BUREAU OF INFECTION CONTROL

DEFINITIONS OF INFECTION

FOR

CANADIAN NOSOCOMIAL INFECTION

SURVEILLANCE PROGRAM

1986

OBJECTIVES:

1. To determine the incidence of nosocomial infections in Canadian hospitals.

2. To allow comparability of infection rates among hospitals.

3. To delineate pertinent risk factors associated with nosocomial infections.

4. To determine existing pathogens and the emergence of new and/or resistant pathogens.

5. To demonstrate the burden of nosocomial infections in terms of morbidity, mortality and cost.

6. To indicate priority areas for management prevention, training and research.

7. To provide participating hospitals with rapid and meaningful analysis of the data gathered during surveillance.

GENERAL INFORMATION:

The surveillance form consists of 2 pages. There are 3 copies of each page. Firm pressure on the top page should be sufficient for filling out the remaining 2 copies.

The top sheet should be sent to the Division of Infection Control at the end of each reporting period. The second or middle sheet should be sent in whenever there is an outcome to the infection (see Section N). This may be at the end of the reporting period or at a later time. The third copy is for your files.

The only patient identifier the bureau receives is the number that appears on the top of the 2 pages of the surveillance form. The forms are numbered sequentially so that the same number should appear on both pages. In filling out a form please try to ensure that the number on the two pages is the same. If a patient has more than one infection the number(s) of the form(s) used for the initial infection(s) should be entered on the form that is being filled for the new current infection.

One form (2 pages) should be used per infection. The number of forms submitted for a patient (and in total) should equal the number of infections.

FILLING IN THE FORM:

SECTION A:

Addressograph:

Only your copy of the form should have this section filled in. You can use whatever method you wish in identifying the patient on your copy of the form. The name of the patient SHOULD NOT be on the copies of the form that are submitted to the bureau.

A4 and A5:

Date of birth and sex should be filled in.

A6:

Infection refers to the number of nosocomial infections the patient has had. Check box 1 if this is the patient's first nosocomial infection. If this is the second or third nosocomial infection, select boxes 2 or 3 respectively. If the patient has had more than 3 infections select the box labelled other. Each infection requires a new set of forms. The form number of the first infection should be recorded on the forms for the subsequent infections.

SECTION B:

B1, B2, B3:

The admission date and the date the infection was first felt to be present should be entered. Most frequently the infection date will be the date that the patient started to experience signs and symptoms and the date on which a culture was obtained. It is not necessary to enter the date of discharge however it would be helpful to have this date. Whenever possible, please enter the date of discharge on the top of either the first or second copy of the form.

B4:

Generally the date of admission should preceed the date of infection. Exceptions include maternally acquired infections, readmissions, or patients seen in emergency or outpatient departments.

The term unit applies to the floor, ward, quad, etc. that describes the physical location of the patient in the hospital. The location entered should be the one where the infection was felt to have occurred as opposed to where it was noted. Most frequently though, the two locations will be the same.

B5:

Service refers to medicine, orthopedics, surgery, pediatrics, etc. In reporting the service the same criteria as was used for determining the "Unit" should be employed.

SECTION C:

Check the type of infection utilizing the following definitions:

C1:

COMMUNITY: An infection present or incubating at the time of admission to hospital.

C2:

NOSOCOMIAL: Infections that occur during hospitalization but are not present on admission. In general an infection which appears 48 hours after admission should be considered nosocomial.

C3:

TRANSFERRED: Patients admitted to your hospital from another facility with an established infection.

C4:

READMITTED: A patient discharged with no apparent signs of infection who is readmitted with an infection related to a procedure or surgical intervention which occurred during a previous admission.

C5:

SURGICALLY RELATED: Infections are surgically related if they involve an operative wound or deep organs, tissues or cavities exposed during an operative procedure. Thus a subphrenic abscess following a gastrectomy or an empyema after thoracic surgery would be considered surgically-related infections since they occurred in tissues directly involved or exposed during surgery. Infections that arise in post-operative patients but do not involve tissue exposed or manipulated during surgery (for example, a postoperative pneumonia or urinary tract infection in a gastrectomy patient) are NOT considered surgically related but should be listed as nosocomial infections.

