Attending Physician Education: Case Management

Presented By: Patrick Marzano, DO
Physician Advisor
Trinitas Regional Medical Center
Department of Case Management Services
Goals for this presentation

- Understand the roles of doctors, nurses and case managers in the case management process
- Understand the importance of accurate documentation and adherence to quality measures
- Understand external review criteria and methods
Goals continued

- Be able to list common reasons for payment denial
- Understand the function of MAC and RAC
- Be able to utilize alternate levels of care in planning for discharge
Goals of Hospital Stay

- Focus on the primary reason for admission to inpatient level of care
- Provide quality care
- Provide a safe discharge
Multidisciplinary Rounds (MDR)

Daily rounds to discuss each inpatient’s plan of care, response to treatment and goals.
The MDR Team

- Physician advisor – team leader
- Nursing staff
- Case manager
- Social worker
- Nutritionists
- Physical therapists
- Pastoral Care
Attending Physician’s Role

- Provide quality care to patients
- Work closely with the MDR team
- Plan discharge and anticipate discharge needs early in the hospital stay
- Recognize when a patient no longer needs to be in the hospital
Attending Physician’s Role continued

- Avoid unnecessary consults, work-up and tests
- Prioritize medical issues
- Communicate with consulting physicians on a daily basis
Attending Physician’s Role continued

- Be a team player
- Communicate
- Avoid hospital complications
Good Documentation

- Medical chart is a legal document
- Daily notes should contain the essential elements
- Good documentation facilitates communication
- Good documentation ensures optimal reimbursement
More on Documentation

- Write legibly
- Incorporate consultant recommendations if indicated
- Avoid use of unnecessary abbreviations
- List a plan for each disease state being managed on a daily basis
- Use computer order entry whenever possible
Hospital Quality Measures

- National Hospital Quality Measures (NHQM)
- Standardized order sets
Some current measures and their indicators

- Acute MI
- Heart Failure
- Pneumonia
Interqual and Milliman Criteria

- Two different sets of criteria used by hospitals and insurance companies to help determine whether a patient needs to be in the hospital

- Interqual: severity of illness (SI) and intensity of service (IS) criteria specific to the diagnosis

- Milliman: progression of care criteria
Utilization Review Based on InterQual Criteria

- Severity of Illness (SI)
- Intensity of Service (IS)
- Appropriateness for transfer or discharge
Interqual II

- Intensity of service must match severity of illness

- Any change in the patient’s severity of illness must be documented and addressed

- Failure to appropriately address change in status will result in outright denial or a decrease in reimbursement
SI/IS Examples

- Shortness of breath
- Chest pain
- Arrhythmia
More SI/IS Examples

- Abdominal pain
- Vomiting/diarrhea
- Fever
Care must progress in an appropriate and timely fashion without delay

Delay in the progression of care = Denial by the insurance company
Discharge or Transfer

- Discharge or transfer to a lower level of care
- Severity of Illness (SI)
- Intensity of Service (IS)
Alternate Level of Care (ALOC)

- Long Term Acute Care (LTAC)
- Acute Rehabilitation
- Subacute Nursing Facility (SNF)
ALOC continued

- Long Term Care
- Home Care
- Hospice
Common Reasons for Payment Denial

- Admission denial
- Continuing stay denial
- Carve out denial
- Telemetry denial
- Delayed discharge denial
Discharge Delays

- Diet advanced and tolerated
- Change from IV to oral antibiotics
- Positive bowel sounds/ no bowel movement
- Medication adjustments
Delayed Discharge continued

- Delay in ordering consult
- Consult or test that could be performed in outpatient setting
- Family issues
- Covering physician
- Physician has already made rounds for the day
Continuing Stay Denials

65 % of all denials
Carve Out Denials

- Tests or procedures ordered inappropriately or unnecessarily

- Delay in the performance of tests and procedures ordered in a timely fashion due to a weekend or a crowded schedule
Admission Denials

Account for 17% of all denials
Telemetry

- Unnecessary telemetry use accounts for an annual loss of hundreds of thousands of dollars
- Patients must meet criteria to be admitted to telemetry AND to stay on telemetry
- Need for continued telemetry use must be assessed AND documented every 24 hrs
Example 1

65 year old female with DM admitted with chest pain and stable Hgb of 10

- D#1 – Cardio consult, MI ruled out, echo ordered
- D#2 – Echo done, stress ordered
- D#3 – Stress test neg, GI consult called
- D#4 – Bowel prep
- D#5 - EGD/colonoscopy done
- D#6 - Patient discharged
Can you identify any problems with the management of this case?
Example 2

