuraxial procedures (2015).

6. Overdose of insulin due to abbreviations or incorrect device

Overdose refers to when:

- a patient is given a 10-fold or greater overdose of insulin because the words 'unit' or 'international units' are abbreviated; such an overdose was given in a care setting with an electronic prescribing system[3]
- a healthcare professional fails to use a specific insulin administration device – that is, an insulin syringe or pen is not used to measure the insulin
- a healthcare professional withdraws insulin from an insulin pen or pen refill and then administers this using a syringe and needle.

Setting: All settings providing NHS-funded care.

National safety requirement:

- Rapid Response Report – Safer administration of insulin (2010). Key points are summarised in Recommendations from Recommendations from National Patient Safety Agency alerts that remain relevant to the Never Events list.
- Patient Safety Alert – Ensuring the Safe Administration of Insulin (2016).

[3] Electronic prescribing, dispensing and administration systems are an evidence-based method to reduce patient harm from medicines. All NHS organisations should introduce them as soon as possible. When the definitions for the insulin and methotrexate overdose Never Events were revised in 2015, it was agreed that those for insulin given in overdose because of the use of abbreviations for 'unit' and for all methotrexate overdose incidents would only apply to care settings with electronic prescribing systems as indicated. The systemic protective barriers for these two types of Never Event were found not to be strong enough in care settings where electronic barriers do not exist. For example, even though most acute hospitals do use a preprinted insulin prescription to try and prevent prescribers using the abbreviations 'iu' or 'u', this is not the case in all care settings. Also, preprinted prescriptions on their own are not a reliably strong enough barrier to prevent a potential 10-fold dosing error as prescribers can still prescribe insulin on general prescriptions.

7. Overdose of methotrexate for non-cancer treatment

Overdose refers to when:

- a patient is given a dose of methotrexate, by any route, for non-cancer treatment that is more than the intended weekly dose; such an overdose was given in a care setting with an electronic prescribing system.[3]

Setting: All settings providing NHS-funded care.

National safety requirement:

- Patient Safety Alert – Improving compliance with oral methotrexate guidelines (2006). Key points are summarised in Recommendations from National Patient Safety Agency alerts that remain relevant to the Never Events list.

8. Mis-selection of high strength midazolam during conscious sedation

Mis-selection refers to when:

- a patient is given an overdose of midazolam due to the selection of a high strength preparation (5 mg/mL or 2 mg/mL) instead of the 1 mg/mL preparation, in a clinical area performing conscious sedation
- excludes clinical areas where the use of high strength midazolam is appropriate; these are generally only those performing general anaesthesia, intensive care, palliative care, or areas where its use has been formally risk-assessed in the organisation.

Setting: All settings providing NHS-funded care.

National safety requirement:

- Rapid Response Report – Reducing risk of overdose with midazolam injection in adults (2008). Key points are summarised in Recommendations from National Patient Safety Agency alerts that remain relevant to the Never Events list.

Mental health

9. Failure to install functional collapsible shower or curtain rails

Involves either:

- failure of collapsible curtain or shower rails to collapse when an inpatient attempts or completes a suicide
- failure to install collapsible rails and an inpatient attempts or completes a suicide using non-collapsible rails.

Setting: All settings providing NHS-funded mental health inpatient care.

National safety requirement:

Health building notes:

- Welsh Health building note 03-01 – Adult acute mental health units (2016).
- Health building note 03-02 – Facilities for child and adolescent mental health services (CAMHS) (2017).

Estates and facilities alerts:

- NAfW Safety Action Bulletin (2002) 02 – Cubicle rail suspension system with load release support systems (2002).
- NHS Estates Alert (2004)03 – G-rail 2301, window curtain tracking system (2004).
- NHSEstates Hazard Notice (2004)06 – Cubicle rail tracking and PVC dustcovers (2004).
- NHS Estates Hazard Notice (2004) 08 – Bed cubicle rails, shower curtains rails, and curtain rails in psychiatric in-patient settings (2004).
- WAG DH Estates & Facilities Alert (2007)08 – Cubicle curtain track rail (2007).
- EFA/2010/003 – Anti-ligature curtain rails (including shower curtains): Risks from incorrect installation or modification (2010).
- EFA/2010/10 – Flush fitting anti-ligature curtain rails: ensuring correct installation (2010).

General

10. Falls from poorly restricted windows

A patient falling from a poorly restricted window[4]. This applies to:

- windows 'within reach' of patients; this means windows (including the window sills) that are within reach of someone standing at floor level and that can be exited/fallen from without needing to move furniture or use tools to climb out of the window
- windows located in facilities/areas where healthcare is provided and that patients can and do access
- where patients deliberately or accidentally fall from a window where a fitted restrictor is damaged or disabled, but not where a patient deliberately disables a restrictor or breaks the window immediately before they fall
- where patients can deliberately overcome a window restrictor using their hands or commonly available flat-bladed instruments as well as the 'key' provided.