Some surgical infections do not become apparent until after the patient has been discharged from the hospital; however, these infections should be reported as nosocomial unless there is compelling evidence that the infection was community acquired. For example, a subphrenic abscess which is demonstrated in a patient who underwent splenectomy and was discharged 2 weeks

previously should be reported as a surgically-related nosocomial infection. It may be difficult, however, to determine whether some infections which become apparent several months following surgery are nosocomial, for example those involving vascular grafts or orthopedic protheses. The best judgement of the clinicians involved should be used to determine the source of these infections.

C6:

PROCEDURE RELATED: Infections associated with invasive medical or surgical procedures which are neither considered major surgery nor performed in an operating room. Examples range from arterial or venous cutdowns, cardiac catheterization, thoracentesis, indwelling urinary catheters, and lumbar puncture or epidural anesthesia. Infections which occur at the site of such a procedure or are associated with the procedure (eg. endocarditis following cardiac catheterization) should be reported by checking the appropriate procedure and stated the date the procedure was done in the treatment predisposing factors column.

C7:

MATERNALLY ACQUIRED: Infections that are believed to have been acquired via passage of an infant through an infected maternal genital tract.

C8:

NOSOCOMIAL OUTPATIENT: These are infections which have been acquired during a previous hospitalization. The infected patient is seen in emergency or the outpatient department but does not require admission to hospital.

SECTION D:

D1:

The subsection dealing with isolation does not have to be completed. If you elect not to collect this data please select "No Data". If however, you do choose to collect the information on isolation you can select any of the remaining choices. The information collected in this subsection on isolation is primarily for use within the cooperating hospitals.

While samples of definitions for the various categories of isolation are included it should be stressed that the hospital does not have to change their isolation systems to conform with the samples that are included. If the categories of isolation used in the hospital are different that those listed here, or if isolation categories are not used but rather disease specific isolation precautions are used and if it is still desired to collect this information please notify the bureau and attempts will be made to modify this section to meet your specific needs.

D2 & D3:

The primary and secondary diagnoses should be entered. If the diagnosis has been coded according to ICD-9 by the medical librarians in your hospital, please include the code in the series of 4 squares adjacent to the spaces for the primary and secondary diagnoses.

D4 & D5:

Completion of the section on staff MDs and consult MDs is entirely voluntary. If it is decided that this data will be collected, this section should be filled in with codes rather than with names. Please DO NOT ENTER specific names on the copies of the forms that will be submitted to the bureau.

D6 & D7:

If the infection is surgically related (see Section C) a surgical procedure and the date of that surgery should be reported. If the infection is not surgically related, the surgical procedure should not be entered.

D8:

The number of the surgical suite used during surgery may be entered.

D9:

The surgical procedure should be classified as clean, clean-contaminated, contaminated or dirty. Operating room staff normally record this on the operating room record and they should be requested to record this at the time of surgery and should utilize the following definitions:

Clean: Operative wound, clean. Non-traumatic wound in which inflammation was encountered, no break in technique occurred, and respiratory, alimentary, and genitourinary tracts were not entered.

Clean-Contaminated: Operative wound, clean-contaminated. Non-traumatic wound in which minor break in technique occurred or in which gastrointestinal, genitourinary, or respiratory tracts were entered without significant spillage. Includes transection of appendix or cholecystic duct in the absence of acute inflammation, and entrance into genitourinary or biliary tracts in the absence of infected bile or urine. Hysterectomy is included in this category.

Contaminated: Operative wound, contaminated. Any fresh traumatic wound from a relatively clean source, or an operative wound in which there is a major break in technique, gross spillage from the gastrointestinal tract, or entrance into genitourinary or biliary tracts in the presence of infected

urine or bile. This includes incisions encountering acute, non-purulent inflammation.

Dirty: Operative wound, dirty. Traumatic wound from a dirty source, or with delayed treatment, fecal contamination, foreign body, or retained devitalized tissue. Also, includes operative wounds in which acute bacterial inflammation or a perforated viscus is encountered, or in which clean tissue is transected to gain access to a collection of pus.

SECTION E - ACUTE COEXISTING DISORDERS

The completion of this subsection is optional. This information is helpful in delineating the risk factors associated with infection. A cause and effect relationship does not have to be present before reporting disorders.

