Introduction

To advance the health and well-being of our region through comprehensive care in a Christian environment.

Scope of the program

The overall purpose of Pikeville Medical Center's Infection Control program is to minimize the risk for transmission and acquisition of healthcare associated infections (HAI) and epidemiologically significant organisms. The scope of this plan includes activities of administration, staff, physicians, licensed independent practitioners, nurses, aids, volunteers, ancillary staff, housekeeping, maintenance, clerical staff, students, part time personnel, dietary, physician office staff, durable medical equipment (DME) employees, interns, outpatient rehab center, sleep labs, diagnostic center, and residents that impact either directly or indirectly the delivery of patient care.

Pikeville Medical Center has implemented a comprehensive inter-disciplinary program for the purpose of surveillance, prevention, and control of both healthcare associated infections as well as community associated infections. Based on epidemiological principals and research PMC coordinated processes to minimize the risks of endemic and epidemic healthcare associated infections in patients and health care workers. Development and an annual review of the program include consideration of the following factors:

1. Patient population,
2. Geographic location,
3. Service lines,
4. PMC's clinical focus,
5. Analysis of PMC's infection prevention and control data, and
6. Number of PMC employees.

In addition, Pikeville Medical Center relies on the following external resources:

- CDC – Center for Disease Control and Prevention definitions for healthcare associated infections
- NHSN – National Healthcare Safety Network developed by CDC utilizing uniform definitions and surveillance methods to collect, report, and analyze healthcare associated infections
- Joint Commission accreditation standards
- Office of Safety and Health Administration (OSHA) Bloodborne Pathogen Standards
- Kentucky Department of Public Health
- Pertinent law and regulation

Risk Factors Involved in the Acquisition and Transmission of Infectious Agents

At least once a year the Infection Control Committee evaluates, revises as necessary and approves the type and scope of surveillance activities based on the following:

- Previous hospital specific historical data
- Effectiveness of prevention and control intervention strategies in reducing healthcare associated acquired infection risk

- Services provided, procedures performed, new services offered, priorities of significant community and world health, and problems identified during the past year

In addition, PMC utilizes the following information including but not limited to:

- Top 50 - 100 DRG's for the past year as determined by hospital data
- Reportable disease identified by the Big Sandy Area Development District
- TB risk assessment and incidence of TB as determined by PMC data
- Total population and demographics for the Big Sandy Area
- PMC's patient payor mix
- PMC's patient age mix
- Historical surveillance data trending analysis
- PMC's Physician Offices and Clinics

Risk Factor: Geographic Location and Community Environment

Pikeville Medical Center is located in Pikeville, Kentucky, and provides patient care services in a region of more than 420,000 people in 15 counties in the states of Kentucky, Southwestern Virginia, and Southern West Virginia. Pikeville is the county seat for Pike County and is the focal point of commerce, banking, medicine, education and law for the multi county region. This geographic location covers over 2700 square miles of mountainous topography in the Cumberland Plateau of the Appalachian Mountains. As such, while the population is comparable to Lexington, Kentucky, an urban area with competing full service hospital facilities, the terrain of the Big Sandy basin precludes the growth and development of large urban/metropolitan centers thereby the region consists of many small towns (400 – 6000 people) and unincorporated communities. As a consequence, some risk for bioterrorism exists but not to the level of an urban/metropolitan area. PMC Infection Control and Safety Departments work together for many purposes including emergency preparedness.

Community data regarding community infectious and reportable disease is obtained from health departments, home health agencies and dialysis clinics within the Big Sandy region.
The local health department contains a division of regional epidemiology and health training which

1. Operates to control communicable disease.
2. Performs disease surveillance.
3. Researches injury prevention.
4. Records and maintains vital statistics and health data.
5. Directs the community in bioterrorism preparedness.

Pikeville Medical Center is affiliated with HANS (Health Alert Network) through the Kentucky Department of Public Health and CDC from which information is received concerning infectious disease alerts for our community, state, and surrounding area.

As noted above, the geographical environment is made up of rugged mountainous regions covered with forests, dissected by streams, with most level land located in the river valley. Transportation is provided mainly by US 23 and US 119 which are major access roads into the region. A major rail route dissects the region and provides mass transportation for a variety of fossil fuels from the region.

Principal industries include coal mining, natural gas production, and related businesses, the University of Pikeville, and it's expansions including the Kentucky College of Osteopathic Medicine and the Kentucky College of Optometry School, and the Big Sandy Community and Technical College. Pikeville has two fully accredited high schools, two private Christian schools, and two elementary schools which provide award winning, highly ranked, educational opportunities. Fish Trap Lake, Breaks Interstate Park, and Bob Amos Park offer an assortment of recreational opportunities appealing to a wide variety of individuals and families, including walking and running trails, camping, boating, swimming, fishing, hiking, horseback riding, zip lining, and white water rafting. The city of Pikeville offers paddle boats and kayaking. Promotion of tourism is increasing in the area, with the offering of various festivals and local tours introduced to take advantage of recent renewed interest in the Hatfield and McCoy feud.

Pike County has vast fossil fuel (coal and natural gas) reserves and is one of the nation's leading natural gas producers. Pike County was the largest coal producing county in the Eastern Kentucky region as reported by the Kentucky Department of Energy for the year of 2018. Coal production has declined rapidly in the region and is now almost non-existent, but the years of coal mining is leading cause of respiratory health issues in the area.

The economic status of eastern Kentucky and Appalachia continues to be a national concern. The poverty level of Kentucky Appalachian counties is 25.4% compared to the United States Poverty Level of 18.5%. Of the top eight coal-producing counties in Eastern Kentucky, Pike County is the only county with a lower poverty rate than Appalachian Kentucky as a whole. So while mining employment is extremely important as a source of income for individuals in coal-producing counties, the benefits of these jobs do not translate into prosperity for the region. The growth of Pike County in areas apart from the coal industry contributes to its lower poverty level.

Risk Factor: Services Provided and Patient Population

Pikeville Medical Center is a 328 acute care and a 20 bed inpatient rehabilitation hospital, accredited by the Joint Commission. Our organization includes medical services, surgical services, intensive care units (medical, surgical, neonatal), obstetrical department, inpatient and outpatient rehabilitation unit, orthopedic unit, children's hospital, emergency services, Level 2 Trauma status, radiology, interventional radiology, interventional cardiology, cardiac rehabilitation, pharmacy (inpatient, outpatient and satellite in the cancer center and the intensive care unit), house wide antimicrobial Pharm D, physical therapy, respiratory therapy, laboratory including microbiology, wound center, DME services, diagnostic center, endoscopy, and a Family Medical Practice Clinic. Pikeville Medical Center has off site physician offices, laboratory services, and two Autism Centers.

Medical specialties among our staff physicians include anesthesiology, general surgery, cardiac surgery, neurosurgery, plastic surgery, ENT, ophthalmic surgery, optometry, urology, orthopedic, obstetrics/gynecology, pulmonary, endocrinology, dermatology, dermatopathology, pathology, rheumatology, vascular surgery, pediatrics, family practice, internal medicine, oncology, infectious disease, dialysis, Lasik eye surgery, and bariatric surgery. Surgical procedures at PMC range from minor surgeries to open heart, neurosurgery, trauma, and bariatric surgery procedures.

PMC provides care to its patients in many settings, including inpatient, outpatient, critical care, clinic, urgent care, rehabilitation, and physician office.

Our patient population ranges in age from newborn to children, adolescents, adults to senior adults. Each age group has its own unique risk factors for developing community and health care associated infections. Included with the risk analysis are the geographical data considered when setting priorities for the next year.

As noted previously, as the region's largest industry is mining. Mining and its related industries are inherently dangerous professions contributing to significant injuries and work related illness.

Socioeconomic indicators of the region are as follows:

1. 31.4% of the population earn at or below the poverty level as compared to 18.5% for Kentucky and 12.7% for the United States.
2. 11.7% of the work force is unemployed as compared to 8.3% for Kentucky and 7.4% for the United States.
3. 75.0% are high school graduates or higher as compared to 84.6% for Kentucky and 87.0% for the United States,
4. 12.9% have a bachelor's degree or higher as compared to 22.7% for Kentucky and 30.3% for the United States.
5. 13.7% of the population is 65 years or older as compared to 13.3% for Kentucky and 13.0 % for the United States.
6. The population continues to suffer from an increase in both prescription and illegal drug abuse. Kentucky is second in drug overdose mortality rate in the United States. Heroin listed as 25.5% of all overdose deaths.
7. The evidence of tuberculosis in our region is low as Kentucky ranked 33rd among the states in TB rates
8. HIV in Kentucky is ranked 30th among the 50 states in the number of HIV diagnoses.

Forty three percent of the population is between the ages of 40-64 and comprises the largest proportion of patients in the outpatient setting. Approximately 68% of payments received at PMC are Medicare and Medicaid (government payer), 31% other third party payers, and 1% self-pay.

The top eight leading causes of death for Eastern Kentucky and surrounding areas, according to CDC National Center of Health Statistics 2020 are:

1. heart disease
2. Cancer
3. COVID-19
4. accidents (unintentional injuries)
5. Chronic Lower Respiratory Disease (CLRD)
6. Stroke
7. Alzheimer's disease
8. Diabetes
9. Septicemia
10. Kidney Disease

These ten causes of death comprised 71.2% of Kentucky deaths in 2020.

Heart disease and stroke are the principal components of cardiovascular disease (CVD). Respectively, they are the first and third leading causes of death in the United States and in Kentucky. These diseases are significant, accounting for more than 40% of all deaths. Twelve percent of the state population has some form of heart disease.

Lifestyle behaviors have been shown to increase a person's chance of developing or dying from CVD. According to the Behavior Risk Factor Surveillance System (BRFSS), Kentuckians exhibit the following risk factors that contribute to CVD: 36.2% of Kentucky adults are seriously overweight, 28.2% of Kentucky adults report that they are physically inactive, 24.2% of Kentucky adults smoke, 17.8% of Kentucky adults report that they have no health care coverage, 198.3 % (age adjusted rate per 100,000 cancer deaths, 12.5% of Kentuckians report that they have diabetes, and an estimated 12.3% of Kentucky adults report being told by a health care professional that they have Chronic Obstructive Pulmonary Disease (COPD).

Malignant neoplasms or cancers are the second leading cause of death in the United States and in the Kentucky. Eliminating Kentuckians' unhealthy habits previously stated such as tobacco use, obesity, and physical inactivity reduces the risk of developing cancer. Avoiding sun exposure could also reduce one's risk of developing skin cancer (Healthy Kentuckians 2019). Screening tests for breast, cervical, and colorectal cancers reduce the number of deaths from these diseases by finding them early, when they are most treatable or by detecting treatable pre-cancerous conditions (Healthy Kentuckians 2019). The Leonard Lawson Cancer Center continues to expand due to the high incidence of cancer in the Big Sandy Area Region.

