North Carolina SPICE
Statewide Program for Infection Control & Epidemiology

JOB TITLE = INFECTION PREVENTIONIST…
WHAT NOW?
PART 1

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OBJECTIVES

- **Describe the Infection Control Assessment and Response (ICAR) implementation in North Carolina.**

- **Discuss the role of the Infection Preventionist in program development and implementation.**

- **Identify key elements of an Infection Prevention long-term care program.**
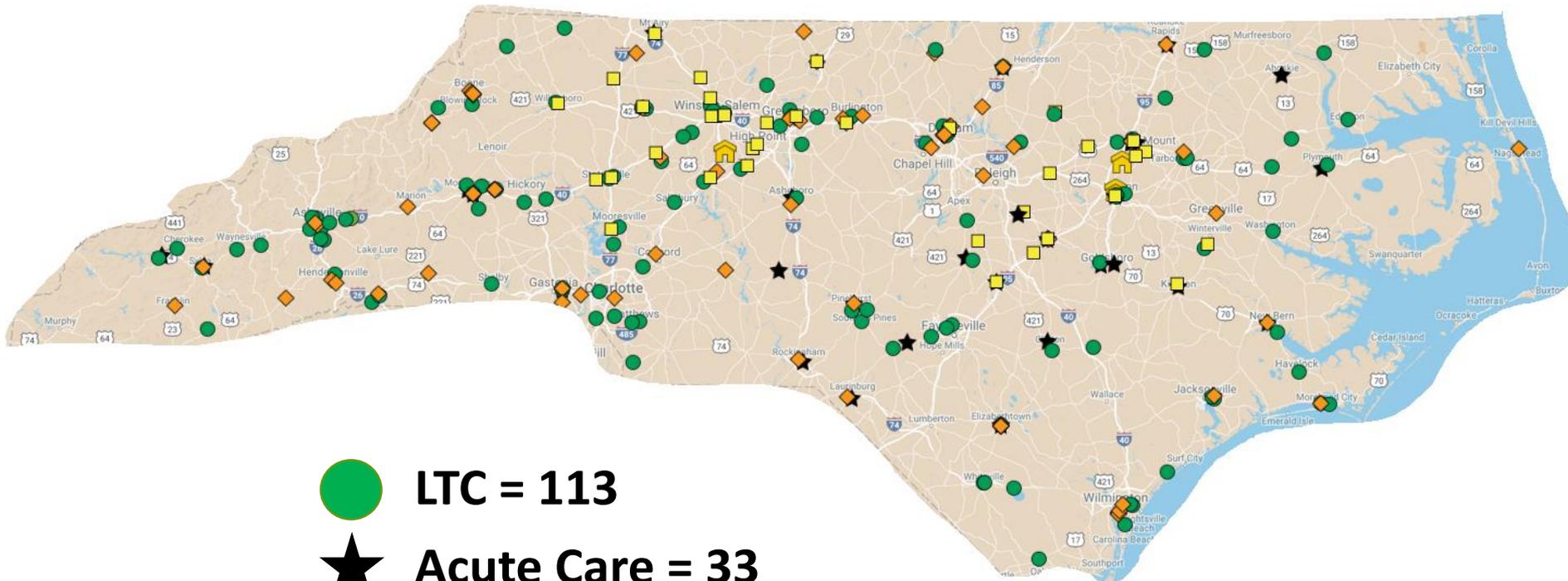
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BACKGROUND (ICAR)

- **CDC funding to Department of Health (DPH) in all 50 states**

- **NC DPH contracted with SPICE Nurse Consultants to perform assessments**

- **ICAR assessments: FREE, non-regulatory and consultative**

- **Mitigate identified gaps**

- **NC project ends 10-31-18**
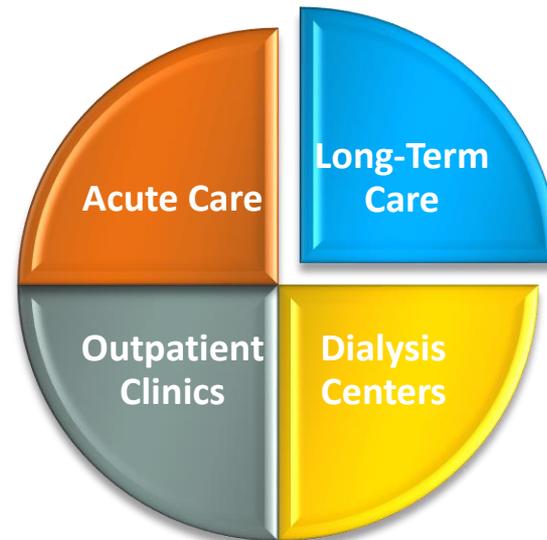
GEOGRAPHIC DISTRIBUTION