E1:

If it is elected not to complete this section then the selection "No Data" should be made. This selection should also be made if the history and physical examination are not available for review.

E2:

"No Factors" should be selected only if after review of the chart predisposing factors are not identified.

Examples of conditions which should be considered as acute predisposing factors follow. They include:

E3:

LIVER: Any acute hepatitis due either to an infection, drugs or Ischemia. Acute liver failure would be considered in this category.

E4:

NEURO: Any factor resulting in a decreased level of consciousness with impaired gag response. Examples include a drug overdose, excessive acute alcohol intake, or a CVA.

E5:

PULM: Pulmonary edema due to any cause including congestive heart failure. Oxygen toxicity defined as a patient receiving an inspired PO2 greater than 60% for more than 72 hours. Aspiration of toxic chemical substances such as vomitus.

E6:

RENAL: Acute renal failure regardless of etiology.

E7:

PREVIOUS INFECTION: Any infection, whether it is nosocomial or community acquired which preceeds the current infection. To be considered as a previous infection, the infection should either have had its onset in the preceeding week or treatment of the infection should have occurred within the preceeding one week period.

E8:

GRAN $\leq$ .5 X 10^9/L: Patients with granulocyte (PMN, neutrophils) counts less than .5 X 10 /L within the 7 days of infection. Mature and Band forms should be summed to obtain the granulocyte count. More immature forms should not be included in determining the number of granulocytes.

E9:

LABOUR $\geq$ 24 HOURS: Any labour in excess of 24 hours.

E10:

ROM $\geq$ 24 HOURS: Any delivery where membranes have been ruptured for more than 24 hours prior to delivery.

E11:

WBC $\leq$ 1.5 X 10^9 /L: Any patient with total blood cell counts less than 1.5 X 10^9 /L should be included in this caterogy.

SECTION F - CANCER COEXISTING DISORDERS:

Completion of this section is completely voluntary. Once again though, it should be noted that this information can be useful in defining problem areas. Cause and effect relationships do not have to be apparent prior to reporting.

If it is elected not to collect this information then "No Data" should be selected. "No Data" should also be selected if history and physical examination are not available on the chart.

"No Factors" should be selected if the patient does not have any cancer predisposing factors. The abbreviations used in this subsection are:

F3:

A.L.L.: Acute Lymphocytic Leukemia

F4:

A.N.L.L.: Acute Non-Lymphocytic Leukemia

F5:

CHRON. LEUK: Chronic Leukemia either Lymphocytic or Myelogenous

F6:

HODGKINS: Hodgkins Lymphoma

F7:

LUNG: Any malignancy within the lung

F8:

MULT MYEL: Multiple Myeloma

F9:

NON HODGKINS: Any lymphoma other than Hodgkins

F10:

OTHER: Any other malignancy

More than one disorder may be selected.

SECTION G - CHRONIC COEXISTING DISORDERS

Once again, completion of this section is voluntary. "No Data" should be selected if this information is not being compiled or if a history and/or physical examination are not present on the chart. "No Factors" should be selected if factors are not identified in reviewing the patient's chart.

Definitions for the conditions listed are:

G3:

ALCOHOL ABUSE: Excessive alcohol intake as noted in medical or nursing history.

G4:

DIABETES MELL.: Any patient with diabetes whether this is controlled by insulin, oral medication or diet.

G5:

DRUG: Drug abuse, particularly parenteral.

G6:

IMMUNODEFICIENT: Refers to immuno-deficiency disorders and should appear in the patient's diagnosis.

G7:

WBC $\leq$ 1.5 X 10^9 /L: Any patient with total white blood cell counts less than 1.5 X 10^9 /L which is not due to a treatment or malignancy.

G8:

MALNOURISHED: Malnourished as stated in the patient's history or physical.

G9:

NEURO: Any chronic disorder resulting in paralysis, altered respiratory function, or problem with swallowing or gag reflex mechanisms.

G10:

OBESE: A patient who is obese as stated by physician in the history and physical.

G11:

PROSTH: Patient with an implanted foreign device such as shunts, heart valves, or orthopaedic appliances.

G12:

PULM: Patients with chronic bronchitis or chronic restrictive lung disease. Cystic fibrosis, bronchio-pulmonary dysplasia are other examples.

G13:

RENAL: Patients with a chronic renal failure who may or may not be on dialysis.