Setting: All settings providing NHS-funded care.

[4] This includes windows where the provider has not put a restrictor in place in accordance with guidance.

National safety requirement:

- Welsh Health Building Note 00-10 Part D – Windows and associated hardware (2014).
- Department of Health Estates and Facilities Alert – Window restrictors of cable and socket design (2014).
- Health and Safety Executive Risk of falling from windows (2016).

11. Chest or neck entrapment in bed rails

Entrapment of a patient's chest or neck between bedrails or in the bedframe or mattress, where the bedrail dimensions or the combined bedrail, bedframe and mattress dimensions do not comply with Medicines and Healthcare products Regulatory Agency (MHRA) guidance.

Setting: All settings providing NHS-funded care including care homes, and patients' own homes where equipment for their use has been provided by the NHS.

National safety requirement:

- Medicines and Healthcare products Regulatory Agency – Safe use of bed rails (2013).

12. Transfusion or transplantation of ABO-incompatible blood components or organs

Unintentional transfusion of ABO-incompatible blood components.

Excludes:

- where ABO-incompatible blood components are deliberately transfused with appropriate management.

Unintentional ABO-mismatched solid organ transplantation.

Excludes:

- situations in which clinically appropriate ABO-incompatible solid organs are deliberately transplanted.

In this context, 'incompatible' antibodies must be clinically significant. If the recipient has donor-specific anti-ABO antibodies and is therefore likely to have an immune reaction to a specific ABO-compatible organ, the inadvertent transplantation of that organ without appropriate management is a Never Event.

Setting: All settings providing NHS-funded care.

National safety requirement:

- Patient Safety Notice – Safe transfusion practice: use a bedside checklist (2018).
- British Society for Histocompatibility and Immunogenetics and British Transplantation Society – Guidelines for the detection and characterisation of clinically relevant antibodies in allotransplantation (2014).
- British Transplantation Society – Guidelines for antibody incompatible transplantation (2015).
- Safer Practice Notice – Wristbands for hospital inpatients improves safety (2005). Key points are summarised in Recommendations from National Patient Safety Agency alerts that remain relevant to the Never Events list.
- Safer Practice Notice – Standardising wristbands improves patient safety (2007). Key points are summarised in Recommendations from National Patient Safety Agency alerts that remain relevant to the Never Events list.

13. Misplaced naso- or oro-gastric tubes

Misplacement of a naso- or oro-gastric tube in the pleura or respiratory tract that is not detected before starting a feed, flush or medication administration.

Setting: All settings providing NHS-funded care.

National safety requirement:

- Patient Safety Alert – Nasogastric tube misplacement: continuing risk of death and severe harm (2017).
- NHS Improvement – Initial placement checks for nasogastric and orogastric tubes: resource set (2016).
- Patient Safety Notice – Placement devices for nasogastric tube insertion DO NOT replace initial position checks (2014).

14. Scalding of patients

Patient scalded by water used for washing/bathing.

Excludes:

- scalds from water being used for purposes other than washing/bathing (e.g. from kettles).

Setting: All settings providing NHS-funded care.

National safety requirement:

- WHTM 04-01 – Safe water in healthcare premises (2006, updated 2016).
- WHealth Building Note 00-10 Part C – Sanitary assemblies (2014).

- Health and Safety Executive – Managing the risks from hot water and surfaces in health and social care (2012).
- Health and Safety Executive – Scalding and burning (2012).

15. Unintentional connection of a patient requiring oxygen to an air flowmeter

This applies when a patient who requires oxygen is connected to an air flowmeter when the intention was to connect them to an oxygen flowmeter.

Excludes:

- unintentional connection to an air cylinder instead of an oxygen cylinder as robust barriers to prevent this have not yet been identified.

Setting: All settings providing NHS-funded care.

National safety requirement:

- Patient Safety Notice – Reducing the risk of oxygen tubing being connected to air flowmeters (2016).

16. Undetected oesophageal intubation

Ventilation of a patient following oesophageal intubation instead of the intended tracheal intubation, which is not identified because capnography is not used or capnography readings indicating the need for tracheal intubation are not acted on.

Setting: All settings providing NHS-funded care.

National safety requirement:

- Association of Anaesthetists of Great Britain and Ireland (AAGBI) – Standards of monitoring during anaesthesia and recovery (2015).