🟢 **LTC = 113**

★ **Acute Care = 33**

🔶 **Outpatient = 91**

🟨 **Dialysis = 40**

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TYPE OF FACILITIES VISITED

N = 113

Type of a facility	Bed Size	# Assessed
Skilled	< 100	47
Skilled	> 100	49
Assisted Living	80	1
Adult Developmental	283	1

Hospital Affiliated	Independent
10	103

Hours per week dedicated to IC (mean)
10.1 (min 0/max 40)

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Long-term Care Gap Analysis by Domain
N=113

Bar chart showing PERCENT NO (y-axis, 0 to 100) by DOMAIN (x-axis):

Domain	Percent No
IC Program	58
HCP Resident	63
Respiratory Cough Etiquette	75
Surveillance Disease Reporting	76
Injection Safety/POC	81
Hand Hygiene	90
Environmental Cleaning	92
PPE	94
Antibiotic Stewardship	99
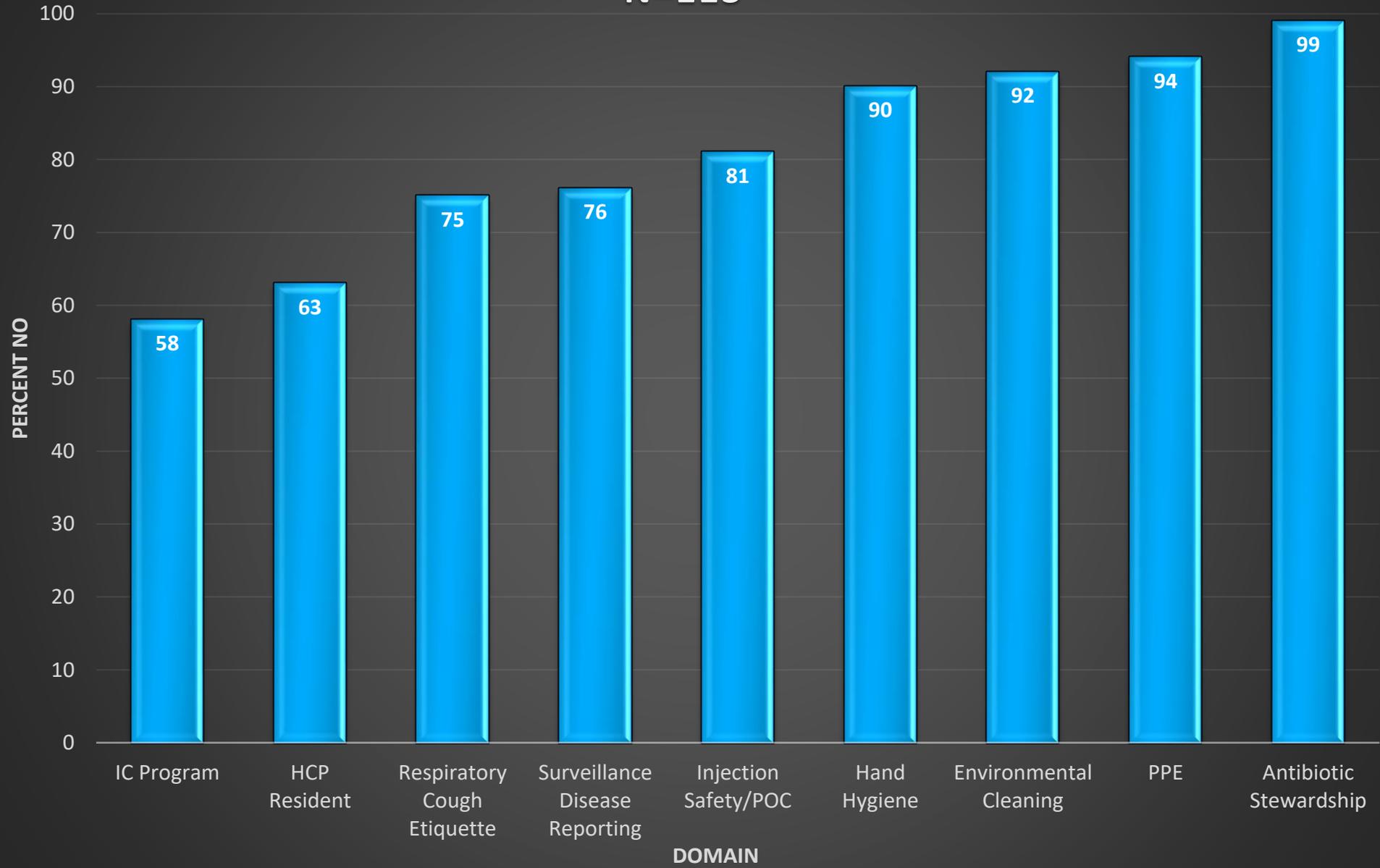
■ Facilities with at least 1 gap per domain