G14:

U.T.I.: 3 or more within the past year, or patient receiving regular therapy to prevent recurrent urinary tract infection.

G15:

VASC: Vascular insufficiency with resultant ischemia except of the myocardium. Angina SHOULD NOT be considered as a chronic predisposing factor.

Stenosis, insufficiency or abnormal movement of a valve or valve leaflet would be considered a chronic predisposing factor.

G16:

LIVER: Cirrhosis due to any cause.

G17:

SKIN: Dermatitis regardless of etiology.

SECTION H - INFECTION SITES

H1. URINARY TRACT INFECTION (UTI):

Definition:

The presence of bacteria in significant numbers in the urine regardless of whether the infection is in the lower (cystitis) or upper (pyelonephritis) urinary tract.

Criteria:

Doctor's diagnosis

Clinical:

Unless there is a reason for negative cultures a UTI should not be diagnosed solely on clinical criteria. Reasons for negative cultures could be (1) no culture taken, (2) culture taken after antibiotic started, (3) obstructed kidney and (4) culture positive but in quantitative counts less than those listed below. In these isolated situations the presence of signs and symptoms from either or both groups will be sufficient for diagnosis.

GROUP # 1	GROUP # 2
Flank Pain	Dysuria
CVA Tenderness	Burning
Supra Pubic Tenderness	Urgency
	Frequency

Laboratory:

Specimen	Asymptomatic	Symptomatic
Clean Catch	10^8 colonies/L on two occasions	10^7 colonies/L on one occasion
Straight Catheter	10^6 colonies/L on one occasion	10^6 colonies/L on one occasion
Indwelling Catheter (Catheter Aspirate)	10^6 colonies/L on one occasion	10^6 colonies/L on one occasion
Suprapubic Aspirate	Any growth	Any growth

New Nosocomial UTI:

In asymptomatic patients where the specimen is obtained either from a straight catheter or indwelling catheter the new organism should be isolated twice in the above listed quantities. In all other situations the isolation of a new organism in the above listed quantities will be sufficient.

New Organisms:

Defined as an organism with either a different antibiogram, a different biotype or phage type or a different genus or species.

Contamination:

The isolation of 3 or more organisms in the quantities listed above will be considered contamination unless the patient has a chronic indwelling catheter.

Community vs Nosocomial:

If admission urinalysis is normal (ie. < 5WBC/hpf) any subsequent positive cultures should indicate a nosocomial UTI.

If there is no admission urinalysis or culture then onset of signs, symptoms and positive culture should be more than 48 hours after admission to be considered nosocomial.

Reporting of Infection:

If the infection is of the urinary tract ie. cystitis or pyelonephritis record site of infection as a UTI. If a procedure (eg. catheterization) was associated with the infection, report the type of infection as nosocomial and procedure related. Please report the procedure(s) in the coexisting predisposing factors section. Urinary tract infections following urological procedures should be classified as surgically related.

URINARY TRACT INFECTION - OTHER (UT-OTHER)

Definition:

Infection involving the kidney (other than pyelonephritis) perinephric tissue, prostate, urethra or periurethra tissue in the absence of a UTI.

Criteria:

The full manual should be consulted for definitions and criteria.

Reporting:

If an infection involves one of the above sites it should be recorded as "UT-Other" but the specific site or infection should be reported in comments.

WOUND INFECTION

Definition:

An infection of a surgical (or traumatic wound requiring surgery) wound involving the skin or deeper tissues.

Criteria:

Doctor's diagnosis.

Clinical:

- Drainage of purulent material (pus) with or without a positive culture.

- Drainage of serous fluid from a wound with heat and redness at the site plus a positive culture and/or treatment with antibiotics.

Community vs Nosocomial:

Incisional wound infections are nosocomial. Traumatic wound infections with surgery are considered community if they occur within 24 hours of admission and nosocomial if they occur 24 hours after admission.

Reporting:

Wound infection should be reported as "Wound Infection". It should also be reported as a nosocomial and surgically related infection in the type of infection section.

When a culture of pus only grows skin contaminants (normal flora) such as S. epidermidis, micrococci, diphtheroids or alpha strep this should be reported as normal flora unless the organism is present in pure culture or is recovered simultaneously from the blood.