70 year old male with CHF exacerbation

- D#1 – Rales, Cardio consult, IV Lasix, echo ordered
- D#2 – Lungs clear, echo done, po Lasix
- D#3 – Continue po Lasix, titrate BP meds for BP of 170/90
- D#4 – Continue po Lasix, BP now controlled, PT evaluation
- D#5 – patient discharged to subacute facility
How would you handle this case?
Example 3

35 year old diabetic man with cellulitis

- D#1 – Febrile, WBC 18, two IV abx
- D#2 – Afebrile, WBC 15, improving cellulitis, continue with IV abx
- D#3 – Afebrile, WBC 10, improving cellulitis, continue IV abx
- D#4 – Afebrile, WBC 7, continue IV abx
- D#5 – Discharged home
Would you have handled the case differently?
Why Should Physicians Care?

- Appropriate level of care means fewer complications, fewer denials and better reimbursement for the doctor AND the hospital.

- Medicare Administrative Contractors

- Recovery Audit Contractors
Medicare Administrative Contractors (MAC)

- MAC: process hospital AND physician Medicare bills
- Hospital and physician claims processing is now integrated
Recovery Audit Contractors (RAC)

- Federal auditors reviewing appropriate billing practices and level of care for Medicare patients
- Demonstration project revealed almost $1 billion in overpayments
- Program now permanent and implemented nationally
Both Physicians and Hospitals Are Vulnerable

- Inappropriate admissions
- Unnecessary services
- CMS will fine both hospitals and physicians
Reducing RAC Exposure

- Appropriate level of care
- Utilize Observation level of care when appropriate
- Physician advisor and case manager input
More about Observation

- An active treatment status for patients with Medicare
- Patients are observed for 24-48 hrs while workup is in progress
Always consider Observation status for Medicare patients with these diagnoses:

- Chest pain, R/O MI or CHF
- Asthma, COPD or simple pneumonia
- Syncope, Near syncope or R/O CVA
- Atrial arrhythmias
More common Medicare Observation diagnoses

- Esophagitis or gastroenteritis
- Renal colic or UTI
- Dehydration
- Hypertension
THE END
Status of the National Hospital Quality Measures (Core Measures) at TRMC

Presented to Physicians By:
Bernadette Pryor, MSN, MA, RN-BC, CPHQ
Director, Performance Improvement Department
Objectives

- At the conclusion of the presentation, the participant will be able to:
  - Discuss the National Hospital Quality Measures (AMI, HF, PN, SCIP and Outpatient Measures)
  - Become familiar with the order sets to specific Core Measures
  - Know how TRMC compares to other NJ hospitals
  - Recognize the physician’s role to support the goals of Trinitas Regional Medical Center to excel in core measures performance
Overview

- Growing concerns regarding quality of services delivered, services provided and at what costs
- Interest to increase transparency and accountability in healthcare organizations
- The Joint Commission and Centers for Medicare and Medicaid Services (CMS) have required hospitals to monitor the care and treatment that they give to patients with certain medical conditions
- CMS requires hospitals to submit data on the measures to receive full Medicare Annual Payment Update
Overview

- National Hospital Quality Measures
  - AMI, CHF, CAP, SCIP, In-patient ED
  - Outpatient measures such as OP-ED AMI / Chest Pain, OP-ED Throughput, OP-Pain Management, OP-Surgery, OP-Stroke

- Public Reporting of Core measures
  - Centers for Medicare and Medicaid Services (CMS)
    (www.hospitalcompare.hhs.gov)
  - NJ Department of Health and Senior Services
    (NJ Hospital Performance Report)
  - The Joint Commission
    (ORYX data)

- Overall Goal = 100% compliance to ensure quality care
# How TRMC Compares to Two Union County Hospitals and Other NJ Hospitals

<table>
<thead>
<tr>
<th>Core Measure Composite Scores</th>
<th>Top 10% of NJ Hospitals Scored Equal to or Higher Than</th>
<th>Top 50% of NJ Hospitals Scored Equal to Higher Than</th>
<th>Overlook Hospital Overall Score %</th>
<th>RWJ - Rahway Overall Score %</th>
<th>TRMC Overall Score %</th>
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<tbody>
<tr>
<td>AMI</td>
<td>100%</td>
<td>99%</td>
<td>95%</td>
<td>100%</td>
<td>94%</td>
</tr>
<tr>
<td>Heart Failure</td>
<td>100%</td>
<td>98%</td>
<td>94%</td>
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<tr>
<td>Pneumonia</td>
<td>99%</td>
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<tr>
<td>SCIP</td>
<td>99%</td>
<td>97%</td>
<td>99%</td>
<td>98%</td>
<td>97%</td>
</tr>
</tbody>
</table>

