Invasive MRSA ABCs Case Report Form Instructions

Revised: July 28, 2010

<u>Please note:</u> all changes in the instructions regarding how to complete the CRF for question 5 and when a patient is exposed to a Long Term Acute Care Hospital will start for all cases with dates of initial culture of <u>July 1, 2009</u> and beyond.

GENERAL INSTRUCTIONS

Where to look for information necessary to complete case report form:

The ***minimum*** sources of information that should be used to complete the Invasive MRSA Case Report form are 1) the admission history and physical (H&P) or Admission Summary, 2) the discharge summary (or DC Summary), 3) the face sheet, and 4) laboratory report. In the H&P, useful information (including underlying or prior illnesses) is often listed under the heading "Past Medical History″ (PMH). Other portions of the medical chart, such as radiology reports, progress notes around the date of initial culture, and nurses notes, will often have useful information; however, reviewing these other sections is not required to answer ALL questions on the case report form. **Questions that require the review of additional data sources have the data source indicated below.**

Very often charts will only tell you that something happened. Charts will not tell you that something did NOT happen. For example, if a woman was pregnant, this would be noted in the chart. If there is no mention of pregnancy in the chart, and the woman is of child bearing age, you would answer "No" this question.

Timing of onset of Disease:

For the purpose of this surveillance a standard way to operationalize how we collect the time between two events is needed because hours are not consistently available; **<u>only</u>** calendar days (dates) should be used. The purpose of this is to ensure we are truly capturing data in a uniform manner across all surveillance sites. For some of the questions on the case report form, there is a *"reference"* date identified in the question. The reference date will be assigned "Day 0". You will count the specific calendar days around that date, as indicated in the question, to define the specific time period for that question (please see the figure below). For example question 19 ("Culture collection ≥ 3 or more calendar days after hospital admission?") refers to the time between admit and culture date; the reference date for this question would be the admit date and would be assigned to "Day 0". If the culture was collected *on Day 3 or beyond*, you would check this question. Throughout these instructions specific examples are used to illustrate this.

Table: Values for different ways to describe a "day" between date of initial culture and a reference date (e.g. Admission date)

Descriptions	**Value**							
Date	6	7	8	9	10	11	12	13
Day	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon
Reference Date			**X**					
Days Since Reference Date	-2	-1	0	1	2	3	4	5
Example 1			11:00 PM	(25 hours)	(49 hours)	(73 hours)		
Example 2			1:00 AM	(47 hours)	(71 hours)	(95 hours)		

The table above illustrates this concept of assigning a "Day". Please consider the following two examples for question 19 "Culture collection ≥ 3 or more calendar days after hospital admission".

- *Example 1:* A patient is admitted on Wednesday January 8th at 11:00 pm. We would assign 1/8 to Day 0. For this example, the date of initial culture (index invasive culture) was 1/13. 1/13 would be assigned Day 5 according to the table above, therefore you would check "yes" to this question as the invasive culture was collected 3 or more days after admission to the hospital.
- *Example 2:* A patient is admitted on Wednesday January 8th at 1:00 am. We again would assign 1/8 to Day 0. For this patient, the date of initial culture (index invasive culture) was 1/10. **According to the table above, this is Day 2, and we would <u>not</u> check yes to this question.** Please note however, if we were determining the time in hours (as was done prior to 2009), this culture could have been collected up to 71 hours after admission.
- Another quick and more simplistic way to determining the number of days between two calendar dates, is to just subtract one date from the other. The number of days between the two dates could be used to answer the question. Please note; we can do this because we have assigned the reference date to "Day 0".
- The gray shaded area in the table above illustrate the days, from which if a culture was collect, would be considered a Hospital Onset case based on the examples above.

Where to send completed form:

By mail (please mark the envelope "confidential") to:
Infectious Disease Epidemiology, Prevention and Control
625 North Robert Street
Post Office Box 64975
St. Paul, MN 55164-0975

By fax to:
1-800-233-1817

Patient ID: (IS transmitted to CDC – for use only with MRSA cases)
Note: Located in the top left corner of the CRF. Not a personal identifier; links STATEIDs to patient.

Patient ID	MRSA unique patient identifier; assigned at each EIP site. Each individual will be assigned a Patient ID with the INITIAL invasive MRSA culture. The Patient ID number will be unique to the individual so that STATEIDs for subsequent cultures will be linked to the individual. The Patient ID will be 8 characters (numeric or alpha); the first two will identify the EIP site and the remaining 6 will be determined by each site.

Patient identifier information (NOT transmitted to CDC)
Note: information found on patient intake or face sheet in medical chart or hospital computer database

Name	Patient name: Last name, first name, middle initial
Phone	Patient home phone number, including area code
Address	Patient home address, including Number, Street, City, State and ZIP Code (plus four). If patient is homeless, and an address is not associated with the patient, for example, this patient is not currently a resident of a shelter, mission, church community center etc; enter "homeless" on the address line. If this patient is

	associated with a shelter and that address on the face sheet of the medical record; enter it here however, please select "homeless" for Question 5. If a patient is a resident of a LTCF or LTACH, and the address is known, please list here and clarify in Question 5 the type of facility.
Chart Number	Patient chart of medical record number
Hospital	Name of hospital where patient received initial treatment for this episode of invasive MRSA infection (note, should be the same as 4b)

Information obtained for cases with any invasive ABCs organism identified
Note: Items 1-4 are filled out by ABCs personnel, except as indicated.

**REMINDER:* For all information listed on the CRF, we are interested in the clinical information immediately surrounding their MRSA infection ONLY. For example, if a patient is initially hospitalized for a gun shot wound (10/30), discharged from the hospital into a rehab center (11/15), at the rehab center they are culture positive for MRSA (11/20), and then admitted back to the hospital as a result of the MRSA culture (11/21). You would complete the CRF based on that second hospitalization that occurred on 11/21 only.

1. State	Use 2 letter postal code (e.g. NY) of patient's state of residence (except for California which uses "SF")
2. County	Patient county of residence.
3. State ID	ABCs case unique identifier. Each ABCs site has its own system of assigning a unique ID to each case. In general, the first 2 spaces designate the location and are followed by 5 numbers. This STATEID is assigned by the ABCs personnel. **Note*: This STATE ID is used for every MRSA isolate from the same illness episode for that case. *IMPORTANT:* The STATE ID links all information pertaining to this particular isolate including the CRF, the lab form, and supplemental forms used for special studies.
4a. Hospital/lab ID where culture identified	This field refers to the hospital or reference laboratory where the original initial culture was identified from a patient's specimen, i.e. the culture that will be recorded in Question 11b. Please use the ABCs laboratory unique identifier. Each ABCs site has its own system of assigning a unique ID to each hospital or lab. Please note name of hospital or lab on the form; the hospital/lab ID will be assigned by ABCs personnel and will be the same as the coding scheme used for Core ABCs pathogens.
4b. Hospital ID where patient treated	Hospital where patient received initial treatment for this episode of invasive MRSA; may be different than 4a; most commonly is the hospital of discharge. Please note the name of the hospital; the hospital ID will be assigned by ABCs personnel and will be the same as the coding scheme used for Core ABCs pathogens. **Note:* The patient does not need to be hospitalized in order to have a treatment hospital indicated.
5. Where was the patient a resident	If known, indicate where a patient was a resident at the time of initial culture.

prior to date of initial culture? *(added 2008)*. Table 1, Appendix 1	*Clarification*: For situations where it is more difficult to determine where the patient is a resident, i.e. patients that "hospital hop" or for nosocomal patients, please, to the best of your ability, try and determine where the patient was a resident three days prior to the date of admission to the current acute care hospital. Please refer to the ABCs Residence Guidelines if any questions arise regarding time of residence (Appendix 1). If these guidelines are not helpful, please use the location of discharge from the discharge face sheet to aid in making the decision for this question. Clarification of Residence Types (please refer to Table 1): *Private Residence*: Select if the patient was living at their private residence at the time their initial culture of MRSA was collected. Please include Home Health, Assisted Living Facilities, Home Hospice, children in Foster Care, residences of a Military Base, Boarding House, Group Home or Halfway House, patients staying at a hotel, etc. *Long Term Care Facility*: Select this if the patient was a resident of a **Nursing Home, Rehabilitation Facility, Inpatient Hospice or Skilled Nursing Facility** (see Table 1 for further explanation of these terms) at the time of their initial culture. Please note, if a patient is admitted from a drug rehab facility, this should NOT be considered a LTCF. *Long Term Acute Care Facility:* Select this if a patient was a resident of a Long Term Acute Care Facility (see Table 1 for further explanation of this term) at the time of their initial culture. *Homeless*: Select if the patient is homeless or resident of a shelter. *Incarcerated*: Select if the patient was a resident of a correctional facility of any kind at the time of initial culture. *Transferred from hospital/acute care facility:* Select if the patient's initial culture was collected while admitted to a hospital/acute care facility that is not *the* current admitting hospital/acute care facility, e.g. a facility that is different from where the patient is currently hospitalized. *Clarification:* if a patient's initial culture was collected at a different acute care facility and they were transferred, for *any reason*, to the current treatment hospital, check this box. *Other:* If a facility does not meet one of the above criteria, please choose "Other" and specify in the section provided. For example, if a patient was admitted from a Drug Rehab facility, please select "other" and specify "DRUG REHAB" in the space provided. If a patient was born in the hospital and was never discharged before their date of culture, please select "other" and specify "BORN" in the space provided. **Guidance:* If a patient was residing at a facility that might have multiple types of facilities within it, i.e., a LTACH within a hospital, **please use the most "acute" facility** to answer this question. If the patient was at a facility that has BOTH LTC and LTACH components, please check the box for Long Term Acute Care Hospital. *Surveillance Changes*: New Variable in 2008. Changed wording in 2009 to be more reflective of what was being captured**.** Further refined definition in 2010; changed the reference date to date of admit.
6. Date of birth	Patient date of birth; use 4 digit year (mm/dd/yyyy).