In the event that a new potential pathogen is isolated from the discharge it should be considered as a contaminant unless there is no improvement or a deterioration in the patient's clinical status. If a new organism is isolated it should be considered as a new infection.

Stitch abscesses that involve the wound should be reported as wound infections. Abscesses that do not involve the wound should be reported as surgically related cutaneous infections.

UPPER RESPIRATORY TRACT INFECTIONS (URT-DIFFUSE)

Definition:

Infection of the nose, throat, middle ear or sinuses either singly or in combination.

Criteria:

Doctor's diagnosis.

Clinical:

Site	Infections Include	Comments
Throat, tonsils, and larynx	Pharyngitis, tosillitis, tonsillar abscess, laryngitis	Do not include infections of the oral cavity
Nose	Rhinitis, sinusitis, infection of nasal mucosa	Positive nasal cultures for staph and strep should not be reported unless associated with clinical evidence for local infection
Ear	Otitis media	Infections of the external ear should be reported as cutaneous infections
Mastoid	Mastoiditis	
Diffuse	Two or more of the above sites	Infections of the tracheobronchial tree, including bronchitis go under lower respiratory

Community vs Nosocomial:

Incubation period for streptococcal pharyngitis is 2-4 days; therefore those infections that are noted within 4 days of admission should be considered community acquired. For the other respiratory infections the patient should be in hospital for at least 24 hours prior to the onset of symptoms in order to be considered as nosocomial.

Reporting:

If the infection involves more than one site (consider throat, tonsils and larynx as one site) report the infection as URT-Diffuse. In the comments section please specify whether the infection is presumed to be viral. For infections involving any single site report it as URT-Other and then specify the infected site and whether or not the infection is of presumed viral etiology in the comments section.

UPPER RESPIRATORY TRACT - OTHER (URT-Other)

Definition:

Infection of: teeth or gum
salivary glands
infection of a single site as noted in upper respiratory - other

Criteria:

See full manual as well as section on Upper Respiratory Tract - Diffuse.

Reporting:

Infection of one of the above should be reported as Upper Respiratory Tract Other with the specific infection/site noted in comments.

PNEUMONIA

Definition:

Infection of the pulmonary parenchyma with alveolar involvement.

Criteria:

Doctor's diagnosis.

Clinical:

The presence of any 4 out of the 6 listed criteria as long as there are either appropriate X-Ray findings (number 3) or appropriate clinical signs (number 5) will be sufficient for the diagnosis of a pneumonia.

1. Cough
2. Purulent Sputum
3. X-Ray Findings
4. Temperature > 38 ^{o} C
5. Clinical findings compatible with pneumonia
6. Isolation of a potential pathogen from sputum or other appropriate specimens (eg. transtracheal aspirate, biopsy)

Laboratory:

In general the isolation of an organism from the sputum is not sufficient for the diagnosis of a pneumonia unless the above clinical criteria are satisfied. An exception would be the isolation of a pathogen from a biopsy obtained in such a way that contact with the oral cavity is avoided.

Community vs Nosocomial:

To be considered nosocomial onset of signs and symptoms should be more than 48 hours after hospital admission in a previously asymptomatic patient or there should be an increase in purulence or sputum coupled with recrudescence of fever in a patient admitted with pulmonary disease. In the latter case care should be taken to try and differentiate between an inadequately treated infection and a new nosocomial infection. No firm rules can be provided for this task.

Reporting:

Report the site of infection as pneumonia. If procedures such as IPPB, Endotracheal Tube, or a Respirator were employed prior to onset of pneumonia the type of infection should be nosocomial, procedure related and the procedure should be noted in the treatment predisposing factors.

LOWER RESPIRATORY TRACT - OTHER (L.R.T.-OTHER)

Definition:

Infections of the large airways (trachea and bronchi) without pulmonary involvement, or a localized necrotizing infection of the pulmonary parenchyma (lung abscess), or an infection involving the pleural space or finally an infection involving the mediastinum.

Criteria:

Refer to the full manual.

Reporting:

If an infection involves one of the above sites report it as Upper Respiratory Tract Other (LRT-Other) and then also report in the comments section the specific site of infection.

GASTROENTERITIS (GASTRO)

Definition:

Onset of infectious diarrhea in hospital.