WHO IS THE INFECTION PREVENTIONIST?

Centers for Medicare & Medicaid Services (CMS) 11/28/19 definition

- Designated 1 or more individuals as the IP who is responsible for the facility program

- The IP must:

  ✓ Primary professional training (nursing, medical technology, microbiology, epidemiology or other related field)

  ✓ Qualified by education, training, experience or certification

  ✓ Work at least part-time at the facility

  ✓ Completed specialized training in infection prevention/control

  ✓ Must be member of Quality assessment/assurance committee and report regularly

10A NCAC 41A .0206 (NC state requirement for IC training)

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WHAT IS THE ROLE OF THE IP IN LTC?

- Data collection and analysis

- Evaluation of products and procedures

- Development and review of policies and procedures

- Consultation on infections, risk assessment, prevention and control strategies including:

  - →Occupational Health

  - →Construction

  - →Emergency Management

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WHAT IS THE ROLE OF THE IP IN LTC

- Education (interventions to reduce infection risks)

  →Staff, residents and families

- Implementation of changes mandated by regulatory, credentialing, and licensing agencies

- Communicable disease reporting

- Application of epidemiological principles directed at improving patient outcomes and implementation science:

  →Antimicrobial management (protocols; system to monitor use)

  →Participation in research projects

  →Provision of high quality services in a cost efficient manner

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OVERSIGHT
LEADERSHIP KEY PARTNERS

- ✓ Administrator
- ✓ DON
- ✓ Housekeeping/Laundry Leadership
- ✓ Rehabilitation
- ✓ Dietary/Nutrition
- ✓ Activities
- ✓ Maintenance
- ✓ Pharmacy
- ✓ Medical Director