7a. Age	Patient age at time of collection of the first positive index culture. If a patient's age is 30 days to 11 months, indicate age in months. If a patient is 12 months or older, indicate in years. *Examples:* 34 days of age should be coded as Age=1 and Unit=2 (see 7b); 14 months of age should be coded as Age=1 and Unit=3 (see 7b).
7b. Age units	Indicate if age is in days, months or years (see explanation of Age above).
8a. Sex	Indicate the genetic gender of the case at birth (e.g. male or female) as indicated in the medical record or on the lab report.
8b. Ethnic Origin	Ethnicity of patient as noted in chart or reported by physician or ICP. Check one EVEN IF race is already indicated. Hispanic or Latino ethnicity indicates a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race. For example, many whites are also Hispanic or Latino. Do not make assumptions based on name. If not noted or unsure, check "unknown." **Note:* Some institutions combine race/ethnic coding. For example, they might define a person's race as "Hispanic or Latino". In this case race would be coded "unknown" on the CRF, and ethnicity would be "Hispanic or Latino".
8c. Race	Race of patient as noted in chart or reported by physician or ICP. Multiple boxes can be checked. Do not make assumption based on name or native language. If race is unknown, please check "unknown". The minimum categories for the Federal statistics of race data are defined as follows: *American Indian or Alaskan Native:* A person having origins in any of the original peoples of North and South America (including Central America) and who maintain tribal affiliation or community attachment. *Asian:* A person having origins in any of the original people of the Far East, Southeast Asia, or the Indian subcontinent. Can include the following: Cambodia, China, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam. *Black or African American:* A person having origins in any of the black racial groups of Africa. Terms such a "Haitian" or "Negro" can be used in addition to "Black" or "African American". *Native Hawaiian or other Pacific Islander*: A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands. *White:* A person having origins in any of the original peoples of Europe, the Middle East, or North Asia.
8d. Weight	***Optional: pilot variable (2005)*** Indicate weight in pounds (lbs) and ounces (oz) OR in kilograms (kg). Weight recorded at admission should be preferentially indicated. If only a person's BMI is recorded, make a note in the Comments field. For a person greater than 1 year of age, please record weight ***only*** in pounds OR kilograms.

	Hint: One source that might be helpful in finding this information is in the pharmacy records.
8e. Height	***Optional: pilot variable (2005)*** Indicate height in feet (ft) and inches (in) OR in centimeters (cm). Height recorded at admission should be preferentially indicated. If only a person's BMI is recorded, make a note in the Comments field. *Hint:* One source that might be helpful in finding this information is in the pharmacy records.
8f. Type of Insurance	***Optional: pilot variable (2005)*** Check ALL types of insurance as noted in the hospital chart. If a patient's insurance status changes during hospitalization, indicate insurance status at time of admission. If insurance type is not noted in the chart or unknown, please indicate. *Clarifications of insurance types:* *Medicare*: the national health insurance program for people 65 years and older (also covers some people under the age of 65 with disabilities and people with end-stage renal disease). *Military/VA (Veterans Administration):* patient receives federal medical care due to current or past military status (e.g. Tricare). If a patient is admitted to a VA hospital you should check this box, in addition to any other insurance listed on the face sheet. *Medicaid/state assistance program*: program that pays for medical assistance for certain people with low incomes and resources. State assistance programs are those state programs that provide medical coverage to individuals who are otherwise uninsured, uninsurable or those with special health care needs. *Indian Health Service (IHS):* provides health services to American Indians and Alaskan Natives. *Private/HMO/PPO/managed care plan*: patient receives and pays for medical case as part of a private or managed care system. *Other:* includes options such as "private-pay" (i.e., service is not covered by state or federal government; patient generally pays out of pocket (self-pay) at time of service and may or may not be reimbursed later by a private insurance company). *No Health Coverage:* if there is no record of insurance in the chart, check the social services assessment, which some hospitals may include in the discharge planning document to assess uninsured status. If uninsured status cannot be confirmed, check "unknown".
9. Was patient hospitalized?	Indicate whether or not the patient was hospitalized at an acute care facility during this event. If appropriate, indicate the dates of admission and discharge. *Clarifications, if a patient is:* *Hospitalized:* If the patient was hospitalized at a short-stay acute care facility, check "Yes" and indicate the date of admission to this facility. If the patient was not hospitalized, check "No". If it is not clear from the chart whether or not the patient was hospitalized, then check "Unknown".

	Transferred from another hospital: If the patient was transferred from another short-stay acute care hospital, check "Yes" and use the date of admission from the 1st hospital. *Seen in the ER*: If the patient was seen in the ER, but was admitted as a result of this visit, choose "Yes". The date of admission should be the date of the ER visit. If the patient was NOT admitted to a short-stay acute care facility and was just treated in the ER, check "No". For a patient to be considered hospitalized related to the MRSA culture; date of initial culture should have occurred no more than 7 days before hospital admission date. *An Outpatient:* If the patient was seen as an outpatient, and was admitted to a short-stay acute care facility after this visit, check "Yes". The date of admission will be the date admitted to the short-stay acute care hospital. If the patient was just seen as an outpatient, check "No". For a patient to be considered hospitalized related to the MRSA culture; date of initial culture should have occurred no more than 7 days before hospital admission date. *Admitted **from** a Long Term Care Facility, Skilled Nursing Facility, Long Term Acute Care Hospital or Specialty Facility:* If the patient was admitted from one of these types of facilities to the short-stay acute care facility, check "Yes". The date of admission will be the date admitted to the short-stay acute care hospital. *Admitted **to** a Long Term Care Facility, Skilled Nursing Facility, Long Term Acute Care Facility or Specialty Facility:* If the patient was NOT admitted to a short-stay acute care facility, i.e. treated for the illness associated with their initial culture at a LTCF, SNF , LTACH, etc, you would check "No" for this question. **Note:* A patient would not be considered hospitalized for their infection if the initial culture date is after the hospital discharge date. *Clarification Date of Discharge:* • Please indicate the date of discharge from the short-stay acute care hospital. We want to capture the entire short-stay acute care hospital stay. • If the patient was transferred to another short-stay acute care hospital, please list the date of discharge from the transfer facility. Please also list the hospital id of the transfer facility in the comments section. • If the patient was discharged to any type of long-term care facility (e.g. nursing home, SNF etc), other specialty or inpatient hospice, please use the date of transfer to these facilities as the date of discharge. • If the patient was discharged to a long term acute care facility (LTACH), please use the date of transfer to this facility as the date of discharge. • If the patient died during their hospitalization, the date of death should be the date of discharge.
10. Was an infection related to	Check "yes" if an infection related to the initial culture is indicated as an admission diagnosis or if the physician clearly indicates that infection related to