Criteria:

Doctor's diagnosis.

Clinical:

Increased stool (3-5) per day X 2 days
Watery or Purulent Stool
Vomiting
Fever

The presence of any three of the above is sufficient for a diagnosis.

Laboratory:

The identification of an enteropathogenic or enterotoxigenic organism in the presence of at least one of the above symptoms is sufficient for diagnosis. Isolation of Salmonella or Shigella in the absence of clinical symptoms should not be considered as nosocomial infection unless previous stool cultures were negative.

Community vs Nosocomial:

To be nosocomial an infectious diarrhea must not be present or incubating on admission. The incubation period for Salmonella should be considered as 3 days, for Shigella 6 days and for E. Coli 2 days.

Reporting:

Report the site of infection as gastroenteritis.

GASTROINTESTINAL (G.I.T.) - OTHER

Definition:

Infection of:
- Oral cavity - Non dental
- Esophagus
- Stomach
- Small or large bowel
- Appendix
- Rectum tissue
- Intra-abdominal (Peritonitis)
- Subphrenic
- Gall bladder (Cholecystitis)
- Bile ducts (Cholangitis)
- Spleen or Pancreas
- Retroperitontum
- Liver (Hepatitis)

Criteria:

See full manual for definitions and criteria for each of the above.

Reporting:

Infections involving any of the above should be reported as Gastrointestinal - Other (G.I.T.) but the specific infection/site should be reported in the comments section.

NECROTIZING ENTEROCOLITIS (NEC)

Definition:

Diffuse fulminating necrotizing colitis - while an infectious etiology has not been established for the purpose of this study it will be included.

Criteria:

Doctor's diagnosis.

Clinical:

1. Neonate less than 1 week of age
2. Apneic spells
3. Abdominal distension
4. Bloody diarrhea
5. X-Rays of abdomen revealing free air in the bowel wall, peritoneal cavity, or portal venous system

The presence of item 1 to 4 will be sufficient for diagnosis. Positive X-Rays in patient of the correct age will also be considered sufficient.

Community vs Nosocomial:

It should be considered nosocomial unless the neonate was transferred in from another institution after the onset of symptoms.

Reporting:

Report as neonatal necrotizing enterocolitis (NEC).

BURN

Definition:

Infection of a burn site (burn wound sepsis) or infection of a skin graft placed at a burn site.

Criteria:

Doctor's diagnosis

Clinical:

Presence of pus beneath the eschar or on the surface of a debrided wound.

Laboratory:

Infection should be reported if:

(a) biopsy of burn wound grows 10^5 bacteria per gram of tissue, or
(b) if sepsis occurs and the organism isolated from blood is the same; that is colonizing the wound and is not causing an infection at another site such as the urinary tract

Surgically Related:

Do not report burn infection as surgically related even if surgical procedure such as debridement or grafting are carried out.

Community vs Nosocomial:

They should be reported as nosocomial unless the burn was infected at the time of admission

Reporting:

Report infection site as burn. Organisms that colonize burn wounds may change from day to day and should not be reported as new pathogens unless they satisfy the criteria listed above or unless the presence of a new organism is associated with onset of purulence and fever.

CUTANEOUS

Definition:

Any infection involving the skin (epithelium and/or subcutaneous tissue) including pyoderma, cellulitis, cutaneous abscesses, or stitch abscesses. Also any infection of the conjunctiva, external ear, external genitalia, umbilicus, mastitis or breast abscess or decubitus ulcers. I.V. infections are NOT included.

Criteria:

See full manual for definitions and criteria for each of the above.

Reporting:

Infections of the above should be reported as cutaneous with the specific infection/site reported in comments.

GYNECOLOGIC

Definition:

Infections in this category include Acute salpingitis, tubo-ovarian abscess, supparative pelvic thrombophlebitis, as well as vaginal cuff infections, pelvic cellulitis and adnexal abscesses. Post abdominal hysterectomy wound infections are NOT included in this category.

Criteria:

See full definitions manual

Reporting:

Any of the above infections should be reported as gynecologic with the specific infection reported in the comments. Abdominal hysterectomy wound infection should be treated as other wound infections.

OBSTETRICAL

Definition:

Amnionitis and endometritis are included in this category. Post cesarean wound infection and Episiotomy infections should be reported as wound infections.