WE ARE ALL RESPONSIBLE
INFECTION CONTROL

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CORE ELEMENTS
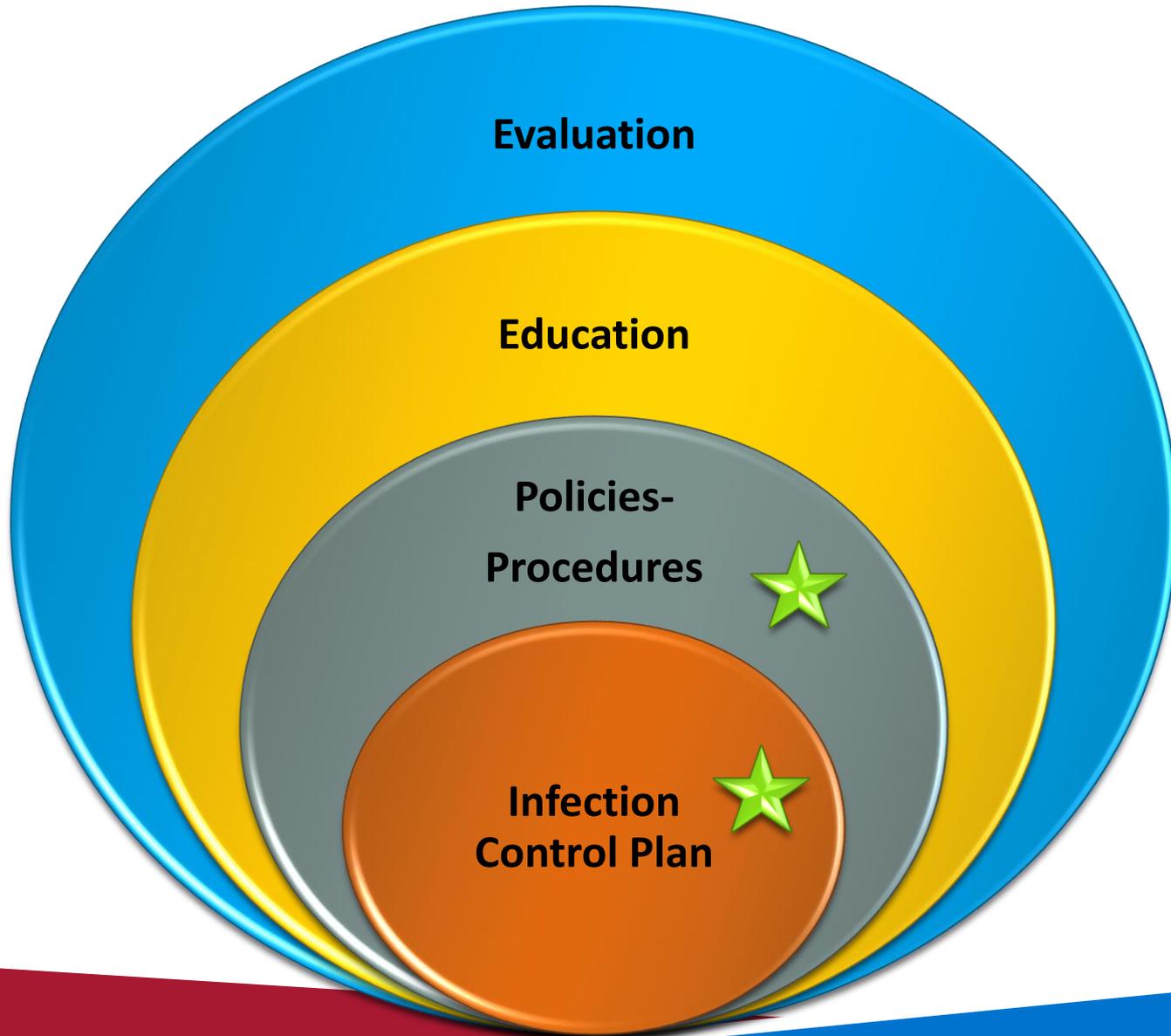
WHERE DO I BEGIN?

What is already in place?

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INFECTION CONTROL PLAN

Independent document

Components include:

- Facility wide program

- Authority statement (IP should have administrative/medical director support)

- Responsibilities of QAPI/QA team members

  → Minimal of Medical Director, Administration, Nursing & IP

- Community geographic/demographic (component of annual risk assessment)

- Facility goals (should be updated annually and when changes)

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INFECTION CONTROL PLAN

- Surveillance (defined facility-wide vs. targeted)

    →Guidelines used (McGeer 2012, NHSN)

    →How calculating rates

- Communication

    →Communicable disease reporting

    →HAI surveillance

    →Audits/feedback

    →Environment rounds

    →Changes in plans/policies/procedures

    →Transfer of residents in/out of facility

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INFECTION CONTROL PLAN

- Outbreak investigation

- Education

  →Residents, healthcare personnel (HCP) and visitors

- Policies/Procedures

  →Evidence-based/most current resources

  →Review process

   ▪ Annual requirement: TB, BBP, IP plan

INFECTION CONTROL PLAN

- Employee/Resident Health

  →Upon hire/annual: TB screening, vaccinations (flu & pneumonia), prophylaxis as required (documentation required)

- Program Evaluation (Annually)