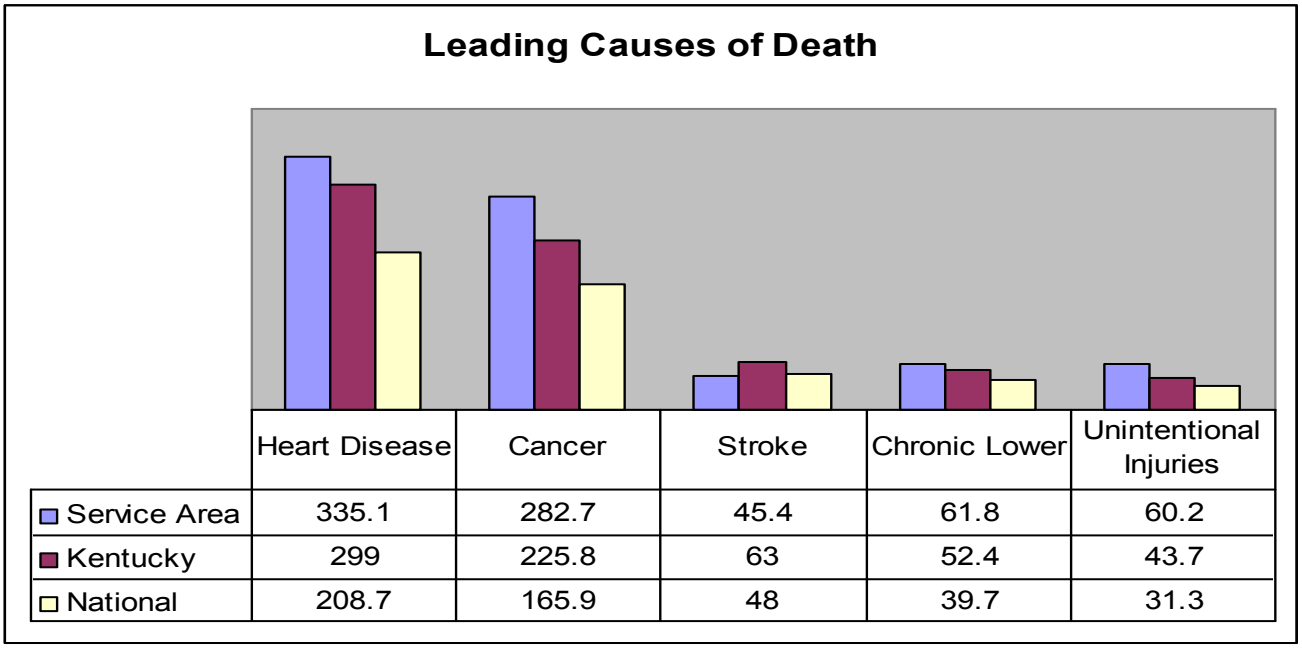
Low COVID-19 vaccination rates along with the older population and the many respiratory and cardiac comorbidities placed COVID 19 as the third leading cause of death in Ky and in the Big Sandy Region.

CLRD is the fourth leading cause of death in the United States and in Kentucky. The primary cause of CLRD is cigarette smoking and as previously stated 24% of the adult population smoke cigarettes in the state of Kentucky, and 29% of Pike County residents. Occupational exposure to smoke, chemicals, and particulates might also be contributing factors. Kentucky workers might be at risk of inhaling these materials from working in coalmines, steel plants, construction industries, oil refineries, and farming operations (CHFS). The only intervention that seems to slow the progression of this disease complex is smoking cessation (American Lung Association). In response to the high incidence of CLRD and cigarette smoking, PMC has a fully instituted pulmonology practice.

The fifth most prevalent cause of death in the United States and Kentucky is that of unintentional injuries (Healthy Kentuckians 2019). These injury deaths resulted from a variety of causes such as motor vehicle collisions, farm accidents, firearms, suicide, poisonings, suffocation, falls, fires, and drowning. Nationally, there were 106,742 deaths as a result of unintentional injuries (Anderson & Smith, 2008). Factors that contribute to the number of injury-related deaths in Kentucky include all-terrain vehicle use, failure to wear helmets and safety belts, use of farm machinery, prolific gun

ownership with failure to safeguard guns and or failure to operate a firearm correctly leads to injuries, lax driving under the influence laws and enforcement as well as rampant drug/alcohol abuse (CHFS).

This chart illustrates the top five leading causes of death for the service area, the State of Kentucky, and United States per 100,000 people (United States Census Bureau).



	Heart Disease	Cancer	Stroke	Chronic Lower	Unintentional Injuries
Service Area	335.1	282.7	45.4	61.8	60.2
Kentucky	299	225.8	63	52.4	43.7
National	208.7	165.9	48	39.7	31.3

Some of the top DRG's for our hospital are noted in the COPD patient population with pneumonia, septicemia in the elderly and patients that are undergoing chemotherapy for cancer. This is in line with the top health problems noted to be facing Kentucky and the rest of the nation identified by the Healthy People 2020 and Healthy Kentuckian 2019.

Risk Factors: Surveillance Results

PMC utilizes a targeted surveillance program for healthcare associated infections. With targeted surveillance, infection control outcome objectives are determined, priorities are established, and resources are allocated to the major types of infections and the patient population at greatest risk for acquiring healthcare associated infections. Criteria for numerators and denominators are established, with the focus on procedures having preventable risk factors that contribute to the development of healthcare associated infections.

Targeted surveillance for specific indicators is identified through the risk assessment process.

In addition to the infection types specified in the targeted surveillance, non-targeted infections, single occurrences and/or outbreaks of healthcare associated infections related to any unusual or virulent pathogenic organisms are evaluated.

Determination of HAI's depends on evaluation of clinical, laboratory, and other diagnostic information gathered on the patient. Consistency in determining HAI's within the healthcare setting is necessary to compare infection rates from one evaluation period to the next. When comparing hospital infection rates to a national infection rate consistent determination of HAI's from all participating hospitals is essential.

The CDC is the recognized authority for healthcare associated infections in the United States. Definitions published by CDC National Healthcare Safety Network system are the standard for use in hospitals and are used by Pikeville Medical Center.

Surveillance activity including data collection and analysis are used to identify infection prevention and control risks pertaining to the following:

- Patient
- Licensed independent practitioners
- Staff, volunteers, students and trainees
- Visitors and families as warranted

Surveillance methodology and risk factors could be amended by the Infection Control Committee based on the following:

- Unusual epidemics
- Clusters of infections
- Infections due to unusual pathogens
- Occurrence of infection that exceeded usual endemic levels
- Occurrence of infection of epidemiological significance among health care workers
- device related infections,
- surgical site infections,
- communicable disease as vaccine preventable community acquired identified risks and high volume, problem prone infections or procedures
- ICRA for construction projects including air quality testing.

Health care associated infections that result in unanticipated death or major permanent loss of function identified through the surveillance program are investigated as sentinel events per PMC protocol.

GOALS for the Infection Control Program

Priorities are established following a review of risk factors, with a focus upon high risk, high volume, and problem-prone services and activities.

- Identify risks, and effectively implement and minimize the prioritized risks for acquiring and transmitting health care associated infections among patients and Health Care among PMC staff.
- Maintain an effective organization wide program utilizing epidemiological approaches that consist of surveillance, data collection and trend identification.
- Maintain an inter-disciplinary committee responsible for overseeing programs for surveillance, prevention and control of infections.

- Develop written guidelines and procedures for the prevention and control of infections among patients and PMC staff in conjunction with patient care support departments and/or services.
- Assure that patient care support departments and services are available to assist in the prevention and control of infections and are provided with adequate direction, staffing and facilities to perform required infection surveillance, prevention and control activities.
- Identify issues as defined by the Infection Control Program to be epidemiologically important as identified through the surveillance process, trending and risk analysis.
- Facilitate integration of the Infection Control program with the Safety program and Performance Improvement programs of PMC.
- Facilitate integration with health care and community leaders to the extent that infection prevention and control is a community wide effort.
- Provide ongoing risk assessment through the surveillance process, of data results, and trending analysis to identify risks for acquisition and transmission and strategies for prevention and control of healthcare associated infections.
- Maintain education and collaboration with hospital wide leaders for effective participation in the design and implementation of the Infection Control Program.
- Research and recommend current risk reduction methods utilizing “best practices” including the ventilator bundle and central line bundle, foley catheter bundle and provide education about the practices.
- Institute changes as needed to reduce health care associated infections including but not limited to:
    - Limit unprotected exposure to pathogens throughout the organization
    - Enhancing hand hygiene compliance
    - Limit transmission of infection associated with procedures
    - Limit transmission of infection associated with the use of medical equipment, devices, and supplies

Priorities and goals could be modified based on emerging need and regulatory requirements

PURPOSE OF THE INFECTION CONTROL COMMITTEE

The purpose of the Infection Control Committee is to assist with the development and approval of Infection Control activities, the surveillance program and the development of policies and guidelines to prevent the spread of infections.

Infection Control Committee Responsibility

- Investigation, control, and to prevent infection.
- Review and approve infection prevention policies and procedures.
- Maintain a working relationship between employee health activities and the infection control and prevention program.
- Receive and analyze reports from the infection control team and other committees.
- Evaluate and recommend applicable patient care practices, sterilizations, disinfections, antisepsis and pertinent environmental controls.
- Rationale for selecting a specific approach or combination of approaches and the time frame for using that approach or combination.

COMMITTEE STRUCTURE, AUTHORITY AND ACCOUNTABILITY

The President of the Medical Staff appoints physician members for the Committee from the physicians on staff at Pikeville Medical Center or on an as needed basis whether permanent member or on a consulting basis.

The Infection Control Committee members are composed of the following health care workers:

- Infectious Disease Physician
- Infection Prevention Director
- Representatives from the Medical Staff
- Representatives from the Nursing Staff
- Representative for Administration
- Infection Prevention Team
- Representative from Employee Health
- Microbiology Supervisor
- Representative from Surgical Services
- Representative from Cardiac Cath Lab/Open Heart Program
- Representative from Environmental Services
- Clinical Pharm D
- Representative from Performance Improvement
- Representative from Hospital Education Department
- Representative from the local Health Department
- Regional Epidemiologist

Representation from the following support services on a consultative basis as needed:

- Central Sterile
- Dietary
- Maintenance/Biomedical
- Physical Therapy
- Inpatient Rehabilitation Unit
- Physician Offices and Clinics
- DME
- Cardio Pulmonary Services

The hospital grants authority to the Infection Prevention Department and/or Chairman of the Infection Control Committee to institute any surveillance, prevention or control measures or studies when there is reason to believe that any patient or health care worker might be in danger and is defined in writing and approved by the CEO and the President of the Medical Staff. The statement of authority is reviewed and authenticated annually by the Medical Staff and Administration.