Criteria:

See full manual

Reporting:

Amnionitis and Endometritis should be reported as obstetrical. The specific infection should be reported in the comments. Wound infections should be reported as wound but the type of wound infection should be reported in the comments.

MUSKULO-SKELETAL (M.S.)

Definition:

Infection of the:
- Bone (Osteomyelitis)
- Joint (Specific Arthritis)
- Muscle or Other Deep Soft Tissue Tendon (Tendonitis)

Criteria:

See full manual for definitions and criteria of above.

Reporting:

Report infections of above structures as musculo-skeletal and then report the specific infection/site in the comments section.

CENTRAL NERVOUS SYSTEM (CNS)

Definition:

Infection of the:
- Brain (Encephalitis or Abscess)
- Meninges (Meningitis)
- Epidural or Subdural Spaces
- Eye - Other than Conjunctiva
- Inner Ear

Criteria:

See full manual for definitions and criteria.

Reporting:

Report infection of any of the above sites as central nervous sytem and then record infection/site in the comments section.

VEIN

Definition:

Infection of a peripheral vein or intravenous cannulation site.

Criteria:

Doctor's diagnosis

Clinical:

Purulent discharge from the I.V. site plus any 2 of the following: heat, redness, swelling, or tenderness will be sufficient for diagnosis.

Laboratory:

Positive cultures of the tip of the cannula or skin should be considered diagnostic of an infection only if:

(1) clinical evidence of infection is also present
(2) cultures of catheter tip were done in a semi-quantitative fashion and 15 or more colonies are isolated
(3) aspirate through the needle with evidence of inflammation at the site

In addition positive cultures of aspirate of tissue fluid should be considered as diagnostic.

Community vs Nosocomial:

I.V. associated infections are all nosocomial unless the patient was transferred with an infection or was admitted from a home I.V. program with an infection.

Reporting:

Infections of I.V. site should be reported as vein. Infections of arterial access sites should be reported as cardiovascular other.

Infections at the site should be reported as surgically related ONLY if the surgical procedure directly involved the vein such as in vein stripping, or thrombectomy.

Infection of I.V. sites should be reported as procedure related with the procedure as well as the date the treatment or procedure was instituted in the treatment predisposing factors section.

CARDIOVASCULAR - (CV)

Definition:

Infections of the:
- Endocardium
- Myocardium
- Pericardium
- Artery
- Aneurysm
- Vascular Graft
- Arteriovenous Shunt or Fistula

Criteria:

See full manual

Reporting:

Infections of above sites should be reported as cardiovascular (CV) with the specific infection/site reported in the comments.

PRIMARY BACTEREMIA (1 BLOOD)

Definition:

Bacterial infection of the blood stream where no other site on the patient has been shown to be infected with this same pathogen prior to the onset or coincident with the blood infection.

Criteria:

Doctor's diagnosis cannot be used without appropriate laboratory findings.

Clinical:

The diagnosis cannot be made on clinical grounds.

Laboratory:

One or more positive blood cultures are required for diagnosis. If cultures grow one of the following skin contaminants at least 2 blood cultures taken either at different times or from different sites must be positive with the same organism: (1) Diphtheroids (Corynbacterium Species), (2) Bacillus Species, (3) Streptococcus (S. Viridans), (4) Micrococcus, (5) Staphylococcus Epidermidis, (6) Propionobacterium Species.

Community vs Nosocomial:

In general, a primary bacteremia is considered nosocomial if the patient did not have any signs or symptoms of bacteremia at the time of admission and the first positive blood cultures were obtained more than 24 hours after admission.

Reporting:

Report the site of infection as a primary bacteremia (1 Blood). All procedures that the patient has undergone (in particular those that interrupt the integrity of the vascular system) should be noted in the treatment predisposing factors section even though it may not be clear that the infection was procedure related.

SITE NOT LOCALIZED

Definition:

A patient who appears "Septic" but a definite infection is not documented.

Criteria:

Onset of "Sepsis" more than 24 hours after admission to hospital.

Patient receives antibiotics for "Sepsis" with improvement in the patients condition occurring within 48 hours of institution of therapy.

Reporting:

If an infection cannot be localized should be reported in this category.