the initial culture included in the admission diagnosis?	the initial culture is suspected. The admitting H&P or consult notes (including ER or Ambulance notes) and/or the physician/nurses progress notes 3 days before through 3 days after the date of initial culture should be reviewed. Presence of the a clinical manifestation coupled with the term "infectious process" or the symptoms strongly associated with the invasive MRSA infection is sufficient to check "yes" to this question. If the reason for admission is not clearly identified as an infection related to the culture AND is not clearly unrelated to the admission check "unknown". For ***example***, if the initial culture is peritoneal fluid and the admission diagnoses include peritonitis check "yes"; however, if the initial culture is blood and the admission diagnosis is heart failure check "no". ***Note:*** This variable may require the judgment of the Surveillance Officer; check "unknown" if uncertain.
11a. Location of culture collection *(updated 2010)* (See Table 1)	Indicate the type of facility where initial culture was collected. If specimen was collected while hospitalized, indicate if patient was in an ICU or if patient was in another hospital unit. See Table 1 for further explanation of terms. Refer to the lab report or the micro section of the medical record to determine where the patient was at the time of culture collection. If a patient was cultured in a facility that might have multiple types of facilities within it, please use the most "acute" facility to answer this question. ***Note:*** If a patient's culture was collected at a Long Term Acute Care Hospital (LTACH), please list as "Other" and specify "LTACH" in the space provided. ***Example:*** If the patient was cultured at a facility that is an Acute Care Hospital, but it is also has a LTC component, and you are unclear where the patient was, please check "Other Unit". If the patient was cultured at a facility that has BOTH LTC and LTACH components, please check "OTHER" and specify "LTACH" in the space provided. *Surveillance Changes:* • Re-introduction of the "ICU" and "Other Unit" check boxes in 2010. • *Question was modified in **2007.*** The "Hospital Inpatient" variable was collapsed. In addition, "Nursing Home" and "Rehabilitation Facility" were collapsed into "Long Term Care Facility". Please, DO NOT included "Home Health" in the LTCF category, "Home Health" should be listed as "Other" and you should specify "Home Health". Lastly, "Prison/Jail" was dropped, please enter as "Other" and specify "Prison/Jail" in the space provided.
11b. Date of initial culture	Indicate date of collection of the ***first positive invasive MRSA culture*** from a normally sterile site for this case, not the date when the culture was first noted to have growth. **REMINDER:* For isolate collection, ***we also want the first positive invasive MRSA culture***, i.e. the culture that led to the completion of the CRF. If that isolate is not available, DO NOT send a different isolate to CDC for that case.
12. Patient Outcome	*Hospitalized patients:* please indicate patient's outcome, either "Survived" (patient was discharged alive) or "Died" (patient died during acute hospitalization) upon discharge **ONLY.** Check "Unknown" if the chart is incomplete or if it is not

	clear from the medical record the outcome of the patient. *Non-Hospitalized patients:* please indicate patient's outcome, either "Survived" (patient left the ER or office alive) or "Died" (patient died while seen at the ER or office) upon leaving the ER or office. Check "Unknown" if the chart is incomplete or if it is not clear the patient's outcomes form the information available. **Example:* A patient was seen at ER "A" on 1/15/2005, was culture positive on that date and discharged home. This same patient was seen at ER "B" on 1/18/2005, no culture was collected on this patient, and the patient died while in the ER. In this case, the ER visit associated with the positive culture would be recorded for this patient ONLY. In addition, the patient would be recorded as having "survived" even though they died 2 days later. The date of death of this patient would be recorded in the "comments" section.
If survived, was the patient transferred to a LTCF? *(added 2008)*	If the patient survived, please determine if the patient was transferred to a LTCF at discharge. Please check "No" if 1) the patient was not transferred to a LTCF, 2) if it is not clear from the chart if the patient was transferred to a LTCF, 3) if this information was not documented in the chart, or 4) if it is "unknown" from the chart. If the patient was discharged to a LTACH do not check this question. Patients discharged to inpatient hospice only will be included in this question.
If survived, was the patient transferred to a LTACH? *(added 2010)*	If the patient survived, please determine if the patient was transferred to a LTACH at discharge. Please check "No" of 1) the patient was not transferred to a LTACH, 2) if it is not clear from the chart if the patient was transferred to a LTACH, 3) if this information was not documented in the chart, or 4) if it is "unknown" from the chart.
If died, date of death: Was MRSA contributory or causal?	If the patient died, indicate the date of death and indicate whether MRSA was contributory or causal. Check "yes" **only if** MRSA is ***clearly stated*** as being contributory or causal in the discharge summary (e.g., patient has MRSA bacteremia and sepsis is indicated as the cause of death). Check "no" if the death is ***clearly unrelated*** to MRSA (e.g. a patient has bursitis and dies from heart failure). Check "unknown" if there is any uncertainty. *Note: This variable may require the judgment of the Surveillance Officer; check "unknown" if uncertain.
If died, was the culture obtained on autopsy? *(added 2009)*	If the culture indicated in Question 11b was obtained during autopsy, check "yes", if it was not check "no". If it is unclear or unknown whether the culture was obtained during autopsy, please check "unknown". This variable is for edit purposes only. *Surveillance Change:* This question was modified on the 2007 CRF. Removed where patient was discharged to.

13a. At the time of first positive culture, was the patient pregnant or postpartum? *(added 2008)*	Indicate whether the patient was pregnant or postpartum at the time of collection of the first positive invasive culture. For this surveillance project, the postpartum period is defined as the **30 days** following a delivery or miscarriage. If there is no indication of a patient being pregnant or postpartum and the entire chart was reviewed check "Neither". If the case is female <12 years of age or >55 years of age, "Neither" is assumed unless otherwise indicated in a complete chart. If there is specific mention of a negative pregnancy test, regardless of age, or that the patient is not pregnant; "Neither" should be checked. If it is unclear from the chart whether the patient was 1) postpartum or pregnant, 2) if the chart was incomplete when reviewed or 3) the whole chart was unable to be reviewed AND the patient is of child bearing age (between the age of 12 and 55), then check "Unknown".
13b. If pregnant or post-partum, what was the outcome of the fetus *(added 2008, updated 2010)*:	If the case is pregnant or postpartum and was seen in the ER or outpatient office indicate ONE of the possible fetal outcomes upon leaving the ER or office. For hospitalized patients, indicate fetal outcome at time of patient's discharge. If the baby survived but it was unknown if the baby was ill, check "survived, no apparent illness". If none of the listed outcomes are clearly documented in the maternal chart or of the outcome of the fetus is unknown, please check "unknown". *Clarifications of fetal outcomes:* *Live birth/neonatal death*: infant born alive but died ≤ 30 days of age. *Abortion/stillbirth*: not born alive, even if death occurred during labor. Specifically, abortion in this instance means death of a fetus *before* 20 weeks of gestation or when < 500 grams in weight from *natural causes*. Stillbirth means fetal death (from natural causes) occurring after 20 weeks of gestation or when the fetus is > 500 grams in weight. *Induced abortion*: fetal death due to a deliberate medical procedure. *Surveillance Change:* Addition of the "Still Pregnant" check box in 2010.
14. Sterile site(s) from which MRSA was initially isolated (See Table 2 and 3)	Check the site(s) from which the initial culture was collected from (culture recorded in question 11b). The initial culture information should come from the initial laboratory report. For some sterile sites, review of procedure notes and operative/surgery notes might be necessary to ensure that the site was obtained sterilely. **REMINDER:* For this question we are looking for the sterile site from which the initial culture was collected. An entry such as "Line Infection" is NOT a sterile site because that is a "type of infection" and not a sterile site. The correct entry would be "Blood". *Clarifications of sterile sites (please also refer to Table 2):* *Pleural fluid*: cultures designated as "Pleural Fluid" on the laboratory report should be considered sterile and recorded on the CRF by checking the appropriate box. Pleural fluid should also be checked for: "chest fluid", "thoracentesis fluid", "pleural peel", "pleural abscess" and "empyema fluid".

Peritoneal fluid: cultures designated as "Peritoneal fluid" on the laboratory report should be considered sterile and recorded on the CRF by checking the appropriate box. Peritoneal fluid includes abdominal fluid and ascites. If ruptured appendix or perforated bowel is noted in the medical chart, case should not be counted as contamination of peritoneal fluid is likely.

Joint/Synovial fluid: cultures designated as "Joint Fluid" or "Synovial Fluid" on the laboratory report should be considered sterile and recorded on the CRF by checking the appropriate box. Joint/synovial fluid includes: needle aspirate or culture of any specific joint (knee, ankle, elbow, hip, wrist, etc). **There is no need to enter the specific joint in the "Other sterile site (specify)" field**. If you would like to indicate the specific joint, do so in "Comments" section ONLY.

Bone: cultures designated as "bone" on a laboratory report, should be considered sterile and recorded on the CRF by checking the appropriate box. Bone includes "bone marrow" (*Note*: Only include cultures that would be from a normally sterile site. Include cultures surgically obtained UNLESS the bone is exposed due to a wound). Please investigate sites such as "hip internal abscess", "vertebral disk", "tissue-knee", for example, to make sure they are not truly bone cultures.

Internal Body Site: specimen obtained from surgery or aspirate from one of the following: lymph node, brain, heart, liver, spleen, kidney, pancreas, vitreous fluid (type of eye fluid), ovary, or vascular tissue should be considered a sterile site and investigated. These are the only sites that appear in the "Internal Body Site" drop down box in the database. Please check "Internal Body Site (specify)" and choose the body site from the list provided. If the specific body site is not included in the drop down menu, please check "Other Sterile Site (specify)" instead and specify the body site there. Please note; aqueous fluid from the eye is also considered a sterile site, however it is captured under "Other sterile site (specify)".

- *Vascular Tissue (added 2010 to drop down box)*: blood bearing vasculature such as aorta, descending aorta, aorta tissue, vena cava, aneurysm wall, etc. Please note, sterile sites such as AV Fistula, AV Graft or vascular graft tissue listed on a lab line list should be investigated and included in this category **if** there is evidence in the medical record that the sample was surgically removed.