Source: NJ Hospital Performance Report- NJ 2011; [http://web.doh.state.nj.us](http://web.doh.state.nj.us)

Data is from 2010
ACUTE MYOCARDIAL INFARCTION

- AMI-1 ASPIRIN AT ARRIVAL
- AMI-2 ASPIRIN PRESCRIBED AT DISCHARGE
- AMI-3 ACEI/ARB FOR LVSD
- AMI-5 BETA BLOCKER PRESCRIBED AT DISCHARGE
- AMI-7 MEDIAN TIME TO FIBRINOLYSIS
- AMI-7a FIBRINOLYTIC THERAPY RECEIVED WITHIN 30 MINUTES OF HOSPITAL ARRIVAL
ACUTE MYOCARDIAL INFARCTION

- AMI-8 MEDIAN TIME TO PRIMARY PCI
- AMI-8a PRIMARY PCI RECEIVED WITHIN 90 MINUTES OF HOSPITAL ARRIVAL (included in CMS Pay for Performance or Value-Based Purchasing Program)
- AMI-9 INPATIENT MORTALITY
- AMI-10 Statin prescribed at discharge
HOW DID WE COMPARE IN 2010-2011?

**Aspirin at Arrival**

- 2010 rate = 97%
- 2011 rate = 97.5%

**Aspirin at Discharge**

- 2010 rate = 94.9%
- 2011 rate = 99.3%

**Data Source:** QuadraMed Comparative Data
HOW DID WE COMPARE IN 2010-2011?

**Beta Blocker at Discharge**

- 2010 rate = 95%
- 2011 rate = 100%

**Statin Prescribed at Discharge**

- 2010 rate = 90.9%
- 2011 rate = 98%

*Data Source: QuadraMed Comparative Data*
HOW DID WE COMPARE IN 2010-2011?

PCI Received Within 90 mins of Arrival

2010 rate=76%
2011 rate=82.4%

Data Source: QuadraMed Comparative Data
**PI Initiatives to Improve AMI Care and Compliance**

- Patient teaching on recognizing AMI signs and symptoms

- Data abstractor discusses variances directly with attending physicians. A letter of “Opportunity for Improvement” (OFI) is sent to physicians involved and a copy sent to Clinical Department Chair. An OFI referral is also sent to the Chief Medical Resident and to the Nurse Manager of the nursing unit, as appropriate.

- Improvement of communication between ED and Cath Lab. PCI D2B outliers are reviewed within 48 hrs by the ED Chair, ED Nurse Manager, Cath Lab Director and ED physician quality reviewer to identify causes of PCI delays and prevent reoccurrences.
PI Initiatives to Improve AMI Care and Compliance

- On-going education of medical and nursing staff (triage, atypical symptoms, EKG, documentation of reasons for not prescribing ASA, BB, ACEI or ARB (if + LVSD), and statin at discharge, and acceptable reasons for delay in PCI)

- Collaboration with EMS/Mobile Intensive Care Units to increase awareness of TRMC’s services and facilitate timely identification of STEMI in the field

- Community outreach and patient teaching on recognizing AMI signs and symptoms
HEART FAILURE

- **HF-1 DISCHARGE INSTRUCTIONS** (included in CMS’ Value-Based Purchasing program)
  - ACTIVITY
  - DIET
  - FOLLOW-UP
  - MEDICATIONS
  - WHAT TO DO WHEN SYMPTOMS WORSEN
  - WEIGHT MONITORING

- **HF-2 EVALUATION OF LEFT VENTRICULAR SYSTOLIC FUNCTION**

- **HF-3 ACE INHIBITOR OR ARB FOR LEFT VENTRICULAR SYSTOLIC DYSFUNCTION**
HOW DID WE COMPARE IN 2010-2011?