VIRAL EXANTHEM

Definition:

Any viral infection in which an exanthem is part of the manifestations. This section is primarily for pediatric sections.

Criteria:

Doctor's diagnosis

Laboratory:

Appropriate viral diagnotic procedures such as serology or culture.

Reporting:

Report the infection as a viral exanthem and include in the comments section the name of the illness.

OTHER

Definition:

Any infection that is not listed in the preceeding section.

Criteria:

Doctor's diagnosis

Reporting:

Infection should be reported as other with the specific infection noted in the comments.

SECONDARY BACTEREMIA

Positive blood culture where the organism isolated from the blood is the same as an organism that is isolated and recognized as a pathogen at another (local anatomic) site such as the urinary tract or a surgical wound.

If a blood culture was taken and is positive select the box marked "Y" , if it was negative mark the box labelled "N". If it can't be determined whether a culture was or was not taken select "No Data". If a blood culture was not taken select the box that is so labelled.

One of the boxes in this section should be selected.

SECTION I - INFECTIONS SIGNS AND SYMPTOMS

This information should be found in the progress notes, physician's history and physical as well as the nursing history or assessment guide.

I1 : No Data - Information is not available in the patient's chart.

I2 : Asymptomatic - There are no signs and symptoms of infection.

I3 : Other - Should be filled as appropriate.

Symptoms should be checked as they appear under each heading. More than one sign and symptom can be checked. Emphasis should be given to the completion of the signs and symptoms that refer to the specific infection.

SECTION J - COEXISTING PREDISPOSING FACTORS

This requires information regarding treatment and/or procedures carried out during the patient's hospitalization which contributed to the patient's subsequent infection.

J1 : No Data - Data is not available.

J2 : No Factors - There were no predisposing factors.

J35 : Other - Fill in as appropriate.

More than one item can be selected. The predisposing factors noted should be for the infection. That is even though the patient has an indwelling catheter it is not necessary to note it if the patient has a pneumonia. The treatment predisposing factors listed as "Other" can be selected for any infection.

SECTION K - ANTIBIOTIC THERAPY AND ANTIBIOGRAM

If it cannot be determined whether or not a patient received antimicrobials either prior to or for the current infection select "No Data".

If the patient has not received any antimicrobial therapy select "No Therapy".

If the patient has received antimicrobial therapy for whatever reason in the 2 weeks preceeding the onset of the current infection place a mark in the column titled "Prior to Infection" opposite the appropriate agent(s). If the agent is not listed 4 spaces are available at the bottom of the section in which the name(s) of the agent(s) can be entered.

If antimicrobials are prescribed for the current infection follow the same procedure as for "Prior to Infection" except place the marks in the column titled "Current".

If an organism(s) is identified as being the pathogen(s) enter the name of the organism in the empty angled columns next to the name of the antimicrobial agent. Below the name of the organism enter the sensitivity profile of the organism. Use "S" for sensitive and "R" for resistant. If an organism was not tested to a particular agent do not enter anything in that row.

SECTION L - VIRAL DX

If there is a viral diagnosis, fill in specific information in the space provided. Also check how the diagnosis was made:

L5 - Culture

L6 - Serology

L7 - Electron Microscopy

L8 - Other

SECTION M - CULTURE

M1 - If culture taken select "Y"

M2 - If culture not taken select "N"

M3 - If it can't be determined if a culture was taken select "ND"

M4 - If a culture was taken but a pathogen was not isolated select "NEG"

M5 - If a culture was taken but the results aren't available when the form is filled out select "Results not Available"

M6 - The site cultured should be the one that is most appropriate to the infection, that is, it is not necessary to note urine cultures if a patient has a pneumonia

SECTION N - OUTCOME

Select:

N1 - "No Data" if information is not available

N2 - "Infection Resolved" if the infection resolves within 2 weeks of onset

N3 - "Acquired Another Infection" if the patient acquires another nosocomial infection during the period of hospitalization

N4 - "Follow-Up Discontinued" if a patient has been followed for 2 weeks after onset of infection and is expected to have a long stay in hospital

N5 - "Discharged" if a patient is discharged home

N6 - "Transferred" if a patient is transferred to another health care facility

N7 - "Death" is a patient dies regardless of cause

N8 - "Infection Resolved and Patient Discharged"