What Is Wound Classification?

Jennifer Zinn, RN, MSN, CNS-BC, CNOR

Vangela Swofford, RN, BSN

Why Is Wound Class Important?

- The OR documentation needs to be accurate.
- Communication is essential
- Potential future issues: never events, pay-for-performance tied to reimbursement

Objectives

- Discuss the purpose of documenting wound classification
- Define the classes of Wound Classification
- Discuss the impact of inaccurate documentation of wound classification
- Discuss nursing interventions that effect wound classification
- Discuss QI project development
History

- National Research Council Study 1964 – ultraviolet light in the OR
- Designed to describe the degree of bacterial load/infection present at the initiation of surgery
- Incorporated into the CDC NNIS (National Nosocomial Infection Study) 1985

Wound Class Basics

- Classification of wounds involves “point of care” documentation
- Snapshot of surgical field at that time
- Perioperative decisions are based on the clinical/qualitative data at the time of the assessment in the OR

WC Basics

- “prediction rule”
- Identify the probability of infection at time of surgery so one can identify who is at increased risk for postoperative occurrences
- Identifies ‘outliers’ as well as documentation issues
Infection Risk per Classification

- Class 1 / Clean: <2%
- Class 2 / Clean-Contaminated: 4-12%
- Class 3 / Contaminated: 10-15%
- Class 4 / Dirty: 25-40%

Per NSQIP presentation by Lynn Devaney Massachusetts General Hospital

Class 1: CLEAN

- Uninfected surgical wounds in which no inflammation is encountered and the respiratory, alimentary, genital, or urinary/vaginal tracts are not entered.
- Clean wounds are closed primarily and do not involve normally colonized areas.

Class 1: CLEAN

- Hernia
- Exploratory Laparotomy
- Mastectomy
- Vascular Bypass
- Abdominal Aortic Aneurysm
- Non-penetrating blunt trauma
- Thyroidectomy
Class 1: CLEAN

- SSI risk is deemed minimal (<2%)
- Usually originates from skin contamination such as staph epidermis or possibly staph aureus

Class 2: CLEAN/CONTAMINATED

- Operative wounds in which the respiratory, alimentary, genital, biliary or urinary tract is entered under controlled conditions and no unusual contamination (a colonized viscous)
- No major break in technique is encountered
- “separate class for the Respiratory/GI tract”

Class 2: CLEAN/CONTAMINATED

- Colectomy
- TURP
- Nephrectomy
- Lung lobectomy
- Hysterectomy
- Cholecystectomy for stones or chronic inflammation only
Class 2: CLEAN/CONTAMINATED

- SSI risk ~ 4 - 12%
- Most common contaminants are endogenous bacteria from within the patient
- Separate class for the Respiratory/GI tract alone and not considered a 'step down' from wound class 1 (clean)

Class 3: CONTAMINATED

- Open, accidental wounds
- Operations with major breaks in technique
- Gross spillage from the GI tract
- Incisions that encounter nonpurulent, acute inflammation
- Absence of obvious infection

- Appendectomy for acute appendicitis
- Dropped instrument into field/broken glove
- Necrosis without infection
- Infarcted bowel
- Cholecystectomy with acute inflammation
- Bile spillage
Class 3: CONTAMINATED

- SSI risk ~ 10 - 15%
- Absence of obvious infection
- Contaminants are introduced by soilage of the surgical field

Class 4: DIRTY/INFECTED

- Wounds with retained, devitalized tissue
- Perforated viscera
- Existing clinical infection in field (pus/purulence)
- Penetrating wounds of > 4 hours duration before treatment

Class 4: DIRTY/INFECTED

- Ruptured appendectomy
- Appendectomy with pus/abscess
- I&D of perirectal abscess
- Compound, open fracture
- Perforated bowel
- Perforated gastric ulcer
Class 4: DIRTY/INFECTED

- SSI rate ~ 25-40%
- Pathogens are usually of the existing infection
- Unusual or non flora pathogens

American College of Surgeons National Surgical Quality Improvement Project (ACS NSQIP)

Vangela Swofford, RN

NSQIP Overview

- The first nationally validated, risk-adjusted, outcomes-based program to measure and improve the quality of surgical care.
- Monitors 30-day risk-adjusted outcomes.
- Currently 243 participating sites

MCHS joined the project Spring 2006
Data Collection Process

- Case selection:
  - 40 cases selected each 8-day cycle
  - General and vascular surgeries only
  - Potential for expansion to multi-specialty model

Drilling down on results

No Links:
- campus
- OR
- surgeon

Wound Classification breakdown
Existing issue with incorrect wound class

QI Project Development

- Background
- Flatten Knowledge
- Policy: Verification of wound class with surgeon at end of case
- PICIS
- Goal: at end of Q4 ≤5% discrepancy
Staff Education

- Inservice to all OR nursing staff (with continuing education credit) system-wide
  Timeline: 1 month
- Pocket guides
- Laminated WC chart posted in all ORs

Audit Tool

- Quality Data Analyst meeting
- Access Database Program
  Imports all cases from the operative journal from all sites
  Randomly selects 10% of charts for audit per specialty per facility
  Allows for entry of audit findings and provides summary of results

Results

- Audit Summary Report
- Continuation of audit next year with 5% audit rate
Nursing Interventions
Sterile Technique
Documentation
Communication

Key Words in Wound Classification
- Inflammation
- Necrosis
- Pus
- Perforation
- Break in sterile technique

*All increase WC to a Class 3 or 4

REFERENCES
- Devaney, Lynn, et al. “Wound Classification” presentation NSQIP Spring 2008
- American College of Surgeons’ National Quality Improvement Project