**Discharge Instructions**

- **2010 rate**: 93.5%
- **2011 rate**: 88.8%

**ACEI for LVSD**

- **2010 rate**: 96.7%
- **2011 rate**: 86.2%

*Data Source: QuadraMed Comparative Data*
PI Initiatives to Improve Heart Failure Compliance

- Monthly interdisciplinary joint AMI/CHF team meetings where compliance rates and variances are discussed.
- Data abstractor discusses variances directly with attending physicians to enforce future compliance. A letter “opportunity for Improvement (OFI) is sent to physicians involved and a copy sent to Medical Department Chair and/or Medical Director.
- Patient teaching including teach back method
- On-going education of nurses during orientation program, Bridge program and staff meetings, TRMC web site Focus: nurses’ role in assisting physicians to achieve compliance
- Annual orientation of new medical residents to Core measures. Focus: role in achieving core measure compliance
PI Initiatives to Improve Heart Failure Compliance

- Community outreach
- Patient teaching including teach back method
- Participation in the Grotta Grant in collaboration with Jewish Family Services and Holy Redeemer Home Care Services to focus on transition in care.
PNEUMONIA (PN) MEASURES

- **PN-3a:** BLOOD CULTURES +/- 24 HRS FROM ARRIVAL FOR ICU PATIENTS

- **PN-3b:** BLOOD CULTURES IN ED PRIOR TO INITIAL ANTIBIOTIC RECEIVED IN HOSPITAL *(included in CMS’ Value-based Purchasing Program)*

- **PN 6:** INITIAL ANTIBIOTIC SELECTION FOR PN IN IMMUNOCOMPETENT PATIENTS *(for All- included in CMS’ Value-based Purchasing Program)*
HOW DID WE COMPARE IN 2010-2011?

**Blood Cultures in ED Prior to initial ABX in Hospital**

**Initial Antibiotic Received Within 6 hrs of Arrival**

**2010 rate= 95.6%**

**2011 rate= 97.3%**

**2010 rate= 87.6%**

**2011 rate= 95.2%**

**Data Source:** QuadraMed Comparative Data
PI Initiatives for Pneumonia Care

- Ongoing education of physicians - **Focus**: diagnoses uncertainties and documentation requirements, appropriate selection of antibiotics

- Education of nurses - **Focus**: timely documentation of blood cultures

- Review of variances and opportunities for improvement during Pneumonia team meetings

- Daily real time review of pneumonia patients treated in ED with primary diagnosis of PN to increase compliance with blood culture documentation
SURGICAL CARE IMPROVEMENT PROJECT (SCIP)

- SCIP-1 PROPHYLACTIC ANTIBIOTIC WITHIN 1 HR PRIOR TO SURGICAL INCISION
- SCIP-2 PROPHYLACTIC ANTIBIOTIC SELECTION FOR SURGICAL PATIENTS
- SCIP-3 PROPHYLACTIC ANTIBIOTIC DISCONTINUED WITHIN 24 HRS AFTER SURGERY END TIME
- SCIP-4 CARDIAC SURGERY PATIENTS WITH CONTROLLED 6 AM POST-OPERATIVE BLOOD GLUCOSE

(Note SCIP 1 through 4 are included in CMS’ Value-based Purchasing Program)
SURGICAL CARE IMPROVEMENT PROJECT (SCIP)

- SCIP-6 SURGERY PATIENTS WITH APPROPRIATE HAIR REMOVAL
- SCIP-9 URINARY CATHETER REMOVED ON POD1 OR POD2
- SCIP-10 PERIOPERATIVE TEMPERATURE MANAGEMENT
- SCIP-VTE-1 SURGERY PATIENTS WITH RECOMMENDED VENOUS THROMBOEMBOLISM PROPHYLAXIS ORDERED
- SCIP-VTE-2 SURGERY PATIENTS WHO RECEIVED APPROPRIATE VENOUS THROMBOEMBOLISM PROPHYLAXIS WITHIN 24 HRS PRIOR TO SURGERY TO 24 HRS AFTER SURGERY
- SCIP-CARD-2 SURGERY PATIENTS ON BETA BLOCKER THERAPY PRIOR TO ARRIVAL WHO RECEIVED A BETA-BLOCKER DURING THE PERIOPERATIVE PERIOD

Note: SCIP VTE-1, SCIP VTE-2 and SCIP Card 2 are included in CMS’ Value-based Purchasing Program)
HOW DID WE COMPARE IN 2010-2011?