***Other Sterile Sites*:**

Abscesses:

- *Skin Abscesses*: a culture designed as a "Skin Abscess" on the laboratory report should be not investigated, as it does not meet the sterile site criteria for this surveillance.
- *Internal Body Abscess*: a culture designed as an "Internal Body Abscess", "Liver Abscess", "Brain Abscess" etc should be investigated. It should be determined if the sample was obtained sterilely though medical chart review. If that is the case, the specimen

should be counted for surveillance. The "Internal Body Site (Specify)" field should be used if the abscess is obtained from one of the organs in the pick list (e.g., a brain abscess should be coded as "internal body site", and specified as" brain"). **Please see Table 2 for further clarifications.**

Autopsy Specimens: In some cases, autopsy specimens, if a specimen is taken ≤ 12 hours after death, *may* be considered sterile sites. The decision of whether or not an autopsy specimen is from a sterile site should be discussed on a case-by-case basis. Please indicate if the initial culture was from an autopsy specimen under Question 12 "If died, was the culture obtained during an autopsy?". Cultures taken > 12 hours after death will not be considered sterile sites for ABCs purposes.

Bursa: cultures designed as "bursa" on a laboratory report should be considered a sterile site. Please check "other sterile site (specify)" and enter in "BURSA" in the space provided.

Fluid (unspecified): cultures designated as "fluid" on a laboratory report, should be investigated as a potentially sterile site. **Please see Table 2 for further explanation.**

Muscle: cultures designated as "Muscle" on a laboratory report should be investigated. Include muscle tissue, muscle biopsy, or muscle aspirate that is sterilely obtained such as muscle tissue obtained surgically or through a needle aspirate.

- Indicate muscle and fascia as "other sterile site" and specify. If you would like to specify the type of muscle sample further do this in the "Comments" section ONLY.

**Note:* In the case of muscle and fascia, a surgically obtained specimen would be included UNLESS from a wound. If a wound such as a decubitus ulcer has exposed the fascia or the muscle then those sites would no longer be considered sterile. If the culture is obtained surgically or through needle aspirate, for example, and the skin was intact over the muscle and fascia when the tissue was obtained this would be considered a sterile site. The culture site must be designated as muscle or fascia; superficial skin cultures obtained surgically (e.g., during debridement) are not considered sterile sites.

Skin Cultures: cultures from skin infections such as skin abscesses, perirectal abscesses, boils, wounds or furuncles are not considered sterile sites for MRSA surveillance and should not be recorded on the CRF.

Swab Samples: cultures taken in a *non-surgical* fashion from superficial sources, even if from a suspected necrotizing faciitis patient, would **not** be reported as a case of invasive MRSA. The isolate MUST have been recovered ***from deep tissue when surgically obtained***.

	Tissue: cultures designated as "tissue" with no specification, on a laboratory report, should NOT be investigated as potentially sterile sites. Cultures designated as "tissue-hip" or "tissue-clavicle", for example, should be investigated as they could actually be a "bone" isolate and should be recorded as such. Please see **Table 2** for more information on "Deep Tissue" and "Biopsy Tissue". *Other Non-Sterile Sites:* cultures from middle ear or ear, amniotic fluid, placenta, sinus, wound, **lung,** gallbladder (including all specimens associated with the gallbladder), appendix, cornea, cord blood, urine, sputum, breast, drainage or throat are not considered sterile sites for MRSA. Information regarding non-sterile site are no longer collected, this started in 2007. **Please see Table 3 for a list of other commonly asked about sites that are not sterile.** **Note:* If uncertain whether a specific culture should be further investigated contact the ABCs MRSA Surveillance Coordinator at CDC.
15. Same site positive 7 to 30 days after initial culture?	Check "yes" if a culture of the SAME sterile site is positive (i.e. the initial culture site recorded in Question 14 is still growing MRSA) between 7 and 30 days after initial culture date (date recorded in Question 11b). This information can be obtained from lab reports received from the identifying lab or in the medical record. (This time period is specified to exclude follow-up cultures and identify persistent invasive MRSA disease – do not document positive cultures of the same sterile site between 1 and 6 days after the initial culture.) **Note:* Chart review should not be required to obtain information; report should be received from the lab. **If a culture is ≥ 30 days after the initial culture date a new STATEID must be assigned and a case report form completed.**
16. Other sterile sites positive within 30 days of initial culture?	Check "yes" if a culture of a DIFFERENT sterile site is positive WITHIN 30 days of the initial sterile site culture and specify site(s). Please check all sites on the CRF. For data entry purposes, if more than 3 other sites are reported, indicate in comments section as "Q15:_____". **Note:* Chart review should not be required to obtain information; report should be received from the lab. **If a culture is ≥ 30 days after the initial culture date a new STATEID must be assigned and a case report form completed.** *Surveillance Change:* As of 2007 we are no longer collecting information on non-sterile sites.
Non-sterile sites within 72 hours?	*This question was removed from the 2007 CRF.*
17. Types of MRSA infections associated with culture(s)	Check ALL infections that apply to this episode of infection. Do not include previously existing or chronic infections under this question; these types of conditions should be included under Question 18. The patient's admission and discharge summaries will be the most reliable sources

(See Table 4)	of information to complete this question. If the final diagnosis of a patient's illness is not the same as the admitting diagnosis, **consider only the final (or discharge) diagnosis**. Often the admitting diagnosis of a patient's illness is unknown and clarified only in the discharge summary or discharge diagnosis. (For example, a patient may be admitted with the provisional diagnosis of pneumonia but actually is found to have asthma.) For patients who have been hospitalized for an extended period of time, review of the progress notes around the date of initial culture might be necessary. Further instructions and definitions of terms are in Table 4 at end of this document. Starting in 2010 we will be collecting information on the following additional type of infections: • *Chronic Ulcer/Wound (non-decubitus)*: Acute infection of any extremity involving sites of chronic wounds including chronic skin breakdown, may involve bone of soft tissue as well, and may or may not include cellulitis. These infection sites are often characterized as diabetic food/leg ulcers but occur in patients with vascular disease as well. Discharge codes for ulcer or lower limb or chronic ulcer are not sufficient unless there is some indication the ulcer was infected or related to invasive MRSA infection. ***Please review Table 4 as changes have been made for 2010!!*** **Note:* We are ***not*** expecting you to medically judge whether or not a patient has a specific infection or illness. The purpose of Table 4 is to inform you as to what the infections types are. For all infection types, ***please check the box if the term is found in the admission or discharge summary. We are looking for type of infection REGARDLESS of what the initial culture site is.*** Often in long hospitalizations or in the case of a patient who died, the MRSA infection might not be documented in the admission or discharge summary. In such situations, it would be advantageous to review progress and consult notes around the date of initial culture to ensure completeness of this question. *No infection types:* If no type of infection is mentioned in the medical record; check NONE. This includes positive blood cultures where the culture is determined to not to be clinically relevant. *Unknown infection types*: If the type of infection information is missing from the medical record (i.e. incomplete chart, no discharge summary), check UNKNOWN. *Surveillance change:* We removed the phrase "This includes positive blood cultures with no mention of bacteremia" from the definition of "No infection type" in 2010. This was to be consistent with how we are defining bacteremia- positive blood culture.
18. Underlying Conditions (See Table 5, 6, and 7)	Check ALL underlying illnesses or prior conditions, listed on the CRF, as noted in the medical record or by reporting physician or ICP. Any listed condition should be considered an "underlying" condition when it is a chronic condition not expected to be resolved (e.g. congestive heart failure), *except when* it is obvious

	that the condition no longer exists (e.g. quit smoking 3 years ago, sober 5 years) OR when the condition is a new condition that occurred during the current illness. If an underlying condition, such as Cancer, AIDS or diabetes, is diagnosed during the current MRSA hospitalization, however existed prior to admission, please record this condition here. Please note, we want to capture **history** of some chronic skin conditions. Types of current infections (see Question 17) should NOT be indicated in the specify field for underlying conditions. The patient's admission summary, H&P or intake consult will be the most reliable source of information to complete this question. *REMINDER:* we are only interested in underlying conditions listed during this admission. Please DO NOT look at data from previous admission to complete this question. ***Please review Table 5 as changes have been made for 2010!!*** **Note:* We are not expecting you to medically judge whether or not a patient has an underlying condition or illness. The purpose of Table 5 is to inform you as to what the underlying condition or illness is. ***Please check the box if the term is found in the chart.*** *Examples:* What is in chart: — Underlying illness or prior condition? h/o heart failure — yes h/o acute leukemia — yes h/o smoking — yes h/o smoking, stopped 10 years ago — no h/o colon cancer — yes acute renal failure — no chronic renal failure — yes h/o chemotherapy — yes *If a question remains about classification of *past* malignancy, contact CDC. *No underlying condition:* If no underlying conditions are mentioned in a complete medical record; check NONE. *Unknown underlying conditions*: If the underlying conditions information is missing from the medical record (i.e. incomplete chart, no discharge summary, chart unavailable), check UNKNOWN.
19. Classification-Healthcare-associated and Community-associated (See Table 1 and Table 8)	Check ALL that apply. *None:* If none of the risk factors are indicated in the medical record and the information appears to be complete, check "none". *Unknown:* If the information appears to be missing for all of the risk factors, check "unknown".