  →Prioritize risks

  →Goals to determine success

  →Results of surveillance findings to determine opportunities

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RISK ASSESSMENTS

FACILITY RISK ASSESSMENT
INFECTION PREVENTION RISK ASSESSMENT
TB RISK ASSESSMENT
CONSTRUCTION/RENOVATION RISK ASSESSMENT (ICRA)

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INFECTION PREVENTION RISK ASSESSMENT

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RISK ASSESSMENT TIPS

- Proactive approach to prioritize risk or events that can cause harm

- Annually completed and/or revised during year as needed

- Team effort and approval by QAPI/QI

- Very subjective-no specific tool required

- Helps anticipate potentially preventable events and evaluate population served

    → Flu outbreak, hurricane (water/power loss), high number of dialysis patients, diabetics

- Use previous years data and regulatory requirements to begin

- Included in Infection Prevention Plan to assist with goal development

- Should be integrated into your overall facility wide risk assessment required by CMS (483.70)(e)

Living, breathing document

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2 TYPES OF EVENTS/RISKS

- **Community/External**

  - TB risk (HCP & residents)

  - Geographical area & environmental issues such as flooding, mudslides, hurricane, tornado, legionella, etc.

  - Population served & socioeconomic status such as retirement community, rural, low income, drug abuse, etc.

  - CMS - Conditions of Participation

- **Facility specific/Internal**

  - Facility associated infections

  - Antibiotic stewardship/ MDROs

  - Exposure related events

  - HCP compliance

  - Resident/family

  - New services/construction

  - Procedures/devices

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DETERMINE YOUR EVENTS

EVENT	PROBABILITY OF OCCURRENCE (How likely is this to occur)				RISK LEVEL OF FAILURE (What would be the most likely)				POTENTIAL CHANGE IN CARE (Will treatment/care be needed for resident/staff)				PREPAREDNESS (Are processes in place and can they work)			YEAR: _____ RISK LEVEL Add rankings (score of 8 or > are considered highest priority for improvement efforts)
Score	High	Med	Low	None	Life Threatening	Permanent Harm	Temp Harm	None	High	Med	Low	None	Poor	Fair	Good	
	3	2	1	0	3	2	1	0	3	2	1	0	3	2	1	
Example: Lack of Communication with Transferring Facility		2					1			2					1	6

Scoring Each Event/Risk

- **Probability-** *How likely is it to happen/occur?*
- **Risk Level-** *What degree of harm could occur; potential impact?*
- **Change Needed-** *Will treatment be needed for resident/staff?*
- **Preparedness-** *Are control measures in place, policies written, staff educated?*

Final Risk Level

- Determine by adding score from each category (some tools multiply)
- Rank by top 3-5 highest scores to determine **priorities and goals**

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	3	2	1	0	3	2	1	0	3	2	1	0	3	2	1	
Facility Associated Infection(s)																
Symptomatic Urinary Tract Infection (SUTI)			1		3				3					2		9

Important:
Review year-end data from previous year!

- <u>6</u> UTIs in 2017 per McGeer Criteria compared to <u>12</u> in 2016

- <u>1</u> healthcare acquired C. difficile in 2017 compared to <u>2</u> in 2016

- <u>2</u> needle stick exposures in 2017 compared to <u>5</u> in 2016

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	3	2	1	0	3	2	1	0	3	2	1	0	3	2	1	
Healthcare personnel																
Lack of compliance with influenza immunization		2			3					2			3			10

What are your opportunities?

- Norovirus outbreak with 25 HCP and 11 residents infected

- Staff Hand Hygiene compliance: 66% in 2017 (Goal = 90%)

- Employee influenza vaccination compliance: 40 % in 2017

EVENT	PROBABILITY OF OCCURRENCE (How likely is this to occur)				RISK LEVEL OF FAILURE (What would be the most likely)				POTENTIAL CHANGE IN CARE (Will treatment/care be needed for resident/staff)				PREPAREDNESS (Are processes in place and can they work)			YEAR: _____ RISK LEVEL Add rankings (score of 8 or > are considered highest priority for improvement efforts)
Score	High	Med	Low	None	Life Threatening	Permanent Harm	Temp Harm	None	High	Med	Low	None	Poor	Fair	Good	
	3	2	1	0	3	2	1	0	3	2	1	0	3	2	1	
Medical Devices, Supplies and Equipment																
Improper use, cleaning/disinfection of blood glucose monitoring equipment			1		3				3						1	8