Appendix A: Wrong implant/prosthesis

Earlier definitions of the Never Event type 'wrong implant/ prosthesis' were not consistently applied with regard to wrong intraocular lenses (IOL). The examples below assist with consistent application of the current clarified definition. They are intended solely as examples of the principles of the definition, and are not a complete list of circumstances where the definition applies.

Circumstances	Does this fit the Never Event definition?
A patient attended hospital for a right phacoemulsification and IOL procedure. The surgeon – a senior trainee – discussed the risks and benefits of right cataract surgery and the target refractive outcome with the patient, who consented to the procedure with the aim of achieving an emmetropic (no distance glasses) outcome. A +20.5 dioptre (D) IOL was chosen and the IOL selection sheet was completed accordingly. At the WHO sign in the surgeon confirmed with the team he wanted a +20.5D IOL. A +20.0D IOL was presented during the time out section of the WHO checklist, which was completed by the consultant (not the surgeon), scrub nurse and operating department practitioner. The team did not identify that the lens power did not match that selected on the biometry and IOL selection sheet, and previously stated at the sign in. The senior trainee continued with surgery supervised by the consultant and a +20.0D IOL was implanted in error.	This is a Never Event. The surgeon clearly stated the surgical plan for a +20.5D IOL to the team. A different IOL was inserted.
A patient was admitted for right phacoemulsification and IOL. A toric IOL was planned to correct astigmatism. The IOL power was circled correctly on the biometry sheet and this was also correctly transcribed onto an IOL selection sheet. The operation was cancelled as the list was running late and the patient was admitted a few days later for surgery by a different consultant. This surgeon confirmed at sign in and again at time out with the surgical team that a 19D model SN6AT (toric) lens was required as detailed in the notes, but did not confirm that a toric lens was required as planned. The lens presented to the surgeon was a	This is a Never Event. The surgeon stated in the surgical plan the wish to implant a certain model of lens but implanted a different model, which could not correct the astigmatism.

Circumstances	Does this fit the Never Event definition?
19D SA60AT (non-toric) and this was opened and inserted into the patient's eye.	
A patient attended hospital for a left phaocemulsification and IOL procedure. The surgeon confirmed with the patient that the aim of the procedure was emmetropia and circled a +17.5D IOL on the biometry sheet. The sheet had unexpectedly been printed in a different format, moving the data for the most commonly used IOL from where it normally appeared. This meant the wrong type of IOL was circled, an anterior chamber not a posterior chamber lens. All WHO checks were appropriately completed by the surgeon and the team, and a lens power of +17.5D was confirmed verbally by the surgeon to the team as the surgical plan. A +17.5D posterior chamber lens was inserted. At the postoperative review the patient was noted to be 3.5D hypermetropic and not emmetropic.	This is not a never event. The IOL inserted was the one stated in the surgical plan by the consultant. However, this surgical plan was wrong because the surgeon had chosen the power for a posterior chamber lens using data pertaining to an anterior chamber lens.
A patient was admitted for left phacoemulsification and IOL. The surgeon discussed the refractive aim with the patient; emmetropia was agreed and a +22D lens was circled on the biometry sheet. The IOL power was then unclearly transcribed onto an IOL selection sheet and later misread as 27D, not 22D. The surgeon confirmed the IOL as 27D to the team and all checks were completed. It was not noted that the original biometry sheet indicated a 22D IOL. A 27D lens was inserted. The patient was noted postoperatively to be myopic rather than emmetropic.	This is not a never event. The IOL inserted was that stated in the surgical plan by the consultant, but the surgical plan was based on information incorrectly transcribed from a poorly written document.

Appendix B: Retained foreign object post procedure

Earlier definitions of the Never Event type 'retained foreign object post operation' were not consistently applied. The examples below assist with consistent application of the current clarified definition. They are intended solely as examples of the principles of the definition, and are not a complete list of circumstances where the definition applies.

Note that the principles of the definition relate to items that should be subject to a formal counting or checking process at the start of the procedure and before its completion. The size of the retained foreign object and the potential for harm from the retained foreign object are irrelevant to the incident's designation as a Never Event.