(See also Appendix 2) Previous documented infection or colonization:	Please check if: • A previous MRSA infection or colonization is noted in the admission summary. If so, indicate the month and year if available. Please indicate regardless of culture site, both sterile and non-sterile sites qualify for this question. • Patient is already in database (if so, enter the most recent STATEID). *Note:* Check if a **non-sterile** culture was **positive 3 or more calendar days** prior to the initial invasive culture, i.e. this positive non-sterile culture could have occurred within the same admission as the invasive MRSA culture that lead to the completion of the case report form. For example, if a patient had a sputum sample positive on 1/1/2005 and then a blood culture positive on 1/4/2005. The reference date for this question, or Day 0, would be assigned to 1/4/2005 (the date of initial culture). Day -1= 1/3/2005, Day -2= 1/2/2005 and Day -3= 1/1/2005 (culture date of sputum sample). Therefore for this example you would check this box, as the previous non sterile culture was collected more than 3 calendar days before the initial invasive index culture. You could also subtract the date of sputum culture from the date of initial culture to come to the same conclusion. *Surveillance Change:* For 2009 we changed the definition of this question from >72 hour to 3 or more calendar days.
Culture collected ≥ 3 calendar days after hospitalization *(changed wording in 2009):*	Please check if the initial culture was collected 3 or more days after the admission date to the short-stay ACUTE care hospital. If the initial culture was collected during admission to a LTCF or LTACH do not check this box. The reference date for this question is date of admission. You will check this box if the date of initial culture occurred on Day 3 or greater than Day 3. *Note:* We would like for you to check this question if the culture was collected 3 or more days after admission. Please do not take any other factors into account when answer this question. For example, regardless of what the admitting diagnosis was of the patient upon admit. *Surveillance Change:* For 2009 we changed the wording of this question from >48 hour to 3 calendar days.
Hospitalized within year before initial culture date:	Please check if the patient was admitted to an **ACUTE care hospital** as an inpatient in the year prior to the initial culture (culture recorded in Question 11b). If patient is in the hospital at the time of the initial culture (i.e. the event that lead to this CRF being complete), **do not include that hospitalization here.** Do not include outpatient or emergency room visits unless admitted as an inpatient; if admitted to an observational unit and not as an inpatient, then do not check. If the patient was previously hospitalized, and the month and date of that hospitalization is known, please indicate. If the exact month and date are not known, but there is an indication in the chart such as "admitted 4 months ago" please estimate month and year. If it is not known, please check "unknown". When recording the date of previous hospital discharge, please indicate the MOST recent date of hospitalization.

	Clarification: The initial hospitalization for birth should be captured under this question. *Surveillance Change:* Change the word "index" to "initial" in 2009 for consistency. 2010 "well baby" births will be considered a hospitalization. Only way to capture this information consistently across sites.
Surgery within year before initial culture *(changed definition of this question in 2009):*	Please check if patient had surgery during the period of one year before the initial culture (as listed in Question 11b) up to 3 calendar days before the initial culture date. Do not check if surgery occurred within 3 days of the initial culture. Check if the surgery takes place during a single trip to the operating room where a surgeon makes at least one incision through skin or mucous membrane, including laparoscopic approach. The reference date for this question is the date of initial culture. *Clarification:* If the location of surgery, such a vein removal, cannot be determined, from the medical record, to have occurred in the OR, please do not check this question. Only check this question if it is clear that the patient visited the OR for their procedure. The insertion of a central vascular catheter would not be considered a surgery for the purposed of our surveillance. This procedure can occur at the bedside. *Surveillance Changes:* For 2009 we changed the definition of this question from 48 hour to 3 calendar days. We also replace the work "index" with "initial" for consistency.
Dialysis within year before initial culture (Hemodialysis or Peritoneal dialysis):	Check if patient is recorded to have been receiving dialysis ***(either acute or chronic dialysis)*** within one year before the initial culture date, include patients currently receiving dialysis. Include peritoneal and hemodialysis. Sources that might be helpful to review, in addition to the routine sources, for this *and the subsequent dialysis questions* are as follows: nursing flowsheets/notes under the "access" section, ID consult/notes, lab reports, dialysis record/flowsheet/consult. *Surveillance Change:* Change the word "index" to "initial" in 2009 for consistency.
Current Chronic Dialysis *(new 2009):* • Type: • Type of vascular device:	Check if a patient had end stage renal failure at the time of positive MRSA culture (initial culture recorded in Q11b) that required regular outpatient hemodialysis or peritoneal dialysis treatments. *Clarification:* For this question we are only interested in whether a patient had existing "chronic dialysis". If a patient is placed on "chronic dialysis" as a result of this MRSA infection DO NOT check this question. • Please indicate the *primary* type of outpatient dialysis they had been receiving (i.e. hemodialysis or peritoneal dialysis). • If the patient is receiving **hemodialysis**, please indicate the type of vascular access the patient ***used at the time of initial culture*** (i.e. check "AV fistula/AV graft" or "Dialysis CVC"). If the type of device that *was used* is NOT known, please check "unknown". Please review hemiodialysis flow sheets/procedure notes, etc, available closest to the date of initial culture. o *Example:* If a patient is CURRENTLY receiving dialysis treatment

	though a Dialysis CVC, but they have an AV graft that is "maturing". Check "Dialysis CVC" as that was the device that was used for dialysis AT TIME OF INITIAL CULTURE. *Clarifications:* *Hemodialysis:* Check if the patient receives regular hemodialysis in an outpatient clinic. *Do not* include short-term hemodialysis treatments received in inpatient setting to treat acute renal failure or poisoning. If a patient receives hemodialysis, at least one type of vascular access should be checked (AV Fistula/Graft , CVC or "Unknown" access device). *Peritoneal Dialysis:* Check if the patient receives peritoneal dialysis in an outpatient clinic or at home. Peritoneal dialysis treatment requires a catheter to access the peritoneal cavity. Peritoneal dialysis catheters are NOT central venous catheters. *AV Fistula/Graft:* Check if the patient has an arteriovenous (AV) fistula or an AV graft. Although AV shunts are no longer in use, the terms, "AV shunt", "dialysis shunt" or "hemodialysis shunt" are sometimes used to mean an AV fistula or graft. *Hemodialysis CVC*: Example of central vascular catheters used for hemodialysis, include: hemodialysis catheters, hemodialysis ports, permacaths and vas caths. The following dialysis devices *ARE NOT* hemodialysis central vascular catheters: peritoneal catheter, AV fistula, AV graft.
Residence in a long-term care facility within year before initial culture date: *(wording changed in 2009)*	Check yes if patient was a resident of a long term care facility within one year before the initial culture date (as listed in Question 11b); include patients that are a resident at the time of culture. Do not check if no indication is made in the medical record or by infection control. **REMINDER: we are including Nursing Homes, Skilled Nursing Facilities, Inpatient Hospice and Rehabilitation Facilities as LTC (Table 1). Please remember, a LTACH or an Assisted Living Facility does not qualify as a long term care facility for this surveillance.** *Surveillance Changes*: • Type of long-term care facility was removed from this question in 2007. • Change the word "index" to "initial" in 2009 for consistency.
Central vascular catheter in place at any time in the 2 days prior to initial culture: *(changed wording of this question in 2009)*	Check if there is evidence of the presence of a central vascular catheter (including a dialysis CVC) in place at any time ***2 calendar days before the initial culture recorded in Question 11b.*** The reference date for this question is the date of initial culture. Sources in the medial record for documentation of the presence of a CVC include: consults, discharge summary, admission notes, any type of typed consult notes, radiology report (CT scan or X-ray), ER notes, nursing notes, flow sheets, and transfer summary. You will review these sources on Day 0 (date of initial culture), Day -1 and Day -2 for this question. • *Central Vascular Catheter:* An intravascular catheter that terminates at or close to the heart or in one of the great vessels which is used for infusion, withdrawal of blood, or hemodynamic monitoring. The following are considered great vessels for this purpose: Aorta, pulmonary artery, superior vena cava, inferior vena cava, brachiocephalic veins, internal jugular veins, subclavian veins, external iliac veins, and common femoral veins.