- Since 2015, resident dedicated glucometers in use

- Stored in resident dedicated, labeled, plastic box

- Cleaned weekly and when visibly soiled

- Audit practices quarterly

  → Storage/disinfection compliance = 97% in 2017

- Emergency used glucometers are disposed of after use

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INFECTION CONTROL RISK ASSESSMENT IS ESSENTIAL TO INFECTION CONTROL PLAN

Infection Control Risk Assessment

Priorities

Goals

Infection Control Plan

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TB
RISK ASSESSMENT

http://epi.publichealth.nc.gov/cd/lhds/manuals/tb/toc.html

NC & CDC TB RISK ASSESSMENTS

- Different forms available

- Under CDC & NC, LTC is classified as "non-traditional settings"

  - Several of the headers & content are not applicable to LTC (if you use those tools, you will have to document "N/A" for those sections)

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SAMPLE FACILITY 2017 STATISTICS

	2017		2016	
	# of Cases	Rate	# of Cases	Rate
Facility	0	0	0	0
County	3	3.2	2	2.8
North Carolina	220	2.2	199	2.0
National	9287	2.9	9546	3.0

- Employees receive a baseline 2-step TST and an annual TST.

- 0 staff TST conversions this year, or in the previous 5 years.

- There are zero Airborne Infection Isolation (AII) Rooms in the facility.

- Infection Control Plan has a statement regarding transfer of TB suspected/confirmed residents.

- N-95 masks are not available and there is no Respiratory Protection Plan in place.

- There is a plan to triage (identify) possible TB.

Call local Health Department for statistics

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COMPLETING YOUR ANNUAL TB RISK ASSESSMENT

SECTION		IN PLACE		
Part 1: Incidence of TB	**Comments**	**Yes**	**No**	**N/A**
1. Number of TB cases in your facility last year	0			
2. Number of TB Cases in your county or service region last year	3			
3. Number of TB Cases in the state last year	220			
4. Number of TB cases in the United States last year	9287			

NC TB Manual

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COMPLETING YOUR ANNUAL TB RISK ASSESSMENT

Part II: Risk Classification (non-traditional settings)	Comments	Yes	No	N/A
1. How many TB patients are encountered at your setting in 1 year? → Previous year → Five (5) years ago	_____ _____			
2. Does evidence exist that a high incidence of TB disease has been observed in the community that the facility serves?				
3. Does evidence exist of person-to-person transmission of *M. tuberculosis* in the setting?				
4. Have any recent TST or BAMT conversions occurred among staff or residents?				
5. Is there a high incidence of immunocompromised staff or residents in the facility?				
6. Have any residents with drug-resistant TB been encountered in your facility in the last five (5) years?				
7. Considering the items above, would your setting require a higher risk classification?				
8. Does your setting have a plan for the triage of patients with suspected or confirmed TB disease?				

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DETERMINING YOUR RISK CLASSIFICATION

Depending on the number of patients with TB disease who are encountered in a nontraditional setting in 1 year, what is the risk classification for your setting?

LOW RISK

_____ No TB cases
_____ < 200 beds & < 3TB residents with active TB per year
_____ > 200 beds & < 6 TB residents with active TB per year

MEDIUM RISK

_____ < 200 beds & > 3 residents with active TB per year
_____ > 200 beds & > 6 residents with active TB per year

POTENTIAL ONGOING TRANSMISSION
_____ Evidence of ongoing M. tuberculosis transmission (Report to your local health department immediately)

NC TB Manual

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YOU HAVE DETERMINED YOUR RISK...
NOW WHAT?