**SCIP VTE-1**

- Surgery Patients with Recommended Venous Thromboembolism Prophylaxis Ordered
- Percentage Rate
- Data Source: QuadraMed Comparative Data

**SCIP VTE-2**

- Surg Pats Received Appropriate VTE Prophylaxis w/in 24 hrs Prior to Surgery to 24 hrs After Surgery
- Percentage Rate
- Data Source: QuadraMed Comparative Data

The 2009 average for VTE-1= 78.9% and 76.9% for VTE-2. The compliance scores improved tremendously in 2010 and 2011.
Rates are: SCIP VTE 1: 2010=92.8%; 2011=99.1%. SCIP VTE 2: 2010=93.2 %; 2011= 98.0%
PI Initiatives to improve SCIP Compliance

- Secured grant to fund SCIP Team initiatives
- Education of new physicians and residents. Focus: utilization of order sets for prophylactic antibiotics
- On-going education of nurses. Foci: nurses’ role in assisting physicians to achieve compliance; discharge instructions to prevent surgical site infection
- Post-operative progress notes to include documentation of VTE indication and a trigger for documentation of reason if prophylaxis is not indicated.
- Variance of surgeons shared with Surgical Department Chair and Medical Director.
- PACU (Recovery Room) checklist to monitor compliance in real time
- WHO Surgical check list poster in OR to focus on safety
OP-ED AMI AND CHEST PAIN

- **OP-1**  Median Time to Fibrinolysis
- **OP-2**  Fibrinolytic Therapy Received Within 30 Minutes
- **OP-3**  Median Time to Transfer to Another Facility for Acute Coronary Intervention
- **OP-4**  Aspirin at Arrival
- **OP-5**  Median Time to ECG
OP-SURGERY

- **OP-6** Antibiotic Timing
  - Documentation that an antibiotic was initiated (started) within 60 minutes (120 minutes for Vancomycin or Quinolones) prior to surgical incision.

- **OP-7** Antibiotic Selection
  - Documentation that the recommended antibiotic was given to the patient
Outpatient ED Throughput

- OET-18  Median time from ED arrival to ED Departure for Discharged ED Patients – Overall
- OET-18b  Median time from ED arrival to ED Departure for Discharged ED Patients (Reporting Measure)
- OET-18c  Median time from ED arrival to ED Departure for Discharged ED Patients (Observed Patients)
- OET-19  Transition Record with Specified Elements Received by Discharged Patients
- OET-20  Door to Diagnostic Evaluation by a Qualified Medical Personnel
GLOBAL - IMMUNIZATION

- IMM-1a Pneumococcal Immunization – Overall
- IMM-1b Pneumococcal Immunization – Age 65 +
- IMM-1c Pneumococcal Immunization – High Risk Age 6-64
- IMM-2 Influenza Immunization
OUTPATIENT PAIN MANAGEMENT

- OPM-21  Median Time to Pain Management for Long Bone Fracture

OUTPATIENT STROKE

- OST-23  Head CT or MRI Scan Results for Acute Ischemic/Hemorrhagic Stroke Within 45 minutes of arrival
How You Can Help Increase Compliance

AMI

- Order the first dose of ASA to be given STAT
- Document the reason for not prescribing ASA, beta blocker, an ACEI or ARB, and a statin during the hospital stay or at discharge

HEART FAILURE

- Accurately list the names of ALL the discharge medications on the Medication Reconciliation form and review this list with the RN
- Avoid listing additional discharge meds on the discharge order or Progress Notes after reconciliation is completed.
- Avoid listing the names of discharge meds when you dictate the discharge summary. Refer to discharge instructions given to the patient.
- Document the reason for not prescribing an ACEI or ARB, and a beta blocker during the hospital stay or at discharge

PNEUMONIA

- Give an order for blood cultures to be done in the ED before the first dose of the antibiotic
- Follow the recommended antibiotic selection for immuno-competent Pneumonia patients admitted to non-ICU and ICU nursing units.
How You Can Help Increase Compliance with SCIP

- Document on post-op day 1 or post-op day 2 with day of surgery being day 0 the reason for not removing the Foley catheter
- Order a beta blocker on admission if patients are on a beta blocker at home
- Make sure that a post-op patient who was on a beta blocker at home receives a beta-blocker the day prior to surgery through POD #2
- Document on POD 0, POD 1, and on POD 2 the reason for not giving beta blocker

- Follow recommended VTE prophylaxis for specific surgical procedures
- Order pharmacological and/or mechanical VTE prophylaxis 24 hrs prior to Anesthesia start time to 24 hours after anesthesia end time
- Document within 24 hours after Anesthesia end time the reason for not giving VTE prophylaxis
Purpose of the Medical Record

TRMC Health Information Services
Valdery Campos, RHIA

Carol Gorski, RHIA, CCS
Purpose of the Medical Record

- Communication tool among healthcare practitioners serving the patient
- A basis for evaluating the adequacy and appropriateness of care
Purpose of the Medical Record

- Supporting documentation for reimbursement of services provided
- Protection of the legal interests of the patient, healthcare practitioners and the hospital
- Clinical data for research and education
Health Information Management
What Do We Do?
What Do We Do?