	(reference: NHSN). Please note: • An introducer is considered an intravascular catheter . • In neonates, the umbilical artery/vein is considered a great vessel. • Neither [the location of] the insertion site nor the type of device may be used to determine if a line qualifies as a central line. The device must terminate in one of these vessels or in or near the heart to qualify as a central line. • Pacemaker wires and other nonlumened devices inserted into central blood vessels or the heart are <u>not</u> considered central lines, because fluids are not infused, pushed, nor withdrawn through such devices. • Peripheral IVs and AV fistulas are NOT CVCs. **Refer to Table 8 and Appendix 3 for examples of devices. Please note that these resources are NOT complete *nor are they meant to be comprehensive.* If at any time, you have a question as to whether or not a medical device should be classified as a CVC, please contact the ABCs MRSA Surveillance Coordinator.** <u>*Surveillance Changes:*</u> This choice was modified in 2007. Only collecting information on central vascular catheters. This question was re-worded in 2009.
20. Susceptibility results (Appendix 3)	Check appropriate box for each antibiotic reported by the lab for the initial sterile site culture (culture recorded in Question 11b); not all antibiotics will be reported by each lab. If an antibiotic is not reported, check "U". If a laboratory tests for an antibiotic that is not listed on the CRF, please check "other", specify that antibiotic <u>CODE</u> (please see Appendix 3) in the blank provided and record the initial culture's susceptibility to it. If the antibiotic code specified in Appendix 3 is not used, this will be fed back in a monthly edit. **<u>Please only list ONE antibiotic into this blank.</u>** If there are multiple antibiotic results that you would like to track, please list them in the comment section ONLY. <u>**Note*</u>: There are no official MIC breakpoints for Daptomycin or Linezolid. For these antibiotics the results should be reported as Sensitive (S) or Not Sensitive (NS) if available. *The CRF was modified in 2009 to accommodate this.* <u>**Note:*</u> If antibiotic susceptibility results were recorded for any culture OTHER THAN the initial culture for this question (culture recorded in Question 11b), please indicate this in comments as "Q19:_____".
Polymicrobial	**Note: this question was removed in 2007*
Receiving antibiotics	**Note: this question was removed in 2007*
Prescribed antibiotics	**Note: this question was removed in 2007*
21a-d. Supplemental pneumonia questions *(added*	**Note: These questions were added in 2008* ***COMPLETE ONLY IF "Pneumonia" WAS CHECKED FOR QUESTION 17.*** *Please complete this questions based on what is recorded in the chart. Please*

2008).	*note for question 21c and 21d we are ONLY interested in the time period 3 days before and 3 days after the initial MRSA culture (culture recorded in Question 11b). You will be looking at the time period that includes Day -3, Day -2, Day -1, Day 0 (date of initial culture), Day 1, Day 2 and Day 3.* *Also if you checked "pneumonia" for question 17 ALL parts of this question MUST BE COMPELTED.* ***For each question at least ONE option MUST have a value.***
21a. Discharge narrative	Review the discharge summary narrative and/or the discharge face/front sheet to determine if any of the following are listed as discharge diagnosis: "MRSA Pneumonia", "Staphylococcal pneumonia", "Aspiration pneumonia", "Hemorrhagic pneumonia" *(added 2009)*, "Necrotizing pneumonia" *(added 2009)* or "Pneumonia". Please check all that are listed. **If a different type of pneumonia is listed, for example "ventilator-associated pneumonia" please check "Pneumonia".** ***If none of the phrases on the CRF are indicated in the discharge summary please check "No pneumonia specified".*** **Note:* You must answer yes to AT LEAST ONE of the choices listed for this question. *Clarification:* The purpose of this question is to capture what is being recorded in the discharge summary, in the medical record, across sites. Please only use the discharge summary when completing this question.
21b. Discharge Diagnosis	Please check all ICD-9 codes indicated at time of discharge for the patient: "482.40", "482.41", "482.42", "482.49" or "V09.0". These codes should be found in the discharge summary or the discharge face/front sheet. *None of these listed:* If none of the above specified codes are indicated please check **"None of these listed"**. Please note, that there could be other ICD-9 codes listed, you will select "None of these Listed" if codes OTHER THAN the ones of interest are found in the chart. *N/A:* If the ICD-9 codes are not routinely available at the surveillance hospital check **"N/A".** *Unknown:* If ICD-9 codes are routinely available at the surveillance hospital, but are just not in the chart being reviewed, please check **"Unk".** **Note:* You must check at lest one box for question. Clarifications: *482.40:* Pneumonia due to *Staphylococcu*s, unspecified *482.41*: Pneumonia due to *S. aureus* *482.42:* Methicillin-Resistant *Staphylococcus aureus* pneumonia *(added 2009)* *482.49*: Other Staphylococcus pneumonia *V09.0:* Methicillin-resistant *Staphylococcus aureus*
21c. Chest Radiology Results *(changed this question slightly in 2009)*	Review all the x-ray reports/films and/or CT scans that were taken **3 days BEFORE up to 3 days AFTER** (i.e. Day -3, Day -2, Day -1, Day 0 (date of initial culture), Day 1, Day 2 and Day 3) the initial culture recorded in Question 11b.

(See Table 9)	• If a patient had an x-ray film taken and a CT scan performed on the same day, **please choose the CT scan as the preferred radiology method.** • Please select the type of radiology procedure used to complete this question by checking the correct box. Please check ONLY one *(added 2009)*. • Find the radiology film/scan and interpretations *closest* to the initial culture (it is preferential to use procedures that occur ON the date of initial culture). Look for the key terms listed in the **"Final Interpretation" or "Finding"** portion **ONLY** of the radiology report and check all the key terms that apply on the CRF. **Note:* documentation of any of the key terms as "probably" or "possible" is enough to check the box. • **If the radiology procedure closest or on the date of the initial culture is normal** (i.e., the interpretation reads "normal x-ray" or "no acute disease") please review the other reports and use the interpretation from the report that is not interpreted as "normal x-ray" or "no acute disease" and is closest to the date and time the initial culture was taken. In other words, preferentially capture the MOST abnormal radiology report closest to the initial culture date. Please note; do NOT go outside of the specified time period above to find an abnormal result. *Not Done:* Choose **"Not Done"** if no x-ray or CT scan was performed on the case in the specified time period. *No Evidence of Pneumonia (added 2009):* Please check this if listed in the interpretation. A list of common terms that should be classified as "No evidence of pneumonia" are listed in Table 9. Please note this resource is ***NOT meant to be comprehensive***. If you have any questions as to how to interpret an x-ray finding or CT scan, please contact the ABCs MRSA Surveillance Coordinator at CDC. *None Listed:* If none of the key terms listed on the CRF are found in the "Final Interpretation" or "Finding", and either an x-ray or CT scan was performed, please choose "None Listed". *Not Available:* If a chest radiology procedure was performed, i.e. it is clearly indicated in the chart, however the interpretation is not available, please choose **"Not available".** *Other (specify):* Please see Table 9 for examples of key terms that **SHOULD NOT** be entered into the "other specify" field. **Note:* You must check at lest one box for question.
21d. MRSA positive non-sterile respiratory specimen.	Please check this box ONLY if the patient had a positive respiratory non-sterile site isolate of MRSA. This isolate **must have been positive either 3 days BEFORE or 3 days AFTER** the date of initial culture of MRSA recorded in Question 11b. The following sites are acceptable "respiratory" sites: "sputum", "bronchoalveolar lavage", "tracheal aspirate" or "lung tissue". **Clarification:* you will look at the lab reports 3 days before through 3 days after the date of

	initial culture. *<u>Note:</u>* Please contact CDC if you have any questions as to whether or not a site would be considered a respiratory specimen. *<u>Note:</u>* You must answer this question.
22. Was case first identified through audit?	Was the case first identified through the audit? Check "Yes" or "No". *<u>Note:</u>* With changes in surveillance and the move towards electronic reporting, audits are performed differently at each site. Please define "audit" at your site and use this question for site specific purposes only.
23. CRF status	What is the current status of the case report form in terms of completion? Check: "Complete" if the case report form is complete and no further changes or chart review are anticipated. "Incomplete" if the case report form is not complete (this is the database default). "Edited and Corrected" if edits received from the ABCs MRSA surveillance coordinator have been made. "Chart unavailable after 3 requests" if the medical record is not available for review after 3 attempts, if the medical record is not able to be located, or if some other event prevented you from gaining access to the medical record. *<u>REMINDER:</u>* A review of the discharge summary is required to call a case "Complete".
24. Does this case have recurrent MRSA disease? (Appendix 4)	Indicate whether or not this patient was previously infected by MRSA as in a previous case report, i.e. this patient was previously registered in this surveillance system. The specimen in this case must have been isolated *30 or more* days after any previous initial MRSA culture. Please see Appendix 4 for further information. *<u>Clarification:</u>* • This box will be checked ONLY if this patient had a previous infection that was ***invasive***. If a patient had a previous infection, and it was from a non-sterile site, please indicate this in Question 19 ONLY and record the date of culture in the space available. • There might be instances were a patient had a positive invasive culture at the beginning of their hospitalization and the infection cleared, however, they remain in the hospital for treatment. If this patient has another positive invasive culture ***more that 30 days after the first***, this second culture will be assigned a ***<u>new</u>*** STATEID and will trigger the completion of a new CRF. (This also applies to any additional subsequent cultures taken more than 30 days from the previous.) In this example the data captured by the CRF will have the same admit and discharge dates. The difference, however, will appear in the date of initial culture (Question 11b), Question 19 and Question 24 (this question). For the second culture date you will mark "Yes" for Question 24, and enter in the STATEID that corresponds with the first culture date, and for Question 19, you will indicate that this patient had a previous infection and add the culture date or the previous STATEID in the space provided.
25 Date reported to EIP Site	Indicate the date reported to the ABCs site. This is the date that the ABCs personnel were first notified or made aware of this case.
26. Initials	Initials of Surveillance Officer completing the case report form.
27. Comments	Use this space to add other information that might not have fit the choices

	provided or to enhance existing information.