All minutes of the Infection Control Committee are forwarded to the Medical Staff (through the Executive Committee), the Chief Executive Officer, and Performance Improvement.

The Medical Director for the Infection Prevention and Control Program

- Is Board Certified as an Infectious Disease Specialist
- Serves as chairman of the Infection Control Committee
- Meets as needed with the IC Director to review current issues
- Consults on infection control, isolation, and employee health issues
- Assists in outbreak investigation
- Assists with policy/procedure review and consultation
- Participates in Medical Staff education
- Assesses and evaluates Pharmacy formulary issues, antimicrobial review and utilization
- Participates in Performance Improvement Initiatives that involve Infection Control and Prevention

The Infection Prevention and Control Department implement the infection control program for PMC. The Infection Prevention Team:

- Are trained in infection prevention and control
- Conduct targeted surveillance
- Analyze data and prepare reports
- Develop and review policy and procedures
- Review patient isolation status
- Provide consultation for support services in matters of outbreak, exposure prevention and management, environmental rounds and policy development
- Consult with hospital and community entities in matters pertaining to infection prevention and control, as needed
- Consult with Employee Health Services in matters of outbreak, exposure prevention and policy development.

The Infection Prevention and Control service and Employee Health Service collaborate to:

- Reduce the risk of healthcare acquired infections in health care workers
- Investigate potential and confirmed exposure incidents
- Consult/assist in employee screening for contagious disease and immunization as needed and directed

MEETINGS

The Infection Control Committee meets Quarterly. In the event a situation arises which needs to be addressed before a regularly scheduled meeting the Infection Control Committee schedules a special called meeting of the members of the Infection Control Committee. If a currently active situation requires the activation of the hospital's Emergency Operations Plan, and the situation involves the Infection Control team, the Quarterly Infection Control Committee meeting can be postponed until the hospital is no longer operating under the Emergency Operations Plan.

RESPONSIBILITIES OF THE COMMITTEE

The Infection Control Committee is responsible for:

- Prioritizing the risk associated with identified HAI's at PMC with subsequent identified issues noted in the Risk Assessment, Risk Analysis Table and addressed in the Infection Control minutes.
- Addressing the prioritized risks identified in the infection control risk assessment.
- Assisting in the development of the content and scope of the employee health program.

The Committee develops strategies and makes recommendations in relation to an identified risk and for evaluates the effectiveness of the strategy employed through continued evaluation and trending of surveillance data.

The Committee conducts an ongoing review and analysis of healthcare associated infection data, risk factors and as needed requests special studies that it deems necessary.

Laboratory support, particularly microbiology, and other laboratory expertise as needed.

Antimicrobial Clinical Pharm D support is provided.

Activities are conducted to prevent and control infections in patients, visitors, and PMC staff. There are written guidelines defined for specific precautions to prevent transmission of infections in order to limit unprotected exposure to pathogens.

Consultation relative to purchase of equipment and supplies used for sterilization, disinfection and decontamination purposes is provided as needed.

The Committee reviews cleaning procedures, agents and schedules in use throughout the organization in conjunction with the specific departments other policy and procedures which are reviewed by the Committee annually or as needed if a problem arises. The Committee provides consultation relative to any major changes in cleaning products or techniques. Also Infection Prevention is represented on the Product Evaluation Committee.

HAI data is used to monitor the effects of intervention strategies and feedback is provided to selected groups of physicians, licensed independent practitioners, nurses and support staff in relation to the HAI risk of their patient.

The committee reviews surveillance activities which include but are not limited to the following:

- Unusual epidemic
- Cluster of infections
- Infections due to unusual pathogens
- Any occurrence of healthcare associated infections that exceed the usual endemic level
- Community identified infection

Any microbiological cultures of Health Care Workers or the environment required by the hospital, the medical staff, or local, state, or federal requirements, such sampling activities are to be originated, supervised, reviewed, and acted upon by the Infection Prevention Department. The sampling might ordinarily be reserved for specific situations where the outcome could be expected to have a potential beneficial effect on standards of care, or to support change in maintenance practices, Health Care Workers practices, or equipment. Occasionally, routine sampling could be used as a quality control mechanism or as an educational or training exercise, as, for example, in demonstrating to Health Care Workers the reduction of microbial contamination by hand washing, or to housekeeping Health Care Workers a reduction in surface bacteria after the use of instituted cleaning practices.

The Committee reviews and approves guidelines and procedures annually related to infection surveillance, prevention and control programs for departments and/or medical services. Approvals and reviews are documented in the minutes.

The Infection Control Practitioners and Employee Health Services collaborate in order to:

- Reduce the risk of healthcare acquired infections in health care workers
- Investigate potential and confirmed exposure incidents
- Consult/assist in employee screening for contagious disease and immunization as needed and directed

POLICIES

Infection Control policies address measures to prevent the transmission of infections among patients, employees, medical staff, volunteers, visitors, and the general public. Policies and guidelines define surveillance, prevention and control measures in all patient care, support, and service areas, and identify methods to reduce the risk of transmission of microorganisms. Infection control policies are reviewed and revised by Infection Control and contributing departments yearly and as needed. New policies and those policies with major revisions are approved by the Infection Control Committee. Hospital-wide policies include those that are general and are followed throughout the hospital; these polices are located in the Infection Control Section of the policy system located on the hospital intranet. Department specific policies include policies for tasks or infection control measures unique to a particular area. Many of infection control approved practices are integrated in department policies that are kept by the department, and Infection Control is consulted for input on updates and revisions.

PMC's Infection Control Hazardous Risk Analysis 2023

The analysis of the relative risk for each identified event is attached.

Potential Risk Identifiers

- Poverty level – double the state and national level.
- Education level – below state and national levels for high school and college graduates.
- Number of elderly – parallel to state and national levels but due to the higher level of poverty and chronic disease status, this group is at higher risk.

- Greatest numbers of admitting diagnosis at PMC was sepsis, joint replacement, pneumonia, heart failure, pulmonary disease, and drug abuse.
- Lifestyle behavior risk factors – physical inactivity, obesity, smoking and drug use.
- Number of patient transfers received from outside healthcare facilities.

Recommendations/Summary
Data revealed that the diagnosis of pneumonia is one of our top admitting diagnoses. In consideration of this and the high incidence of smoking, cardiovascular disease, and employment in and exposure to the mining industry, the IC program monitors for hospital acquired pneumonia and ventilator associated pneumonia. Other areas of focus are designated surgical site infections as evidenced by the review of PMC's historical data, device related infections, high volume and/or high risk procedures, and needle stick exposures and prevention. Catheter associated UTI's and CLABSI's will be tracked in 2023 in relation to device days in all ICU's and NHSN designated medical/surgical units. Historical data reveals that PMC is experiencing a slight increase in Hospital Associated C. diff infections as well as community onset C. diff infections. Due to the increase in the number of invasive outpatient procedures the 2023 Infection Control plan will include surveillance activities including the areas providing these procedures. 2022 SSI data indicated an increase in SSI trending to superficial infections occurring >12 days post-op, therefore evaluation of the surgical SSI prevention program is recommended.

The increase in PMC physician offices is a focus for infection control in relation to procedures, high level disinfection, hand hygiene compliance, surgical surveillance, and safe needle practices.

CDC guidelines regarding hand hygiene are implemented by PMC and are monitored throughout the facility by secret spotters, Infection Preventionists, Infection Control Champions, and the "You've been Spotted" program from the PMC intranet. Employee Health continues to monitor for any infectious trends involving PMC staff. Any outbreaks or incidence of infection is to be monitored by Infection Control as needed. Data is to be presented using EPIC and NHSN reports and/or control charts.

2023 Surveillance Plan

SURGICAL SITE SURVEILLANCE (SSI)

All patients' that undergo operative procedures are monitored for surgical site infection; this includes all NHSN operative procedures. For each patient undergoing these procedures information is collected about the patient's underlying condition, including American Society of Anesthesiologists score (ASA), age, sex, duration of operation, method of approach, wound class, whether operation was emergency or scheduled and if multiple procedures were performed through the same incision.

Goal- For Surgical Site Surveillance: Decrease SSI's by minimizing prioritized risk factors

Measurable Objective: Maintain the rate of Surgical Site Infections per surgical service to 2% or less.

Methodology:

1. Infection Control collects data on an ongoing basis.
2. Numerator-number of patients developing surgical site infection for that particular procedure by ICD-10 code when comparing with the NHSN.
3. Denominator – Total number of patients undergoing surgery for that particular procedure by ICD-10 code when comparing with NHSN. Historical data comparison uses total number of patients undergoing surgery for that particular service.

Data Sources:

1. Post discharge surveillance is collected through utilization of EPIC reports: i.e. returns to the emergency room, report on readmissions, EPIC readmit alert, positive cultures, feedback from the surgeon, patient chart, rounding on patients, offices reporting any sign of infection on follow-up visits.
2. Concurrent and retrospective chart review
3. All positive culture reports
4. National Healthcare Safety Network
5. Feedback from surgeon to Infection Control department
6. Reports are provided quarterly to the Infection Control Committee and the respective medical staff service committees.
7. Include in the report the comparison of current PMC's infection rate with PMC historical data as well as benchmark with National Healthcare Safety Network when applicable.

Defining Indicators for Infections:

1. Infection following surgical procedure.
2. National Healthcare Safety Network definition for surgical site infection for that particular surgical procedure.

Follow-up:

1. Reports are presented to the Infection Control Committee and the respective medical staff service committees.
2. When rates exceed PMC historical rates, a determination is made by the Infection Control Medical Director and Infection Prevention team and reported to the Infection Control Committee as to the significance.
3. If the infection rate is significant, an evaluation of relevant procedures, policies and practices is undertaken by Infection Prevention in conjunction with the surgical service and other departments as indicated.
4. If preventable risk factors are identified an action plan is initiated to outline ways to minimize the risk.
5. Detailed grid is attached outlining intervention strategy.

Device associated Surveillance

All patients are monitored for healthcare associated infections such as, but not limited to, **Central Line Associated Blood Stream Infection** (CLABSI); **Ventilation Associated Pneumonia (**VAP); and **Catheter Associated Urinary Tract Infection (**CAUTI). ICU patients are assessed daily for the presence of a central line, urinary catheter, ventilator, oral care, and patient positioning. Rates for

device related infections are calculated separately for ventilator, central line, and/or foley catheter use.