	Low Risk	Medium Risk	Ongoing Risk
Recommendations for	**Screening Frequency**		
Baseline two-step TST or one BAMT¶	Yes, for all HCWs upon hire	Yes, for all HCWs upon hire	Yes, for all HCWs upon hire
Serial TST or BAMT screening of HCWs	No**	At least every 12 months††	As needed in the investigation of potential ongoing transmission§§
TST or BAMT for HCWs upon unprotected exposure to M. tuberculosis	Perform a contact investigation (i.e., administer one TST or BAMT as soon as possible at the time of exposure, and, if the result is negative, give a second test [TST or BAMT, whichever was used for the first test] 8–10 weeks after the end of exposure to M. tuberculosis)¶¶		

** HCWs in settings classified as low risk do not need to be included in the serial TB screening program.

†† The frequency of screening for infection with *M. tuberculosis* will be determined by the risk assessment for the setting and determined by the Infection Control team.
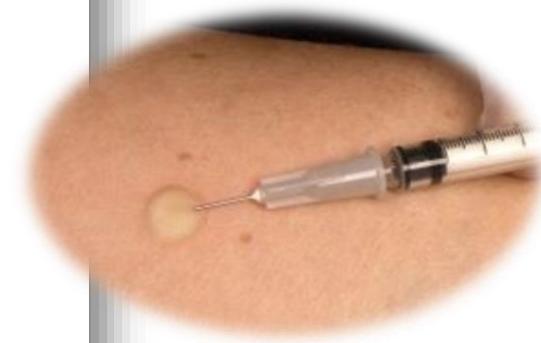
CDC 2005 TB Guidelines

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NORTH CAROLINA SPECIFIC RULES

S. Quick Reference for Tuberculin Skin Testing Requirements:
1. Tuberculin Skin Testing (TST) or IGRA (Interferon Gamma Release Assays) testing is **required** by communicable disease/TB rules for:

- **household and other close contacts** of active cases of pulmonary and laryngeal tuberculosis
  By: 10 A NCAC 41A .0205
  Frequency: at the time of exposure and 3 months post exposure
- persons reasonably **suspected of having tuberculosis disease**
  By: 10 A NCAC 41A .0205
  Frequency: when suspected
- **inmates in the custody of the Department of Corrections**
  By: 10 A NCAC 41A .0205; DOC policy
  Frequency: upon incarceration and annually
- **Department of Correction employees with direct inmate contact**
  By: 10A NCAC 41A .0205; OSHA; DOC policy
  Frequency: upon employment
- **patients in long term care facilities**
  By: 10A NCAC 41A .0205; 10A NCAC 13D .2202 &.2209
  Frequency: upon admission (two-step for TST or IGRA) & by risk assessment (DFS regulations require an annual screening which can be accomplished by a verbal elicitation of symptoms)
- **long term care facility employees**
  By: 10A NCAC 41A .0205; 10A NCAC 13D .2202 & .2209; OSHA
  Frequency: upon employment (two-step for TST or IGRA) & by risk assessment (DFS regulations require an annual screening which can be accomplished by a verbal elicitation of symptoms)
- **employees of adult day care centers providing care for persons with HIV infection or AIDS**

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10A NCAC 41A.0205

- A 2-step TST or IGRA must be performed on all new residents.

Exceptions

- If the resident is being admitted directly from another hospital, licensed nursing home/adult care home in NC **AND** there is documentation of a 2-step skin test or single IGRA test

    → **NO need to re-test**

- A single TST or IGRA in the following situations

    - Person has ever had a 2-step skin test

    - Person has had a single skin test within the last twelve months

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EXPLORING REMAINING PARTS OF
TB RISK ASSESSMENT

Part III

Screening of HCWs for M. tuberculosis Infection

✓ Do you have a screening program?

✓ What HCWs are included?

✓ Baseline and serial screening (as necessary) plan and record storage?

✓ HCW conversion follow up?

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EXPLORING REMAINING PARTS OF TB RISK ASSESSMENT

Part IV

TB infection Control Program

✓ Do you have a written TB plan?

✓ Who is responsible?

✓ When was the plan 1st written and when last reviewed/updated?

✓ What team is part of the review/approval process?

✓ What groups are represented on the team?

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EXPLORING REMAINING PARTS OF TB RISK ASSESSMENT

Part V

Implementation of TB Infection Control Plan Based on Review by Infection Control Committee/QAPI

- ✓ Who is responsible for implementing plan?
- ✓ What is in place to correct lapse in IC practices?
- ✓ What training and education is in place for HCP?