Table 1. Question 5 and 11a:
RESIDENCE AT TIME OF/LOCATION OF INITIAL CULTURE COLLECTION

Note: Question 5 was added in 2008. Question 11a changed in 2007. The sub categories for "Hospital Inpatient" were collapsed. The "Nursing Home", "Rehabilitation Facility" and "Home Health" options were all collapsed into "Long Term Care Facility".

Location	Definition
Emergency room (Q11a only)	Culture collected while in the ER/ED, regardless of admission status. Please check "Emergency Room"
Home health	*This specific category was dropped on the 2007 for Q11a. Patients in home health programs should be captured as follows:* *Q5: Select "private residence".* *Q11a: Select "outpatient".*
Homeless (Q5 only)	Please check if a patient is documented to be homeless in the medical record or a resident of a shelter, mission, church community center, etc, at time of initial culture.
Hospital Inpatient (Q11a only) - ICU - Other unit	Culture was collected while an inpatient at a hospital. *Intensive Care Unit (ICU):* culture collected while the patient was in an intensive care unit. A step-down unit is not considered and ICU for ABCs. *Other unit*: Culture collected while patient was in another *inpatient* unit. **Note:* Do not check if culture was collected in ER or outpatient unit (such as outpatient surgery). *Surveillance Changes:* Sub categories for this location were removed in 2007. "ICU" and "Other Unit" were added back in 2010.
Incarcerated (Q5 only)	Select if the patient was a resident of a correctional facility of any kind at the time of initial culture.
Long Term Care Facility	*Q5:* Please check if patient was a *resident* of a Long Term Care Facility, including a Nursing Home, Inpatient Hospice or Physical Rehabilitation Facility at the time of initial culture. *Q11a:* Please check if initial culture was *collected* while patient was at a Long Term Care Facility, including Nursing Home, Inpatient Hospice or Physical Rehabilitation Facility. Do not check if the culture was collected at another location; for example, if a NH resident is transported to an ER and the culture is collected in the ER, check ER. *Clarifications:* *Nursing home*: Includes nursing home, long term care facility and other chronic (where the patient has lived for at least 30 days) care facilities where the patient has been living. This does *not* refer to facilities where the patient receives daily outpatient therapy *nor* does it include prisons, group homes, rehabilitation hospitals or assisted living facilities. *Physical Rehabilitation facility*: Includes facilities where the patient is admitted for the purpose of receiving rehabilitation following a

	hospitalization (includes previous and current hospitalizations). Include facilities within hospitals that are designated as rehabilitation units. Include facilities within nursing homes if the purpose of transfer is to be discharged home after completion of rehabilitation. Drug Rehabilitation Facilities ARE NOT Rehabilitation Facilities. *Skilled Nursing Facility*: A nursing facility with the staff and equipment to give skilled nursing care and/or skilled rehabilitation services and other related health services. This is a level of care that requires the daily involvement of skilled nursing or rehabilitation staff (e.g. registered nurse or licensed practical nurse), and that, as a practical matter, can't be provided on an outpatient basis. Examples of skilled nursing facility care include intravenous injections and physical therapy. Assisted living facilities (e.g. facilities that provide custodial care such as assistance with daily living, like bathing and dressing) are not considered skilled nursing facility. **Note:* "Home Health" **should not** be classified under LTCF for either Q5 or Q11a. **Note:* If a facility does not meet one of these criteria, please choose "Other" for either Q5 or Q11a and specify the facility type in the space provided. For **example**, for a Drug Rehabilitation Facility, please check "Other" and specify "Drug Rehab". *Surveillance Changes:* • The following options for Q11a were all combined into this choice for 2007; "Nursing Home" and "Rehabilitation Facility" • Inpatient Hospice was added, officially, to this category (2010)
Long Term Acute Care Hospital *(added 2010)* (Q11a only)	*Q5:* Please check if patient was admitted at a Long Term Acute Care Hospital, at the time of initial culture. *Q11a:* Please check if initial culture was *collected* while patient was at a Long Term Acute Care Hospital. If so, check "Other" and specify "LTACH" in the space provided. Do not check if the culture was collected at another location; for example, if a LTACH patient is transported to an ER and the culture is collected in the ER, check ER. *Long Term Acute Care Hospital (LTACH):* Includes acute care hospitals that specialize in caring for patients with complex medical problems for extended periods of time (at least 25 days). These hospitals may be located within acute care hospitals or may be freestanding. The major corporations that manage these types of facilities are listed below, this information might be helpful in identifying this type of facility. -Triumph HealthCare -Kindred -Select Medical Corporation -LifeCare Hospitals -Promise -Regency Hospital Company **Please note:* for our surveillance system, we will keep LTACHs a separate

	entity from the short-term acute care hospital setting.
Nursing home (Q11a only)	*This specific category was dropped on the 2007 CRF, however still captured in the Long Term Care category.*
Outpatient (Q11a only)	Culture collected in an outpatient clinic (i.e., outpatient clinic, physician office, minor emergency clinic, community health center, outpatient surgery or procedure). **Please also include persons receiving "home health" and residents of "assisted living facilities" in this category.**
Other	*Q5:* Check if the location where the patient was a resident at the time of initial culture collection is not listed, please check "Other" and specify the location. *Q11a:* Check if location of culture collection does not fit any of the given definitions and specify. *Clarifications:* If a patient was born in the hospital, and had not been discharged before their initial culture, please for either Q5 or Q11a, enter in "BORN" into the "Other, specify" field.
Prison/Jail (Q11a only)	*This specific category was dropped on the 2007 CRF*
Private Residence (Q5 only)	Select if the patient was living at their private residence at the time of initial culture. Please include Home Health, Assisted Living Facilities, Home Hospice, Foster Care, Halfway House, Boarding Home, Group Home, Military Base or a patient staying in a hotel here. *Surveillance Change:* Home Hospice was, officially, added to this category (2010).
Rehabilitation facility (Q11a only)	*This specific category was dropped on the 2007 CRF, however still captured in the Long Term Care category.*
Transferred from hospital/acute care facility (Q5 only)	Select if the patient's initial culture was collected at another hospital or acute care facility. For example if this patient was transferred.
Unknown	*Q5:* Check if there is not indication as to where the patient was a resident at time of initial culture collection. *Q11a:* Check if no indication is given as to the location of the culture collection or unclear.

Table 2

Question 14 and 16:
COMMONLY QUESTIONED NORMALLY STERILE SITES

Note: If you have an unusual sterile site, and you are confident that it is sterile, please enter the site under "other sterile site" and "specify". However, after they source put "(Sterile)".

Sterile Site	What to consider	How to enter onto CRF/Database
Abscess or Abscess Fluid	If you have an isolate from an "abscess". Please investigate where the abscess was located from and if it was collected in a sterile fashion.	*Sterile Abscess/Fluid*: If you determine that the sample was collected in a sterile fashion: • *Internal body site abscess:* if the abscess or abscess fluid was from an internal body site, check "Internal Body Site" and choose the site from the drop down list. Example: Renal Abscess Fluid would be entered as "Internal Body Site" and you would select "Kidney" from the drop down box. • *Bone Abscess:* if the abscess is for example from bone, such as a "humerus abscess" please check "Bone". • *Other Internal Body Site abscess:* Check "Other sterile site" and specify "ABSCESS (STERILE)". List the specific location in the comments section ONLY. • Please note, an entry of "Abscess" only is not an acceptable sterile site and will be returned on the monthly edit reports. • *Clarification:* PLEURAL ABSCESS. Please check "Pleural Fluid". DISC ABSCESS, please enter "SPINAL DISC" in "Other Sterile Site".
Aspirate/ Fine Needle Aspirate	If you have an isolate from any sort of "aspirate" (including **"fine needle"**). Determine if the sample was collected during surgery in a sterile fashion.	*Joint Aspirate:* If determined to be from a join, such as a knee, elbow, hip, wrist, spine column, etc, check "Joint/Synovial Fluid" on the CRF. *Body Fluid Aspirate:* Determine the body part that was aspirated. If this is an internal body site, please follow the directions for "Internal Body Aspirate". If this was another body site, and this was collected in a sterile fashion, then check "Other Sterile Site" and specify "BODY FLUID ASPIRATE (STERILE)". If you would like to capture the exact location of the body fluid, please do so in the comments section ONLY. *Muscle Aspirate:* If determined to be from a muscle, check "Other Sterile Site" and specify "MUSCLE". *Internal Body Aspirate:* If the site aspirated was determined to be an internal body site, check the "Internal Body Site" box and choose the site from the drop down box. If the specific internal body site is not included on the list, please check "Other Sterile Site" and specify "INTERNAL BODY ASPIRATE (STERILE)". If you would like to capture the exact site from which the aspirate was taken please indicate that in the comments section ONLY. *Other Fine Needle Aspirate (ONLY):* If a fine needle aspirate does not fit into any of the categories above, enter as "Other