Ventilation Associated Pneumonia (VAP):
Goal: Decrease VAP infections by reducing prioritized risk factors. Evaluate and establish best practice for prevention of VAE's. To update reporting to include VAE's not limiting reporting to only VAP's.

Measurable Objective: To maintain VAP's in the ICU's at 0. To report all VAE's and establish criteria for evaluation of each occurrence. This will allow development of an action plan moving forward. Benchmark VAP's internally to current VAP rate. Establish a benchmark using NHSN moving forward into 2023.

Methodology:
1. Infection Control collects data on an ongoing basis.
2. Numerator: Number of ventilator patients who develop pneumonia, utilizing the current NHSN criteria for determining VAE and VAP.
3. Denominator: Number of ventilator days.
4. Benchmark with the National Healthcare Safety Network VAE infection rate.
5. Identify VAE trends above the National Healthcare Safety Network benchmark rate.
6. Evaluate procedures, policies and practices,
7. Analyze for preventable risk factors, when infection trends are identified.
8. Reports are presented quarterly to the Infection Control Committee, Critical Care Committee, Quality Council, and Board PI.

Data Sources:
1. Monthly number of ventilator days reported from the Respiratory Therapy team.
2. Review of chest x-ray reports.
3. Sputum gram stain and culture and sensitivity (C & S) reports from Microbiology.
4. Communication from ICU staff to Infection Control.
5. Communication from physicians to Infection Control.
6. Concurrent and/or retrospective chart review.
7. Daily ICU huddles with all disciplines.

Defining Indicators for Infections:
1. ICU patient developing pneumonia following placement on ventilator after 48 hours.
2. National Healthcare Safety Network definitions for pneumonia.

Follow-up:
1. Reports are presented to the Infection Control Committee and the respective medical staff service committees.
2. When PMC rates exceed National Healthcare Safety Network, a determination is made by Infection Prevention as to significance.

3. If it is determined that the pneumonia rate is significant, evaluation of relevant procedures, policies and practices is undertaken by Infection Control, ICU Director, Cardiopulmonary, and the Critical Care Committee.
4. A report is presented by Infection Control to the Infection Control Committee describing the result of the evaluation.
5. If preventable risk factors are identified, an action plan outlining ways to reduce risks is developed.

Central Venous Catheter (CVC) Associated Bloodstream Infection (BSI):
Goal: Decrease Central Line Associated Blood Stream Infections (CLABSI's) by reducing prioritized risk factors.

Measurable Objective: Maintain an SIR of </= to 0.8, utilizing the 2015 NHSN pooled mean for SIR determination.

Methodology:
1. Infection Control collects data on an ongoing basis.
2. Numerator: Number of episodes of CVC BSI infections.
3. Denominator: Number of CVC days.
4. Benchmark with National Healthcare Safety Network rate.
5. Identify BSI rates above National Healthcare Safety Network rate.
6. Evaluate procedures, policies and practices, looking for preventable risk factors, when infection trends are identified.
7. Reports are presented quarterly to the Infection Control Committee, Critical Care Committee, Quality Council, and Board PI.

Data Sources:
1. Monthly report of number CVC days obtained daily by IP during rounding.
2. Microbiology reports of blood cultures.
3. Concurrent and/or retrospective chart review of patients with CVCs.
4. Daily rounding on units.
5. Benchmark with National Healthcare Safety Network rate.

Defining Indicators for Infection:
1. Patient with CVC.
2. National Healthcare Safety Network definitions for CLABSI's.

Follow-up:
1. Identify BSI rates above National Healthcare Safety Network rate.
2. When the PMC rate exceeds National Healthcare Safety Network rate, a determination is made by Infection Prevention as to significance.

3. If it is determined that the infection rate is significant, an evaluation of relevant procedures, policies and practices is begun by infection control and critical care, looking for preventable risk factors.
4. Evaluate procedures, policies and practices, looking for preventable risk factors, when infection trends are identified.
5. A report is presented to the Infection Control Committee and the Director of the unit describing the result of the evaluation.
6. If preventable risk factors are identified, an action plan outlining ways to reduce risks is developed.
7. Reports are presented quarterly to the Infection Control Committee, ICU Director, ICU Staff, and Critical Care Committee.
8. If preventable risk factors are identified, an action plan outlining ways to reduce risks is developed.

Foley Catheter Associated Urinary Tract Infections (CaUTI):
Goal: Decrease CAUTI's by reducing prioritized risk factors.

Measurable Objective: Maintain an SIR of </= to 0.8, utilizing the 2015 NHSN pooled mean for SIR determination.

Methodology:
1. Infection Control collects data on an ongoing basis.
2. Numerator: Number of episodes of CAUTI's.
3. Denominator: Number of Foley catheter days.
4. Reports are presented to the Infection Control Committee and the respective medical staff service committees.

Data Sources:
1. Monthly report of the number of foley catheter days obtained daily by IP during rounding.
2. Reports of urinalysis and urine C/S, Medical record reports of patient's temperature.
3. Communication from nursing staff to Infection Control.
4. Concurrent and/or retrospective chart review of ICU patients with Foley catheters.
5. Daily huddles with all disciplines.
6. Benchmark with the National Healthcare Safety Network rate.
7. Identify CAUTI rates above National Healthcare Safety Network benchmark.
8. Evaluate procedures, policies and practices, looking for preventable risk factors, when infection trends are identified.

Defining Indications for infection:
1. Patients with Foley catheter in the inpatient wards.
2. NHSN definition for CAUTI.

Follow-up:

1. The unit that the CAUTI will be assigned to will participate in a "SWARM" which will include staff that directly cared or cares for the patient with the CAUTI, Infection Prevention personal who do surveillance on the unit, the nurse manager and a representative from patient safety. A "SWARM" is a visual observation of the patient's environment and a discussion with staff about issues that may concern them. Discussion includes "best practice" for CAUTI prevention and any observed concerns with the environment in the room.
2. The "SWARM" evaluation is combined with a detailed Infection Control report providing "best practice" fallouts along with NHSN criteria used to determine that a CAUTI is present. Included also is a breakdown of how and when tht criteria was met.
3. A report is presented to the Infection Control Committee and the Director of the unit describing the result of the evaluation.
4. When the PMC rate exceeds benchmark rates, a determination is made by the Infection Prevention as to significance.
5. If it is determined that the infection rate is significant, an evaluation of relevant procedures, policies and practices is begun by infection control, looking for preventable risk factors.
6. A report is presented by infection prevention to the Infection Control Committee describing the result of the evaluation.
7. If preventable risk factors are identified, an action plan outlining ways to reduce risks is implemented.

ADDITIONAL SURVEILLANCE STRATEGIES

Other Indicators

In addition to the selected National Healthcare Safety Network indicators, infection surveillance is performed for the following types of infections:

House-wide Non-Ventilator Associated Pneumonia (NVAP):

Goals: Decrease healthcare associated pneumonia infection by minimizing prioritized risk factors.

Objective: Achieve an overall reduction in Non-ventilator associated pneumonia for 2023.

Methodology:

1. Data collected on a monthly basis by Infection Control
2. A report is provided quarterly to the Infection Control Committee and nursing unit managers, and selected medical staff service Committee.
3. Numerator: Number of NVAP cases.
4. Denominator: Total patient days for medical patients. Total number surgical cases per service for post-operative patients.
5. Benchmark with the historical PMC determined rate.
6. Identify pneumonia trends above PMC historical rates.
7. Evaluate procedures, policies and practices, looking for preventable risk factors, when infection trends are identified.

Data Sources:

1. Chest x-ray reports, from Radiology and Transcription.
2. Sputum gram stain and C & S reports from Microbiology.
3. Communication from nursing staff to Infection Control.
4. Concurrent and/or retrospective chart review.

Defining Indicators for Infection:

1. National Healthcare Safety Network definition for pneumonia.
2. Non-ventilator associated Pneumonia.

Follow-up:

1. When the pneumonia rate exceeds the PMC historical rate, a determination is made by Infection Prevention as to significance.
2. If Infection Prevention determines that the pneumonia rate is significant, an evaluation of relevant policies, procedure and practices is undertaken by Infection Control and other departments.
3. A report is presented by Infection Prevention describing the result of the evaluation.
4. If preventable risk factors are identified, an action plan outlining ways to reduce risks is developed and implemented.

Healthcare Personnel (HCP) Influenza Vaccination

Goal: To remain on our incremental schedule to achieve the 90% rate established in the national influenza initiatives for 2020. In the year 2015 the PMC Quality Council voted to make a condition of employment, LIP's, and students the receipt of the yearly influenza vaccine. Percentages are calculated according to NHSN guidelines of Healthcare Provider Flu vaccination data for CMS IPPS.

2014-15: Goal: 77%: Surpassed goal -79% vaccinated.
2015-16: Goal: 80%: Surpassed goal- 96% vaccinated.
2016-17: Goal: 85%: Surpassed goal – 96% vaccinated
2017-18: Goal: >90%: Maintained goal - 95% vaccinated
2018-19: Goal: >90%: Maintained goal - 97% vaccinated
2019-20: Goal: >90%: Maintained goal - 98% vaccinated
2020-21; Goal: >90%: Maintained goal - 96% vaccinated
2021-22; Goal: >90%: Maintained goal - 92% vaccinated

Measurable Objective: Benchmark with the US National Adherence Percentage (NHSN).

Methodology:

1. Immunization data consisting of vaccination status of all employees and volunteers is to be collected from the Employee Health Office.
2. Immunization data is collected for Licensed Independent Practitioners (LIPs): Physicians, advanced practice registered nurses (includes certified nurse practitioners, certified nurse

midwives, certified nurse anesthetists and clinical nurse specialists), and physician assistants from the Medical Office.
3. Immunization data for adult students/trainees (including medical, nursing, and other health professional students, interns and residents) is to be collected by the Education Department and by the Residence Practice Coordinator.
4. Immunization data of contract personnel (persons providing care, treatment, or services at the facility, through a contract who does not meet the definition of employee, LIP, or student/trainee or volunteers) is to be collected by the owners of each contract. This data is then forwarded to Infection Control.

Follow-up:
Following each Influenza season the seasonal data is evaluated and a plan developed for the next season to continue to maintain the U.S. National Reported Adherence Percentage at > 90%.