- Maintain, collect and analyze the data that doctors, nurses and other clinicians rely on to deliver quality of healthcare.
What Do We Do?

- Manage patient health information in both paper-based and electronic medical records
- Code diagnoses and procedures for healthcare services provided to patients
Timely Completion of Medical Records
Timely Completion

- **H&P** – must be completed within 24 hours of admission and prior to an outpatient procedure for which an H&P is required
- **OP Report** – dictate immediately after surgery
- **Post Op Progress Note** – written immediately after surgery and/or before next level of care
Timely Completion

- **Discharge Summary** – dictate immediately after discharge
- **Discharge Progress Note / Final Discharge Note** – should be completed the day of discharge
- **Verbal/Telephone Order** – must be signed within 48 hours of being given
Timely Completion

- Sign, date and time all entries, if a computer entry, authenticated.
- Entries written in error shall be corrected by drawing a single line through and writing “error” above the incorrect entry. The date of correction and legible signature or initials of the person correcting the error shall be included.
- If a late entry is made, write “late entry” and the actual date and time of the entry.
Timely Completion

- Dictate your reports in a timely manner and speak clearly
- Write legibly
- Record completion is required within a period that in no event exceeds 30 days following discharge
- After written warning and failure to complete medical records with the 30 day timeframe, the physician’s admitting privileges will be suspended
Clinical documentation should support the coding.

The goals of good documentation are:
- Accuracy
- Consistency
- Specific
- Supportable
- Justify treatment
Documentation

- If documentation is vague or unclear the physician should be queried to facilitate clarification of gray areas

  - The physician query is a method of communication used by coders in order to code diagnoses and procedures correctly. Queries are used whenever there is conflicting, incomplete or ambiguous information in the record.
Documentation

- It’s inappropriate to assign a diagnosis based solely on physician orders for a prescribed medication. A diagnosis must be documented in the record.

- Documentation must be present in the medical record to support a procedure was medically necessary and performed.
Documentation and Coding

- Coding is getting increased attention due to:
  - Greater financial impact
  - MS-DRG reimbursement system
  - Need for clean accurate data base
  - Increased coding demands
  - RAC audits are coming
Infection Control

Michelle Gillis-Harry, MPH, RN, CIC
Allison Brown, BS, MT
Objectives

- Importance of Hand Hygiene
- Importance of Isolation
- Prevention of MDROs
- Bundles to prevent infection
  - VAPs
  - CLABs
  - CAUTIs
- Bloodborne pathogens
  - Three most common pathogens
  - Safe injection practices
- TB
  - Latent vs. Active TB
Handwashing Compliance

- What do your hands look like???
- Hospital-acquired infections exact a tremendous toll, resulting in increased morbidity and mortality, and increased healthcare costs.\(^1,2\) Since most hospital-acquired pathogens are transmitted from patient to patient via the hands of healthcare workers, handwashing is the simplest and most effective, proven method to reduce the incidence of nosocomial infections.\(^3,4\)

Importance of Isolation Procedures

Objective. To assess the rate of and the risk factors for the detection of methicillin-resistant *S. aureus* (MRSA) and vancomycin-resistant enterococci (VRE) on the protective gowns and gloves of healthcare workers (HCWs).

Methods. We observed the interactions between HCWs and patients during routine clinical activities in a 29-bed medical intensive care unit at the University of Maryland Medical Center, an urban tertiary care academic hospital. Samples for culture were obtained from HCWs' hands prior to their entering a patient's room, from HCWs' disposable gowns and gloves after they completed patient care activities, and from HCWs' hands immediately after they removed their protective gowns and gloves.

You do not have to slip up very often to transmit infections. How many rooms do you go in and out of everyday?