Part VI

Laboratory Processing of TB-Related Specimens, Tests, and Results Based on Laboratory Review

- ✓ What tests are done in the facility or sent out to a reference lab, etc.?
- ✓ Majority answer = Not Applicable (N/A)

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EXPLORING REMAINING PARTS OF TB RISK ASSESSMENT

Part VII

Environmental Controls

- ✓ Mostly involved with Airborne Infection Isolation (AII) Rooms (aka negative pressure rooms)

- ✓ Majority answer = Not Applicable (N/A)

Part VIII

Respiratory Protection Program

- ✓ Do you have a program & what HCPs are included?

- ✓ Details of fit-testing program and masks used

- ✓ Majority answer = Not Applicable (N/A)

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EXPLORING REMAINING PARTS OF TB RISK ASSESSMENT

Part IX

Reassessment of TB Risk

✓ What is the frequency of when the TB risk assessment is conducted?

✓ When was the last TB Risk Assessment conducted?

✓ Problems identified, actions taken?

✓ Did your risk classification change as a result of last TB risk assessment?

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POLICIES & PROCEDURES

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POLICY TIPS

- Must be specific to organization (no blanks, not vague, etc.)

    → If purchased, tailor to your facility

    → Corporate, must be tailored

- Review/revision dates documented

    → Spread out throughout the year so not all due at 1 time

- Based off of regulatory, credentialing, evidence-based practice

- Include references

- Educate HCP when changes occur

- Approval process (via QAPI/QA)

- Accessible to ALL staff (computer vs. hard copies-are they updated?)

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ESSENTIAL COMPONENTS

Plans

- Infection Prevention Plan

  → Infection Prevention Risk Assessment

- Bloodborne Pathogen Exposure Control Plan

- Tuberculosis Plan (HCP & Residents)

  → TB Risk Assessment

- Antimicrobial Stewardship Program

- Influenza & Pneumococcal vaccination program/policy

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ESSENTIAL COMPONENTS

Policies

- Standard Precautions
  - → Hand hygiene
  - → Respiratory hygiene/cough etiquette
  - → Safe injection practices
  - → Personal Protective Equipment
- Transmission based precautions (Isolation)

- Cleaning & disinfection of rooms/equipment/POC
- Linen management
- Outbreak management
- Communicable illness public reporting
- Employee health
  - → HCP communicable illnesses/work restrictions
  - → Vaccinations

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ESSENTIAL COMPONENTS

Procedures

- Device related (urinary catheters, central lines, etc.)

- Patient care including wound care

- Equipment cleaning/disinfecting steps

- Environmental services

INFECTION PREVENTIONIST... NOW WHAT?
PART 2

SEPTEMBER 20TH

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RESOURCES

SPICE RESOURCES

SPICE Resources

Sample IC risk assessment template

Sample policy for LTC IC Program

Hand Hygiene competency checklist

Injection Safety competency checklist

PPE competency checklist

LTC surveillance tools (2012 McGeer & CDC-NHSN)

- UTI
- GI including C. difficile & norovirus
- Respiratory infections
- Skin & soft tissue infections

https://spice.unc.edu/infection-control-tools-policy-risk-assessment-competency-and-more/

RESOURCES

Statewide Program for Infection Control & Epidemiology (SPICE)

https://spice.unc.edu/

Centers for Disease Control & Prevention (CDC)

https://www.cdc.gov/longtermcare

Association for Professionals in Infection Control and Epidemiology

https://apic.org/

Centers for Medicare & Medicaid Services (CMS)

https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/GuidanceforLawsAndRegulations/Nursing-Homes.html

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RESOURCES

North Carolina Infection Prevention-Health Care Settings 10A NCAC 41A .0206

http://reports.oah.state.nc.us/ncac/title%2010a%20-%20health%20and%20human%20services/chapter%2041%20-%20epidemiology%20health/subchapter%20a/10a%20ncac%2041a%20.0206.html

North Carolina Tuberculosis Policy Manual

http://epi.publichealth.nc.gov/cd/lhds/manuals/tb/toc.html

Occupational Safety and Health Administration (OSHA)

https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_id=10051&p_table=STANDARDS

Questions?

- *Un-mute your line*
- *Type in the chat box*

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THANK YOU FOR YOUR ICAR PARTICIPATION AND SUPPORTING RESIDENT SAFETY!