Methicillin Resistant Staphylococcus aureus Hospital Onset Blood Stream Infections (MRSA-HO-BSI), and Hospital Onset Clostridium difficile Infections, (C diff–HO)
Goals: Decrease healthcare associated MDRO's by reducing prioritized risk factors.
Decrease and Maintain SIR of </= 1.0, utilizing the 2015 NHSN pooled mean for SIR determination for LabID reporting for MRSA-HO-BSI and C diff-HO.

Measurable Objective: Benchmark to the NHSN provided rate for occurrence and prevalence, and utilize PMC historical data when NHSN data is not available.

Methodology:
1. Data is collected on a daily basis.
2. Numbers are submitted on a quarterly basis to NHSN for C.diff Hospital Onset and MRSA bloodstream infections.
3. Reports are provided quarterly to the Infection Control Committee, nursing units, and other committees as necessary.
4. Identify healthcare associated infections rates above PMC Historic benchmark rates.
5. Evaluate procedures, policies and practices, looking for preventable risk factors, when infection trends are identified.
6. Review each LabID event individual to evaluate issues in "real time".

Follow-up:
1. Data is to be utilized to help provide insight into the occurrence and prevalence of MDRO's.
2. Each LabID MRSA and C diff are evaluated for possible concerns. Education is provided when fallouts are noted.
3. Strategies (if needed) developed to help control the increase in the carriage of these organisms.
4. If it is determined that the infection rate is significant, evaluation of relevant procedures, policies and practices is initiated by infection control looking for preventable risk factors.

Physician Offices and Clinics
The following issues are to be monitored in the off site physician practices and clinics as addressed by the risk analysis table. Emphasis is to be placed on compliance with safe injection practices, competency demonstrated with high level disinfection protocols, and aseptic techniques for office procedures. Environmental surveillance is to be conducted which includes, but not limited to, blood borne pathogen standard, needle stick protocols, and equipment cleaning. Hand Hygiene compliance is to be monitored in all physician offices by patient's utilizing a patient questionnaire.

Aseptic Technique for Invasive Procedures
Goal: Maintain aseptic technique when performing invasive procedures in the office and/or clinic setting.

Measurable Objective: Achieve 100% compliance with adherence to aseptic technique on visual audited invasive procedures.

Methodology:
1. Educational competencies are to be completed and verified on employees performing and/or assisting with invasive procedures.
2. Direct observation by staff.

Data Source:
1. CBO has competency completed.
2. Direct observation.

Defining Indicators: CDC's guideline for prevention of SSI's.

Follow-Up:
1. If an employee is observed to be out of compliance this is to be addressed at the time of observation by the auditor to the individual.
2. Detailed grid is attached outlining intervention strategy.

High Level Disinfection
Goal: Achieve 100% compliance of audited procedures of high level disinfection.

Measurable Objective: Employee demonstrates 100% compliance with the applicable protocol when performing high level disinfection.

Methodology:
1. Educational competencies are to be completed and verified on employee performing high level disinfection.
2. Direct observation to confirm compliance.

Data Source:

1. CBO has competency completed.
2. Direct observation.

Defining Indicators: CDC's guidelines for disinfection and sterilization in healthcare facilities.

Follow-up:
1. Employee noted to be out of compliance is to be addressed individually.
2. Detailed grid is attached outlining intervention strategy.

Safe Injection Practices
Goal: Adhere to the practice 'One Needle, One Syringe, One Time'.

Measurable Objective: Employee demonstrates 100% compliance of visually audited procedures with adherence to safe injection practices when performing injections.

Methodology:
1. Employee views CBT education titled "One Needle, One Time".
2. Direct observation to confirm compliance.

Data Source:
1. Direct observation.
2. CBO has completed competency.

Defining Indicators:
1. CDC's guideline for isolation precautions 2007.
2. OSHA's Bloodborne Pathogen Standards.
3. CDC Website for Injection Safety.

Follow-up:
1. Employee noted to be out of compliance is to be addressed individually by their supervisor.
2. Detailed grid is attached outlining intervention strategy.

Hand Hygiene (compliance including all PMC patient care areas)
Infection Control monitors compliance with hand hygiene by secret spotters, "You've been spotted" program, Infection Preventionist, and the Infection Control Champions. Physician office hand hygiene technique is monitored by patient's feedback. The questionnaire is dropped into a collection box at the physicians' office check out desk. All departments are monitored periodically by the secret spotters and their designated IC Champions. Observations are sent to Infection Prevention. The opportunity is determined by number of observations submitted and is the denominator and the opportunity taken is the numerator and a percentage rate assigned. Rates of compliance are established, documented results shared and recommendations for improvement given. Observations are reported to the Infection Control Committee, managers, physicians, and health care personnel.

Goal: Increase Hand Hygiene compliance.

Measurable Objective: Achieve at least 90% compliance with hand hygiene with at least 80% of PMC's departments and physician practices by end of December 2023.

Methodology:

1. Numerator- number of times hand hygiene is completed.
2. Denominator- number of opportunities to perform hand hygiene.

Data Source:

1. Secret Spotters
2. Infection Control Champion hand hygiene spotters.
3. Infection Control personnel direct observation.
4. Hand Hygiene foam utilization monitored.
5. Utilization of "You've Been Spotted".
6. Hand Hygiene surveillance tool to patients in physician offices.

Defining Indicators: CDC's guideline for Hand hygiene.

Follow-up:

1. Reports of compliance rates are sent to each department and/or clinics on a minimum of bi-monthly.
2. When compliance rates are noted to be lower than PMC's expected compliance, individuals and/or departments are addressed.
3. Individuals and/or departments are in-serviced, coached and/or have disciplinary actions if required.
4. Reports are presented quarterly to the Infection Control Committee, Critical Care Committee, Quality Council, and Board PI.
5. Detailed grid is attached outlining intervention strategy.

Construction

The Infection Control department participates with construction projects. Construction personnel, with PMC safety, infection control, maintenance, and administration departments meet prior to the start of any construction project to assess the project and complete the ICRA.

Goal: Limit unprotected exposure to pathogens through notification of new construction projects and infection control planning as part of construction, renovation or alterations for the facility, and/or infection control's inclusion in pre-construction and renovation planning.

Measurable Objectives:

1. Equal to or greater than 95% notification and infection prevention planning prior to any construction, renovation, and/or alterations in the facility.
2. Equal to or greater than 95% inclusion in the design and planning phases of construction or renovation.
3. Infection Prevention monitors air quality throughout the facility. During construction activities air monitoring of the construction locations is provided.

Methodology:

1. Policies and/or procedures developed with applicable staff to include Infection Control in the construction process.
2. Provide education to plant operation, maintenance, and contractors.
3. Participate in weekly construction meetings.
4. Monitor environment for compliance with ICRA.
5. Provide immediate feedback when lack of compliance is discovered or noted.

Data Source:

1. Infection Control Risk Assessment (ICRA)
2. Environmental rounds conducted by Infection Control and Safety for compliance with ICRA.
3. Monthly bioaerosol monitoring by *Environmental Compliance Source*, *Ltd*. of air samples reported to Safety and Infection Control Committees.
4. Regularly scheduled construction meetings.

Defining Indicators:

1. CDC guidelines for construction.
2. *American Institute of Architecture* (AIA) guidelines for healthcare facilities.
3. 902 KAR 20:009 Facility specifications; hospitals.
4. 902 KAR (specific to type of construction)

Follow-up:

1. Quarterly reports to Infection Control Committee.
2. ICRA compliance reports and results of area sampling presented at construction meeting.
3. Detailed grid is attached outlining intervention strategy.

ADDITIONAL REPORTS TO THE INFECTION CONTROL COMMITTEE

Scheduled Reports

Infection Prevention and Employee Health perform other activities to prevent and control infection transmission in the organization.

PMC Employee Health Reports: Reports define trends in respiratory, gastrointestinal, skin and other communicable illnesses that cause health care workers to be absent from work, as well as follow-up measures taken by employee health in response to employee work-related exposures to infectious agents, sharp injuries, and the status of prophylactic vaccination programs. Employee Health has established criteria for reporting infections and immunization status from healthcare providers having patient contact, and utilizes CDC recommendations for control of the spread of disease. In addition, trends in employee infections are compared to trends of patient infections to determine if transmission is occurring from one group to the other if a trend is noted.

Needle Safety: A report is provided by Employee Health about the number of needle sticks, description of the stick and/or exposure and exposure follow-up quarterly to the Infection Control Committee.

Reportable Infections Reports: Infection Control is the liaison between the hospital and local, county and state public health departments for issues related to infectious diseases. Infection Control provides information to the applicable health department for each reportable infectious disease report that is processed by the PMC laboratory. A summary of all infections reported to public health agencies by Infection Control is provided quarterly to the Infection Control Committee.

OSHA Bloodborne Pathogen Reports: Compliance with OSHA Bloodborne Pathogens standard to prevent occupational transmission of bloodborne infections is monitored quarterly. Hand Hygiene observations by infection control are conducted by secret spotters reported to Infection Control Committee, nursing managers, hospital personnel and physicians as to the results of the observations and recommendations for improvement.

Water Analysis Report: A report from the Maintenance Department concerning water analysis will be provided to the Infection Control Committee.

Ventilation Report: A report from the Maintenance Department about ventilation and negative pressure in isolated rooms is produced at least semi-annually. The monitoring performed by maintenance for all exchanges in C-section rooms, surgical suites, cath lab, nuclear medicine, histology, isolation anti rooms and isolation patients rooms is performed semiannually.

Pharmacy Report: A report outlining antimicrobial utilization prepared by the clinical Pharm-D managing the antibiotic stewardship program is provided on a quarterly basis about to the Infection Control Committee.

Dialysis Report: Dialysis provides the water colony count and Endotoxin Level report quarterly to Infection Control. In the event there is a report outside the accepted AAMI range, this is reported at that time to Infection Control and corrective actions taken.

Environmental Cleaning: Infection Control in conjunction with the Housekeeping department monitors the department's cleaning techniques through the use of Glo Germ in isolation rooms, emergency services and intensive care areas. A quarterly report is provided to the Infection Control Committee. The manager of environmental services addresses every area to the individual when the room is not cleaned correctly, the employee is shown the deficiencies and directed to clean those areas again.

Bioaerosol Monitoring: All monitoring performed monthly by *Environmental Compliance Source*, *Ltd*. and as needed due to construction activity.

Unscheduled Reports

Focused Studies: Focused studies and identification of infection prevention measures occur from data generated from targeted PMC surveillance, governmental regulations, and the recommendations of recognized experts in Infection Control such as The Association for Professionals in Infection Control and Epidemiology (APIC) and the CDC. Focused studies include retrospective and concurrent chart reviews, literature reviews, and surveys of clinical procedures and observations of clinical practices. Infection prevention measures include employee education,

revision of policies and procedures, evaluation and modification of PMC equipment, disinfectants, and work practices. Ongoing evaluation and monitoring of infection rates is required to assess effectiveness of infection prevention measures.