<table>
<thead>
<tr>
<th>Organism</th>
<th>HCW Room Entries</th>
<th>Hand + Before (%)</th>
<th>Gown/Glove + After (%)</th>
<th>Hands + After Removal</th>
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<tbody>
<tr>
<td>ACBA</td>
<td>199</td>
<td>1.7%</td>
<td>38.7%</td>
<td>4.5%</td>
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<tr>
<td>PSEUDO</td>
<td>133</td>
<td>0%</td>
<td>8.2%</td>
<td>0.8%</td>
</tr>
<tr>
<td>VRE</td>
<td>94</td>
<td>0%</td>
<td>9%</td>
<td>0%</td>
</tr>
<tr>
<td>MRSA</td>
<td>81</td>
<td>2%</td>
<td>19%</td>
<td>2.6%</td>
</tr>
</tbody>
</table>
IS IT ME, OR DO OUR KIDS SEEM MUCH MORE RESISTANT THAN WE EVER WERE?
Common MDROs

- MRSA
- VRE
- MDR K. Pneumoniae
- MDR Acinetobacter
- MDR Pseudomonas
- ESBL+
- KPC
- C. difficile
CONTACT PRECAUTIONS
Private room or Cohort

Visitors: Report to Nursing Station before entering
Visitantes: Reportarse a la ejtacion de enfermeria antes de entrar en la habitacion

Wash Hands or use Alcohol Rub
• Entering room
• Before leaving room

Gloves
• Wear gloves entering room
• Remove gloves before leaving room

Gowns
• Wear gown entering room
• Remove gown before leaving room

Patient Care Equipment
• Use patient-dedicated or single-use equipment when possible
• Clean and disinfect all shared equipment

Patient Transport
• Maintain precautions during transport
Key Prevention Strategies

- Prevent infection
- Diagnose and treat infection effectively
- Use antimicrobials wisely
- Prevent transmission

Clinicians hold the solution!
12 Steps to Prevent Antimicrobial Resistance: Hospitalized Adults

12. Break the chain
11. Isolate the pathogen
10. Stop treatment when cured
 9. Know when to say “no” to vancomycin
 8. Treat infection, not colonization
 7. Treat infection, not contamination
 6. Use local data
 5. Practice antimicrobial control
 4. Access the experts
 3. Target the pathogen
 2. Get the catheters out
 1. Vaccinate
Bundles and Collaboratives

- Trinitas participates in a number of collaboratives in order to reduce HAIs

- **VAPs** (Vent Associated Pneumonia)
  - SAGE Oral Care Kit implemented
  - 10-20% vented patients develop a VAP
  - Significant cause of morbidity and mortality. Costs about $60K/case

- **CLABs** (Central line associated bloodstream infections)
  - We are currently participating in the John Hopkins Collaborative
  - About a 20% mortality rate. Costs about $100K/case

- **CAUTIs** (Catheter associated urinary tract infections)
  - We are participating in the NJ HA Stop CAUTI Collaborative
  - 12-16% of patients have catheters at some time during their stay
  - Daily risk of UTI varies from 3-7%. Costs about $44K/case
Vents

- Elevate Head of Bed to 45%
  - 67% reduction in VAP among patients maintained in semirecumbency
- Frequent Suctioning
- Regular antiseptic Oral Care
- Sedation Vacation
- GI prophylaxis
- DVT prophylaxis
Bundle to Prevent Central Line Infections

- Use catheter checklist
- Hand hygiene before catheter insertion
- Avoid femoral lines
- Use catheter kit
- Meticulous maintenance
  - Antiseptic before access
  - Keep dressing clean, dry, and intact
  - Biopatch- Chlorhexidine gluconate patch
- Remove nonessential venous catheters
Bundle to Prevent CAUTI

- Aseptic insertion and proper management
- Bladder ultrasound may help avoid indwelling catheterization
- Condom or intermittent catheter in appropriate patients,
- Do not use the indwelling catheter unless you must!!
- Early removal of catheter using reminders
Indications for Foley Catheter

1. Pre/post operative
2. Urinary output monitoring
3. Urinary Retention/Obstruction
4. Pressure Ulcer/Wound Management with patients who are incontinent
5. Patient Request

If none of these indications are present, the nurse will have the authority to discontinue the foley catheter.
Foleys are NOT a Fashion Statement!
Bloodborne Pathogens