Circumstances	Does this fit the Never Event definition?
A patient underwent gynaecological surgery and a vaginal pack/vaginal tampon was intentionally left in place at the end of surgery, with removal planned for 48 hours after surgery. Unfortunately, the pack was not removed as planned and the patient was sent home with the pack still in place. She went to her GP complaining of vaginal discomfort and discharge. He examined her and found the pack.	This does not meet the definition of a Never Event as the vaginal pack was intentionally retained after the procedure. Once outside the controlled counting processes in theatre, the Never Event principle of being eminently preventable if existing guidance is followed does not apply. This incident is still likely to fit the definition of a Serious Incident and should be reported to Welsh Government and the NRLS, with all possible steps taken to prevent similar events in future.
A patient needed suturing after an episiotomy during a vaginal delivery. To create a clear view for the suturing procedure, three swabs were placed in the patient's vagina, to be removed as soon as suturing was complete. Only two swabs were removed. This error was realised when the swab fell out a few days after the patient and her baby went home.	This meets the definition of a Never Event. The swab was not intentionally retained. The number of swabs inserted and removed should have been counted at the time of the procedure.
A patient undergoing eye surgery as a day case had a pledget (a small swab) inserted under her eyelid an hour preoperatively to deliver topical medication. The pledget should have been removed during surgery but was not. The patient telephoned for advice about her painful eye the day after her procedure. When she returned to the unit to be examined the pledget was found and removed.	This does not meet the definition of a Never Event as the pledget was inserted outside the controlled counting processes in theatre. The Never Event principle of being eminently preventable if existing guidance is followed does not apply. This incident is still likely to fit the definition of a Serious Incident and should be reported to Welsh Government and the NRLS, with all possible steps taken to prevent similar events in future.

Circumstances	Does this fit the Never Event definition?
A patient undergoing eye surgery as a day case had a pledget inserted under her eyelid at the beginning of the procedure. The pledget should have been removed at the end of the surgery but was not. The patient telephoned for advice the day after her procedure because her eye was painful. When she returned to the unit to be examined the pledget was found and removed.	This meets the definition of a Never Event. The pledget was not intentionally retained and the number of pledgets inserted and removed should have been counted at the time of the procedure.
A patient had an interventional cardiology procedure using a guidewire. When the doctor tried to withdraw the guidewire, it appeared to be stuck. It was left in place so that X-rays could be taken and expert advice sought before attempting to remove it.	This does not meet the definition of a Never Event as the guidewire was known to be retained before the procedure was completed, and immediate action to retrieve it was impossible or more damaging than retention. This incident is still likely to fit the definition of a Serious Incident and should be reported to Welsh Government and the NRLS, with all possible steps taken to prevent similar events occurring in future. If an equipment fault is likely to be responsible, the incident should also be reported to the MHRA.
A patient had an interventional cardiology procedure using a guidewire. No problems with the procedure were noticed at the time, but an X-ray taken for another reason several days later revealed a broken-off guidewire tip lodged in a blood vessel.	This meets the definition of a Never Event as the guidewire should have been checked for completeness when it was withdrawn at the end of the procedure.

Appendix C: Rationale for amendments to the Never Events list (including consideration of NHS Improvement's October 2016 open consultation)

Never Event	Amendment	Rationale
Wrong site surgery	Include pain relief blocks.	New guidance is available from the Faculty of Pain Medicine – Safety checklist for interventional pain procedures under local anaesthesia or sedation (2017).
Wrong site surgery	Clarification that the extraction of primary (milk) teeth is excluded unless done under a general anaesthetic.	The extraction of milk teeth is extremely unlikely to result in severe harm/death unless it is done under a general anaesthetic when the potential risks of anaesthesia could apply.
Wrong site surgery	Exclude spinal surgery.	There is no specific guidance available relating to preoperative identification/marking of the spinal level. NHS Improvement will be working with the British Orthopaedic Association to develop guidance.
Wrong site surgery	Exclude contraceptive hormone in the wrong arm.	Severe harm/death is extremely unlikely.
Wrong implant/prosthesis	Includes the implantation of an intrauterine contraceptive device that differs from the one in the procedural plan.	The existing barriers to prevent implantation of the wrong implant/prosthesis also apply to intrauterine devices.
Wrong implant/prosthesis	Excludes where the implant/prosthesis differs from the one intended due to incorrect preprocedural measurements or incorrect interpretation of the preprocedural data, e.g. wrong intraocular lens due to wrong biometry or using the wrong dataset from correct biometry.	There are currently no robust barriers to prevent this from occurring.

Never Event	Amendment	Rationale
Overdose of insulin due to abbreviations or incorrect device	Include when a healthcare professional withdraws insulin from an insulin pen or pen refill and then administers it using a syringe and needle.	New guidance is available in the Patient Safety Alert Ensuring the Safe Administration of Insulin (2016).
Unintentional connection of a patient requiring oxygen to an air flowmeter	New Never Event.	New guidance is available in the Patient Safety Notice Reducing the risk of oxygen tubing being connected to air flowmeters (2016).
Undetected oesophageal intubation	New Never Event.	New guidance is available to prevent the ventilation of a patient following intended tracheal intubation and subsequent oesophageal intubation that is not recognised or acted on: Association of Anaesthetists of Great Britain and Ireland – Standards of monitoring during anaesthesia and recovery (2015).