ADDITIONAL INFECTION CONTROL ACTIVITIES
Infection Control performs other activities to prevent and control infection transmission in the organization (at PMC):

Healthcare Personnel and Public Education: Government regulations, Bioterrorism, and unusual microorganisms such as Monkey pox, Severe Acute Respiratory Syndrome (SARS), and H1N1 Influenza have greatly increased the need for education and training. Infection Control continues to update and present information as necessary to keep healthcare personnel, volunteers, and the public health department informed.

Role as Liaison with Public Health Departments: Infection Control personnel notify state, county Health departments when occurrences of reportable diseases are identified for any patient of PMC, including inpatient, outpatient and home health. In addition, infection control assists with concurrent and retrospective chart reviews for the health departments in gathering epidemiological information as requested.

Input on Purchases: Infection Preventionists are members of the Product Evaluation Committee, and provide guidance regarding the purchase of equipment and medical supplies used for patient care, procedures, sterilization, disinfection and decontamination, and regarding any major change in cleaning products and techniques.

Resource and Trouble-Shooting: Infection Control responds to questions and concerns about infections, PMC practices, isolation requirements, and incidents of exposure to blood and other potentially infectious body fluids, and other topics as requested. In addition, Infection Control assists with Employee Health needs as indicated.

Continuing Education and Professional Networking: Infection Prevention remains knowledgeable regarding infection control issues and current information. Participation in (APIC) on the local and national levels, as well as attending education programs is an important part of this process.

Any person with an Infection Control concern needs to contact the Infection Prevention and Control Department. After normal business hours the House Manager can be contacted.

KEYWORDS: Infection Control Committee Meetings, Reviewing Infection control policies, Infection Control Surveillance, Infection Control Risk Analysis

ADDENDUM: Infection Control Risk Analysis and Risk Assessment Tables

PRIORITIZED INFECTION CONTROL RISK ANALYSIS

INFECTIONS IN THE HOSPITAL 2023

EVENT	PROBABILITY	SEVERITY = (MAGNITUDE - MITIGATION)						RISK
		HUMAN IMPACT	PROPERTY IMPACT	BUSINESS IMPACT	PREPARED-NESS	INTERNAL RESPONSE	EXTERNAL RESPONSE	
	Likelihood these will be present in your patient population	*Severity of this type infection*	*Additional Cleaning / Isolation / Staffing Needs Due to this Infection*	*Increased length of stay / cost to the facility due to this infection*	*Identification of this disease / infection, Plan for caring for this type patient*	*Staff Knowledge / internal support of plan for this particular disease / infection*	*External Support for this type infection / disease- Public Health, Mutual Aid, Gov. Agencies, etc.*	*Relative threat* to this facility*
SCORE	*0 = N/A 1 = Low 2 = Moderate 3 = High*	*1 = N/A 1 = Low 2 = Moderate 3 = High*	*0 = N/A 1 = Low 2 = Moderate 3 = High*	*0 = N/A 1 = Low 2 = Moderate 3 = High*	*0 = N/A 1 = High 2 = Moderate 3 = Low or none*	*0 = N/A 1 = High 2 = Moderate 3 = Low or none*	*0 = N/A 1 = High 2 = Moderate 3 = Low or none*	*0 - 100%*
MRSA	3	3	3	3	2	1	2	**78%**
VRE	3	3	3	3	2	1	1	**72%**
CRE	3	3	3	3	2	2	2	**83%**
Other MDROs	3	3	3	3	2	2	2	**83%**
Tuberculosis	1	3	3	1	2	2	1	**22%**
Hepatitis A	2	1	1	1	2	2	1	**30%**
Hepatitis B	3	2	1	1	1	1	1	**39%**
Hepatitis C	3	2	1	1	1	1	1	**39%**
HIV	1	3	1	2	1	1	1	**17%**
Chickenpox	1	1	1	1	1	1	1	**11%**
Rubella	1	1	1	1	1	1	1	**11%**
Infectious Disease Pandemic (SARS-CoV2)	2	2	3	3	1	1	1	**41%**
C Difficile	3	3	3	3	1	1	1	**67%**
Sentinel Event	1	3	1	3	1	1	1	**19%**
HA & Post-Op Pneumonia	2	3	1	3	1	1	2	**41%**
AVERAGE SCORE	**1.88**	**2.12**	**1.71**	**1.88**	**1.24**	**1.12**	**1.12**	**29%**

**Threat increases with percentage.*

RISK = PROBABILITY * SEVERITY

0.29	**0.59**	**0.48**

PRIORITIZED INFECTION CONTROL RISK ANALYSIS 2023

PROCEDURAL ISSUES

EVENT	PROBABILITY	SEVERITY = (MAGNITUDE - MITIGATION)						RISK
		HUMAN IMPACT	PROPERTY IMPACT	BUSINESS IMPACT	PREPARED-NESS	INTERNAL RESPONSE	EXTERNAL RESPONSE	
	Likelihood this type infection / problems with this process will occur in our facility	*Severity of this for the patient*	*Additional Cleaning / Isolation / Staffing Needs Due to this Infection / Problem*	*Increased length of stay / cost to the facility due to this infection / problem*	*Identification & Prevention of this disease / infection / process problem in place*	*Staff Knowledge & compliance of plan for prevention of this particular problem*	*External Support/ Regulations for this type procedure problem - Public Health, CHS, Gov. Agencies, etc.*	*Relative threat**
SCORE	*0 = N/A 1 = Low 2 = Moderate 3 = High*	*0 = N/A 1 = Low 2 = Moderate 3 = High*	*0 = N/A 1 = Low 2 = Moderate 3 = High*	*0 = N/A 1 = Low 2 = Moderate 3 = High*	*0 = N/A 1 = High 2 = Moderate 3 = Low or none*	*0 = N/A 1 = High 2 = Moderate 3 = Low or none*	*0 = N/A 1 = High 2 = Moderate 3 = Low or none*	*0 - 100%*
Patient Related								
SSI's	2	3	2	3	1	2	1	**44%**
Vent associated Events	2	3	3	3	1	1	1	**44%**
Catheter-related UTI's	2	3	1	2	1	2	1	**37%**
Patients undergoing Dialysis	2	3	2	3	1	2	1	**44%**
Vascular Access Infections								
Central Lines	2	3	2	3	1	2	1	**44%**
PICC Lines	1	3	2	3	1	2	1	**22%**
Peripheral Lines	2	3	1	3	1	2	1	**41%**
Equipment Related Infections:			1					
DME Equipment	1	1	1	1	1	1	1	**11%**
Endoscopes	1	3	2	2	1	1	1	**19%**
Central Sterilization	1	3	1	3	1	1	1	**19%**
Environmental Related Infections								
Environmental Cleaning & Disinfection	2	3	3	3	1	1	1	**44%**
C difficile Environmental Measures	2	3	3	3	1	2	1	**48%**
Cleaning & Disinfection of Equipment	2	3	2	3	1	1	1	**41%**
AVERAGE SCORE	**1.69**	**2.85**	**2.00**	**2.69**	**1.00**	**1.54**	**1.00**	**35%**

**Threat increases with percentage.*

RISK = PROBABILITY * SEVERITY

0.35	**0.56**	**0.62**

PRIORITIZED INFECTION CONTROL RISK ANALYSIS Exposure 2023

COMPLIANCE ISSUES

EVENT	PROBABILITY	SEVERITY = (MAGNITUDE - MITIGATION)						RISK
		HUMAN IMPACT	PROPERTY IMPACT	BUSINESS IMPACT	PREPARED-NESS	INTERNAL RESPONSE	EXTERNAL RESPONSE	
	Likelihood noncompliance with this will occur	*Possibility of infection to related to noncompliance*	*Additional resources needed if noncompliance occurs*	*Noncompliance could lead to increased length of stay, litigation, cost to the facility*	*Monitoring for compliance of this process in place*	*Internal support to increase compliance with this*	*External agencies that encourage comliance with this: OSHA,*	*Relative threat**
SCORE	*0 = N/A 1= Low 2 = Moderate 3 = High*	*0 = N/A 1= Low 2 = Moderate 3 = High*	*0 = N/A 1= Low 2 = Moderate 3 = High*	*0 = N/A 1= Low 2 = Moderate 3 = High*	*0 = N/A 1= High 2 = Moderate 3 = Low or none*	*0 = N/A 1= High 2 = Moderate 3 = Low or none*	*0 = N/A 1= High 2 = Moderate 3 = Low or none*	*0 - 100%*
Isolation Procedures	1	3	3	3	1	1	1	**22%**
Chloraprep Use for Vascular lines	1	3	3	3	1	1	1	**22%**
Contamination of the Blood Culture	1	2	2	3	1	1	1	**19%**
PPD Compliance	1	1	2	1	1	1	1	**13%**
Influenza Immunization Compliance	1	2	2	1	1	1	1	**15%**
Fit-testing Compliance	2	1	2	1	1	1	1	**26%**
Environmental Surveillance	2	2	1	2	1	1	1	**30%**
Hand Hygiene Compliance	2	3	1	2	1	1	1	**33%**
SSI's Reporting	1	1	1	2	1	1	1	**13%**
Safe injection practice (One needle / One syringe)	2	3	1	3	2	2	1	**44%**
High Level Disinfection	1	3	2	3	1	1	1	**20%**
Aseptic Technique Ambulatory	1	3	2	2	2	1	1	**20%**
Invasive Procedures Ambulatory	2	3	3	3	2	1	1	**48%**
AVERAGE	**1.38**	**2.31**	**1.92**	**2.23**	**1.23**	**1.08**	**1.00**	**42%**