- Standard Precautions are so important because we do not know who is carrying a virus that could threaten your health.
- Human Immunodeficiency Virus (HIV)
  - Causes AIDS
  - Attacks the immune system/initial symptoms are flu-like
  - Is currently on the rise...56,300 new cases/year
- Hepatitis B Virus (HBV)  **Vaccine is Available**
  - Attacks the liver-causes cirrhosis, liver cancer, death
  - Creates a carrier state without symptoms, but infectious
  - Less than 2% of the population is chronically infected, injection drug abuse and unprotected sex are the primary methods of transmission
- Hepatitis C Virus (HCV)  **No Vaccine Available**
  - Attacks the liver causing cirrhosis, liver cancer, death
  - Symptoms may be absent or mild/creates a carrier state
  - Contact with the blood of an infected person, primarily through sharing contaminated needles to inject drugs.
Safe Injection Practices

- Safe injection practices are not optional!
- They are a basic expectation anywhere injections are administered. It may be hard to believe, but over the last decade, syringe reuse and misuse of medication vials have resulted in dozens of outbreaks and the need to alert over 100,000 patients to seek testing for bloodborne pathogens such as Hepatitis B virus, Hepatitis C virus and HIV.
Safe Injection Practices cont’d

- Needles and syringes are single use devices.
- They should not be used for more than one patient or reused to draw up additional medication.
- Do not administer meds from a single dose vial or IV bag to multiple patients.
- Limit the use of multi-dose vials and dedicate them to a single patient whenever possible.
- Additional resources can be found at www.OneandOnlycampaign.org
Exposure to Bloodborne Pathogens

- Hep B
  - 30% risk to unvaccinated Health Care Worker

- Hep C
  - 1.8% risk

- HIV
  - .3% risk from needle stick
  - .1% risk from eye, nose, or mouth exposure
  - .1% risk from exposure to non-intact skin
What to do after exposure!

- Clean site with soap and water!
- Flush mucous membranes with water!
- Avoid bleach and other caustic agents!!
  - Do not squeeze site
  - Do not apply antiseptics or disinfectants
Tuberculosis

What is TB?

- TB is an infectious disease which spreads through the air from person to person by droplets. These droplets are expelled from the lungs of a person with active TB disease through coughing, shouting, singing, speaking, or sneezing and are then inhaled into the lungs of another person.

- If the infection is not treated, it can become active and affect the liver, skin, bone, and other organs of the body.

- The presence of bacteria can be detected by tuberculin skin test (TST) using PPD.
TB Infection VS TB Disease

**Infection**
- No signs or symptoms
- Bacteria are inactive
- Person does not feel sick
- Usually will have a “positive” skin test reaction
- Can develop TB disease later in life unless preventive medication is given
- Not contagious

**Disease**
- Bacteria become active
- Will have signs and symptoms
- Will need to take medication
- Will have a “positive” chest X-ray
- Will be contagious
THINK TB!

Recognize positive signs and symptoms of tuberculosis. Early diagnosis and treatment reduces spread. Contact your Health Department or Physician for more information.

U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES
Public Health Service

CDC
Tuberculosis Disease

- Important to recognize signs and symptoms so that we can get patients on isolation as soon as possible

- Signs and Symptoms
  - Bad cough that lasts longer than 2-3 weeks
  - Pain in chest
  - Coughing up blood
  - Weakness or fatigue
  - No appetite
  - Chills
  - Fever
  - Night sweats
Stopping Tuberculosis Transmission Requires a Team

- The Infection Control Department is notified of any suspected cases. If confirmed, the Lattimore clinic is then notified:
  - They conduct hospital visits prior to discharge
  - Interview the patient
  - Interview significant others
  - Investigate all contacts
  - Supervise Direct Observed Therapy (DOT)
  - Provide education and back up for physicians and patients
- They do this for both **ACTIVE pulmonary TB** and **ACTIVE non-pulmonary TB**
Lattimore Clinic Information

- 225 Warren Street
  1st Floor, East Wing
  Newark, NJ 07101
- 973-972-6232
Discharge Requirements for pulmonary TB patients

- 3 consecutive negative sputum smears
  It’s now the law in NJ!
Where Can I Get A Flu Vaccination

- Occupational Medicine/Employee Health Clinic
  210 Williamson St (Administrative Building) 1st floor
  Hours 7:30 am to 3:30 pm (no appt needed)
- Local pharmacy *
- Private physician *
- Local Health Dept/Clinics *
  * Please bring paperwork to Employee Health if you did not get the vaccine at work.
- A Mandatory Declination form must be completed for employees who do not receive the flu vaccine!