**Threat increases with percentage.*

RISK = PROBABILITY * SEVERITY

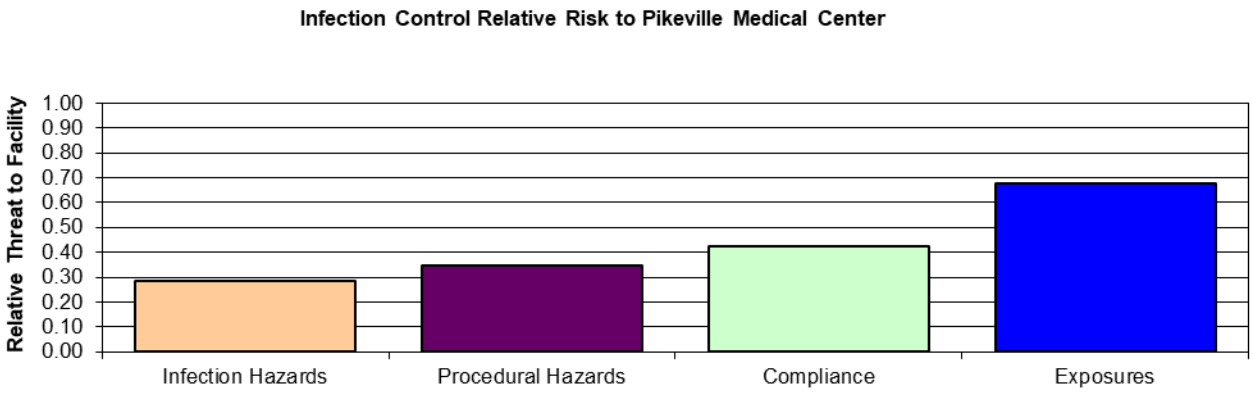
0.42	**0.60**	**0.71**

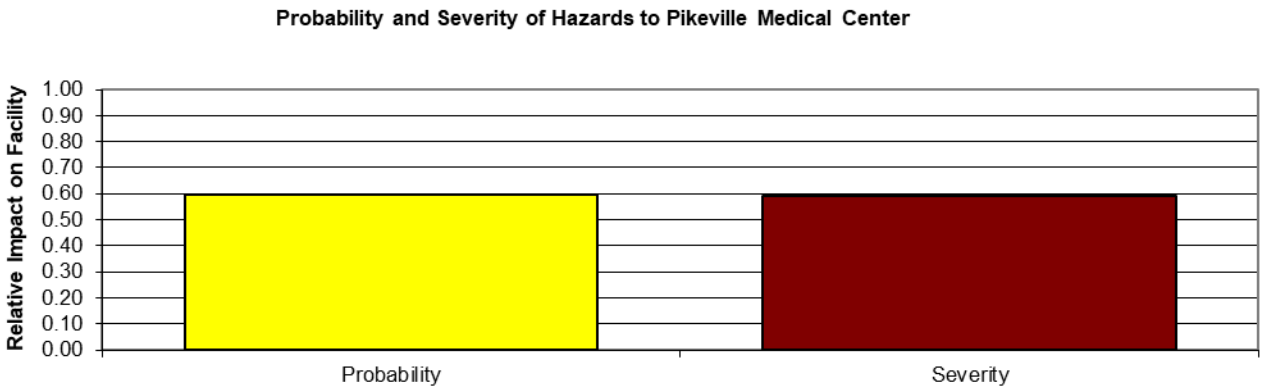
PRIORITIZED INFECTION CONTROL RISK ANALYSIS 2023
EXPOSURES IN THE HOSPITAL

EVENT	PROBABILITY	SEVERITY = (MAGNITUDE - MITIGATION)						RISK
		HUMAN IMPACT	PROPERTY IMPACT	BUSINESS IMPACT	PREPARED-NESS	INTERNAL RESPONSE	EXTERNAL RESPONSE	
	Likelihood this type exposure will occur	*Severity to employee / patient if this exposure occurs*	*Additional resources needed if this exposure occurs*	*Exposure could lead to increased length of stay, litigation, cost to the facility (worker's comp)*	*Prevention / Identification of Exposure in place*	*Staff knowledge of prevention measures for this type of exposure & internal support if it occurs*	*Outside support if this type exposure occurs: CDC, CHS, Mutual Aids, Gov. Agencies, Exposure Hotline, etc.*	*Relative threat**
SCORE	*0 = N/A 1 = Low 2 = Moderate 3 = High*	*0 = N/A 1 = Low 2 = Moderate 3 = High*	*0 = N/A 1 = Low 2 = Moderate 3 = High*	*0 = N/A 1 = Low 2 = Moderate 3 = High*	*0 = N/A 1 = High 2 = Moderate 3 = Low or none*	*0 = N/A 1 = High 2 = Moderate 3 = Low or none*	*0 = N/A 1 = High 2 = Moderate 3 = Low or none*	*0 - 100%*
Sharps Injuries	3	3	3	2	1	1	1	**61%**
Infectious Disease Exposures	2	3	2	2	1	1	1	**37%**
Outbreaks (internal)	2	3	3	3	1	1	1	**44%**
Epidemic (Influx of Infectious Patients - External)	2	3	3	3	2	1	1	**48%**
Bioterrorism Event	1	3	3	3	2	2	1	**26%**
Construction Issues Opportunistic Mold & Fungi	2	3	3	3	1	2	1	**48%**
AVERAGE	**2.00**	**3.00**	**2.83**	**2.67**	**1.33**	**1.33**	**1.00**	**68%**
		RISK = PROBABILITY * SEVERITY						
**Threat increases with percentage.*		**0.68**	**1.00**	**0.68**				
Environmental Surveillance/Cleaning								
Hand Hygiene Compliance								

SUMMARY IC RISK ANALYSIS

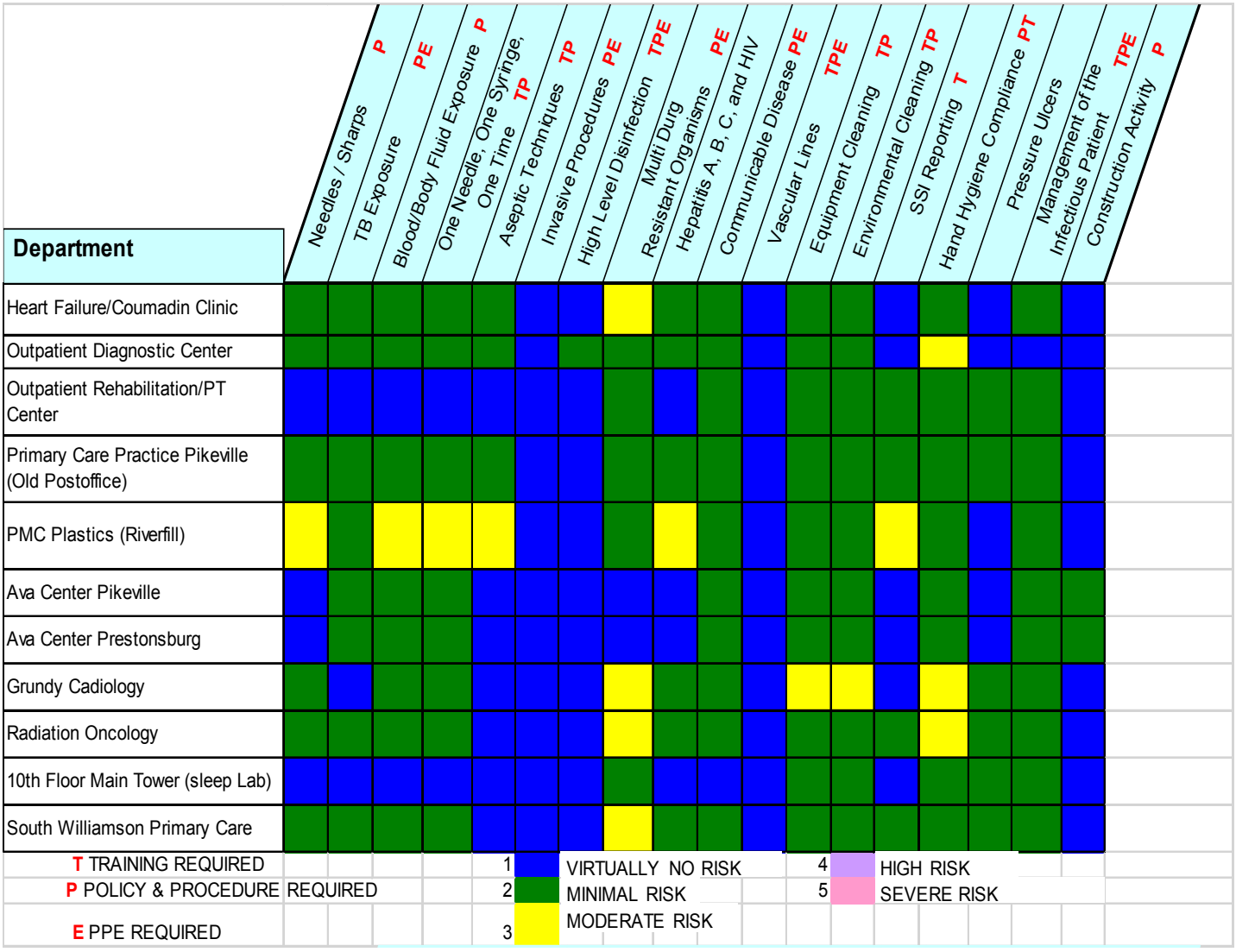
	Infection Hazards	Procedural Hazards	Compliance	Exposures	Total for Facility
Probability	**0.59**	**0.56**	**0.60**	**1.00**	**0.60**
Severity	**0.48**	**0.62**	**0.71**	**0.68**	**0.59**
Hazard Specific Relative Risk:	**0.29**	**0.35**	**0.42**	**0.68**	**0.35**

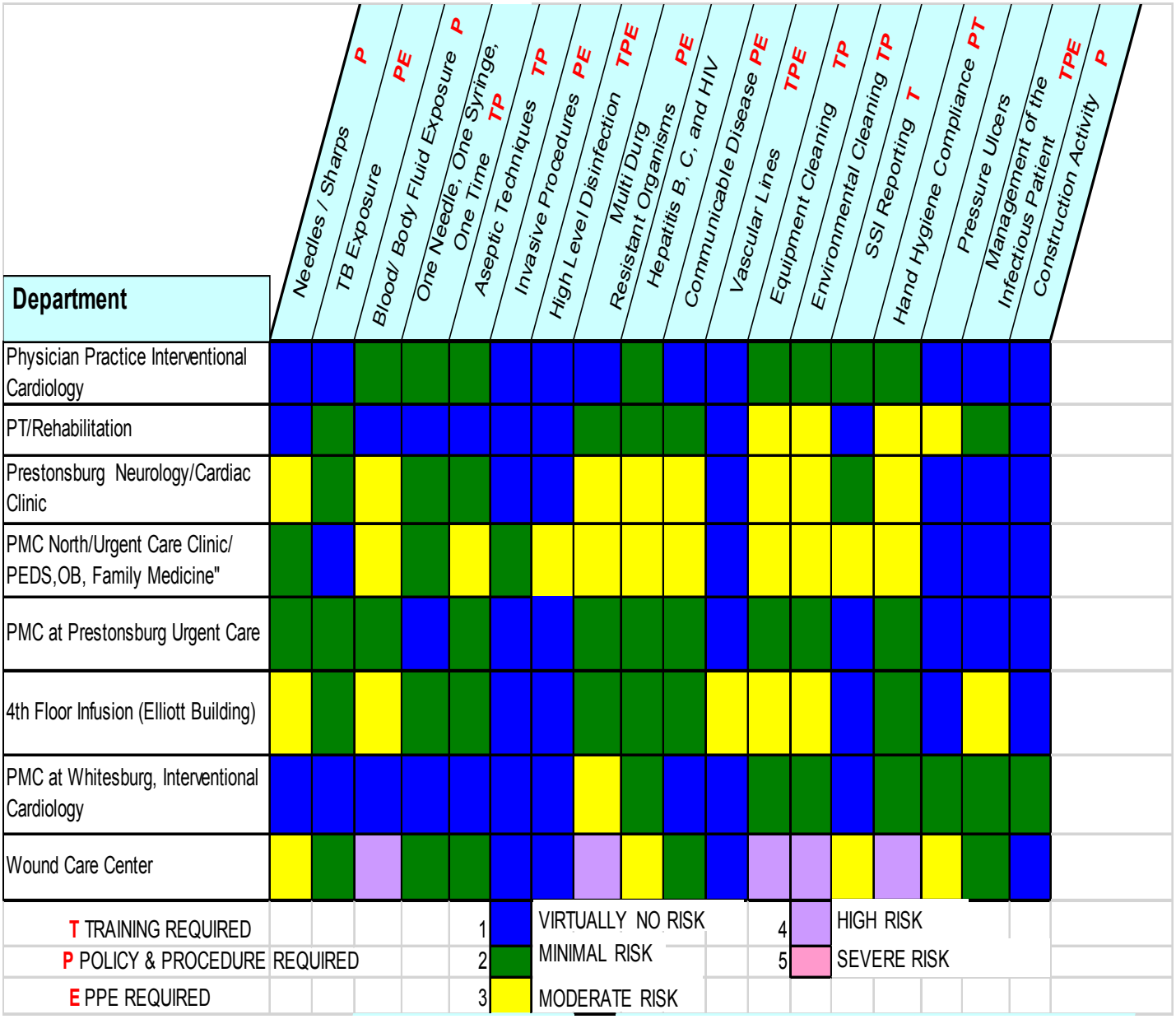


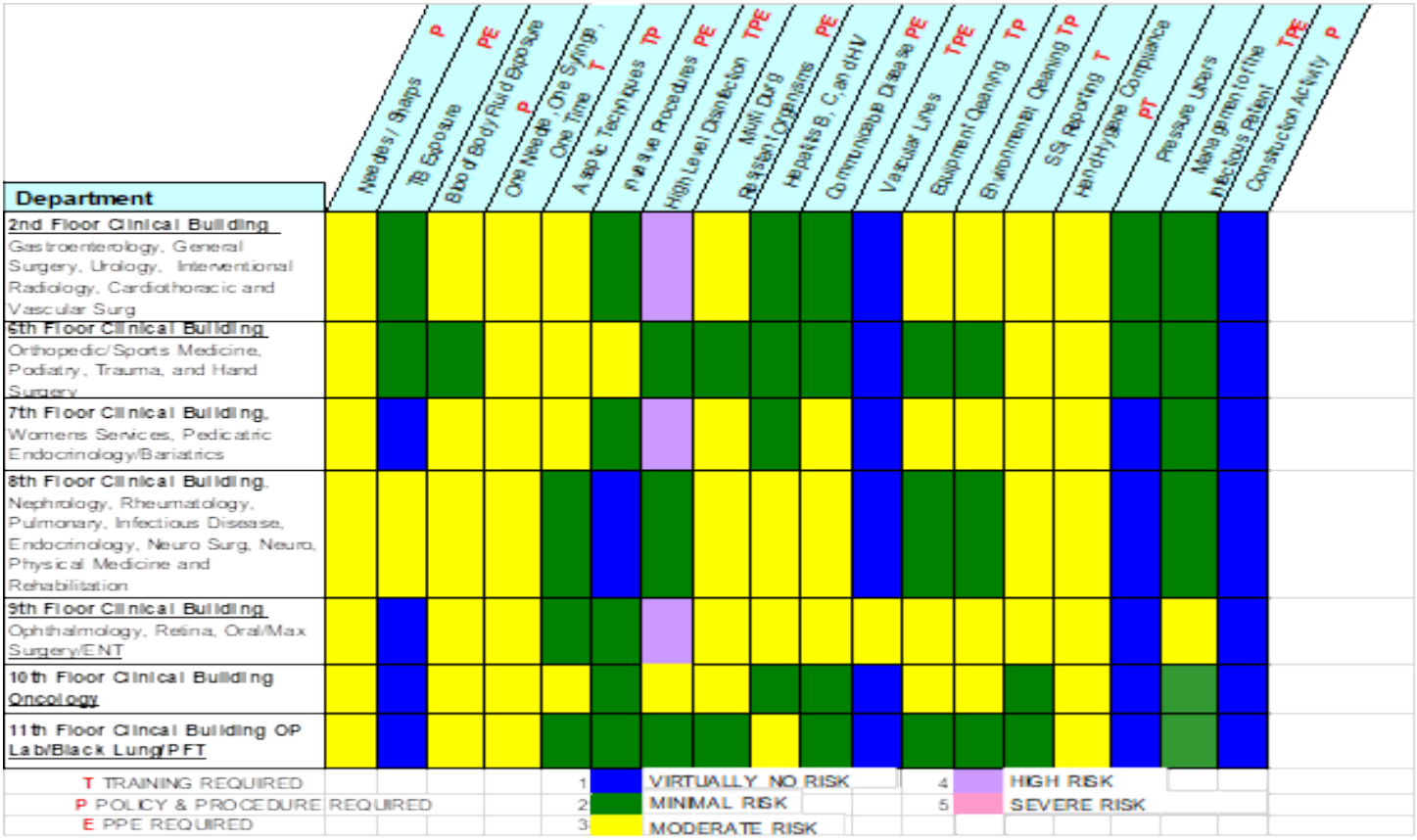


Summary

In reviewing the risk associated with each event, the Infection Control Department will monitor and develop goals and action plans as prioritized by the risk analysis, for the following: MRSA, VRE, C-Difficile, VAPS, Central Line related bacteremias , and CaUTI's . All NHSN coded surgical procedures will be followed benchmarking to the NHSN Pooled Mean . Hand hygiene and isolation procedures will be a focus for the inpatient facility. The ambulatory services, ie. physicians offices and clinics will have goals and action plans as regards hand hygiene surveillance, environmental surveillance, SSI infection reporting and compliance, safe injection practices, high level disinfection practices, and compliance with protocols for invasive procedures. DME service: equipment cleaning and hand hygiene in the home setting.


Department
Needles / Sharps P
TB Exposure PE
Blood/Body Fluid Exposure P
One Needle, One Syringe, One Time TP
Aseptic Techniques TP
Invasive Procedures PE
High Level Disinfection TPE
Multi Durg Resistant Organisms PE
Hepatitis A, B, C, and HIV
Communicable Disease PE
Vascular Lines TPE
Equipment Cleaning TP
Environmental Cleaning TP
SSI Reporting T
Hand Hygiene Compliance PT
Pressure Ulcers
Management of the Infectious Patient TPE
Construction Activity P
Heart Failure/Coumadin Clinic
Outpatient Diagnostic Center
Outpatient Rehabilitation/PT Center
Primary Care Practice Pikeville (Old Postoffice)
PMC Plastics (Riverfill)
Ava Center Pikeville
Ava Center Prestonsburg
Grundy Cadiology
Radiation Oncology
10th Floor Main Tower (sleep Lab)
South Williamson Primary Care
T TRAINING REQUIRED
P POLICY & PROCEDURE REQUIRED
E PPE REQUIRED
1 VIRTUALLY NO RISK
2 MINIMAL RISK
3 MODERATE RISK
4 HIGH RISK
5 SEVERE RISK


Needles / Sharps P
TB Exposure PE
Blood/ Body Fluid Exposure P
One Needle, One Syringe, One Time TP
Aseptic Techniques TP
Invasive Procedures PE
High Level Disinfection TPE
Multi Durg Resistant Organisms PE
Hepatitis B, C, and HIV Communicable Disease PE
Vascular Lines TPE
Equipment Cleaning TP
Environmental Cleaning TP
SSI Reporting T
Hand Hygiene Compliance PT
Pressure Ulcers
Management of the Infectious Patient TPE
Construction Activity P
Department
Physician Practice Interventional Cardiology
PT/Rehabilitation
Prestonsburg Neurology/Cardiac Clinic
PMC North/Urgent Care Clinic/ PEDS,OB, Family Medicine"
PMC at Prestonsburg Urgent Care
4th Floor Infusion (Elliott Building)
PMC at Whitesburg, Interventional Cardiology
Wound Care Center
T TRAINING REQUIRED
P POLICY & PROCEDURE REQUIRED
E PPE REQUIRED
1 VIRTUALLY NO RISK
2 MINIMAL RISK
3 MODERATE RISK
4 HIGH RISK
5 SEVERE RISK


Needles / Sharps P
TB Exposure PE
Bbd of Body Fluid Exposure P
One Needle One Syringe, One Time T
Aseptic Techniques TP
Invasive Procedures PE
High Level Disinfection TPE
Multi Drug Resistant Organisms PE
Hepatitis B, C and HIV
Communicable Disease PE
Vascular Lines TPE
Equipment Cleaning TP
Environmental Cleaning TP
SSI Reporting T
Hand Hygiene Compliance PT
Pressure Ulcers
Management of the Infectious Patient TPE
Construction Activity P
Department
2nd Floor Clinical Building Gastroenterology, General Surgery, Urology, Interventional Radiology, Cardiothoracic and Vascular Surg
5th Floor Clinical Building Orthopedic/Sports Medicine, Podiatry, Trauma, and Hand Surgery
7th Floor Clinical Building, Womens Services, Pediatric Endocrinology/Bariatrics
8th Floor Clinical Building, Nephrology, Rheumatology, Pulmonary, Infectious Disease, Endocrinology, Neuro Surg, Neuro, Physical Medicine and Rehabilitation
9th Floor Clinical Building Ophthalmology, Retina, Oral/Max Surgery/ENT
10th Floor Clinical Building Oncology
11th Floor Clincal Building OP Lab/Black Lung/PFT
T TRAINING REQUIRED
P POLICY & PROCEDURE REQUIRED
E PPE REQUIRED
1 VIRTUALLY NO RISK
2 MINIMAL RISK
3 MODERATE RISK
4 HIGH RISK
5 SEVERE RISK