		Sterile Site" and specify as "FINE NEEDLE ASPIRATE"
Abdominal Specimens	If you have an isolate form an "Abdominal Abscess" or "Abdominal Fluid". Please determine if the specimen was collected in a sterile fashion. If you have an isolate labeled as "Intra Abdominal", this is a sterile site. For example "Intra abdominal swab".	*Abdominal Abscess:* If this was collected in a sterile fashion, please check "Other Sterile Site" and specify "ABSCESS (STERILE)". If you would like capture that this was an abdominal abscess, please indicate in the comments section ONLY. *Please note*: an "**abdominal seroma**" is a type of an abdominal abscess. *Abdominal Fluid:* If this was collected in a sterile fashion, please check the "Peritoneal Fluid" check box. *Intra Abdominal Specimens:* Please check "Other Sterile Site" and specify "INTRA-ABD SPECIMEN (STERILE)".
Biopsy Tissue, Biopsy Culture or Biopsy	If you have an isolate form listed as "biopsy" determine if the site biopsied is a normally sterile site and it was done is a sterile fashion.	*Sterile Biopsy:* If you have determined that the sample was collected in a sterile fashion: • *Biopsy of internal body site:* if the biopsy was from an internal body site (such as an organ), check "Internal Body Site" and choose the site from the drop down list. Please note this would include a biopsy of a liver. • *Deep Tissue Biopsy:* If it is a biopsy of a "deep tissue", and the deep tissue is an internal body site, check "Internal body site" and choose the interal body site from the drop down list. If not, check "Other sterile site" and specify "DEEP TISSUE". • In all other situations an entry of "biopsy tissue", "biopsy culture" or "biopsy" will NOT be considered a sterile site. If you cannot determine the site of biopsy however, you know that it is a sterile site, please check "Other Sterile Site" and specify "BIOPSY (STERILE)".
Blood clot		Select "Blood" on the CRF.
Blood from blood line		Select "Blood" on the CRF.
Body Fluid/ Body Fluid Aspirate	If you have an isolate from "body fluid" or "body fluid aspirate". Please investigate where the fluid was obtained from and if it was collected in a sterile fashion.	*Please see "Aspirate" above for directions on how to deal with a "Body Fluid Aspirate".* *Internal Body Fluid:* If the body fluid was from an internal body site, check "Internal Body Site" and choose the site form the drop down list. *Please note:* For "Ascitis Fluid" you would check the "Peritoneal Fluid" check box. An entry of "Body Fluid" or "Body Fluid Aspirate" will not be considered a sterile site.
Breast Abscess, Breast Tissue	Any culture taken from the breast is	Do not enter onto the CRF/Database as a sterile site.

etc.	NOT a sterile site. In most procedures, the procedure DOES NOT go past the facia to collect the sample.	
Chest Fluid, Chest Abscess		*Chest Fluid:* Please check the "Pleural Fluid" check box *Chest Abscess:* This is not a sterile site.
Deep Tissue	Determine if the sample was collected during surgery in a sterile fashion.	*Sterile Deep Tissue:* If determined to be sterile • *Deep Tissue from an internal body site:* if the deep tissue was surgically obtained from an interal body site, check "Internal Body Site" on the CRF and choose the body site from the drop down list. • *Other Deep Tissue:* if the deep tissue is from another site, then check "Other Sterile Site" and specify "DEEP TISSUE". Do not indicate the source of the deep tissue in this field, list in the comments section ONLY.
Dialysate or Dialysate effluent	Determine what type of "dialysiate", i.e. peritoneal or hemodialysis	*Peritoneal Dialysate:* Check "Peritoneal Fluid". *Peritoneal Dialysate Effluent:* Check "Peritoneal Fluid". *Hemodialysis Dialysate*: Not a sterile site, do not enter. *Hemodialysis Dialysate Effluent*: Not a sterile site, do not enter. *Unspecified Dialysate or Effluent:* If you cannot determine the type of dialysate or effulent, then this is not a sterile site and do not enter.
Disc Space, Disc Aspirate	This is a sterile site	List both as "Other Sterile Site" and specify "SPINAL DISC"
Epidural Abscess or Epidural Fluid	This is a sterile site.	*Epidural Abscess:* Please check "Other Sterile Site" and enter "EPIDURAL ABSCESS" into the specify field. *Epidural Fluid:* Please check "Other Sterile Site" and enter "EPIDURAL FLUID" into the specify field.
Eye Fluid	Determine what type of "eye fluid" and if it was collected in a sterile fashion.	*Aqueous Fluid:* Sterile, check "Other sterile site (specify)" and specify "AQUEOUS FLUID". *Vitreous Fluid:* Sterile, check "Internal Body Site" and specify "VITREOUS".
Fluid (unspecified)	If you have an isolate from "fluid", please determine of the fluid was collected in a sterile fashion.	If the fluid is from any of the following sites, please check the correct box on the CRF: • Pleural Fluid • Peritoneal Fluid • Pericardial Fluid • Joint/Synovial Fluid *Other Sterile Fluid*: If you determine that the sample was collected in a sterile fashion: • *Internal body site fluid:* if the fluid was from an internal body site, check "Internal Body Site" and choose the site from the drop down list. • *Other Internal Body Site fluid:* Check "Other sterile

		site" and specify "FLUID (STERILE)". List the specific location in the comments section ONLY. • *Unspecified fluid:* If you cannot determine the source of the fluid, do not enter, not a sterile site.
Pacer Pocket Fluid or Pacemaker Pocket		Please enter as "Other Sterile Site" and specify "pacer pocket fluid" or "pacemaker pocket". The entry of just "Pacemaker" will not be considered sterile and will be fed back on the monthly edit reports.
Parotid gland or any isolate relating to it.		Please enter as "Other Sterile Site" and specify as "PAROTID".
Pleural peel/ Pleural Abscess		Check "Pleural Fluid"
Pericolic space		Check "Peritoneal Fluid"
Renal Specimen or Abscess		Check "Internal Body Site" and select "Kidney".
Spine, Spinal Tissue or Lumbar Spine	Other sites that might be listed on a lab report, but should be treated the same, include: Lumbar Spine Abscess, Lumbar Surgical Site, Surgical Deep Lumbar. Determine if the sample was collect during surgery in a sterile fashion.	*Spinal or Lumbar Abscess:* Please check "Other Sterile Site" and enter in "ABSCESS (STERILE)" into the specify field. If you would like to capture that this was a spinal abscess, please enter this in the comments section only. *Spinal or Lumbar Tissue*: Please confirm that this was take sterilely, i.e. during surgery. If so, please check "Other Sterile Site" and enter in "SURGICAL SPECIMEN (STERILE)" into the specify field. *Spinal or Lumbar Swab:* Please confirm that this was taken sterilely, i.e. during surgery. If so, please check "Other Sterile Site" and enter in "SPINAL SWAB (STERILE)" into the specify field. Spinal or Lumbar Surgical Specimen: Please check "Other Sterile Site" and enter in "SURGICAL SPECIMEN (STERILE)" into the specify field. If you would like to capture that this was a spinal specimen please enter this into the comments section ONLY.
Surgical Specimens (including swab and tissue)		*Internal Body Surgical Specimen:* If the site was determined to be an internal body site, please check "Internal Body Site" and choose the site form the drop down box. *Other Surgical Specimen:* Please check "Other Sterile Site" and list "SURGICAL SPECIMEN (STERILE)" in the specify field.
Tissue	Cultures designed as "tissue" with no specification, on a laboratory report,	If a tissue sample is investigated and it is not found to be bone, joint fluid, deep tissue etc, and it was obtained sterilely, i.e. during surgery, please check "Other Sterile Site" and enter "SURGICAL SPECIMEN (STERILE)" into the specify field.

	should NOT be investigated. Cultures with a designation should be investigated further.	

Table 3

Question 14:
COMMONLY QUESTIONED NON STERILE SITES

Non-sterile Site
Aqueous Fluid
Any isolate from "Breast"
Bile
Catheter/skin site
Catheter Tip
Chest Wall **Abscess**/Specimen
Cornea
Gallbladder
Any isolate from "Lung"
Hemodialysis dialysate
Pacemaker
Sebaceous Gland/ Cyst
Subcutaneous Fat
Tissue culture from a vein that recently had a line removed

Table 4.

Question 17:
TYPES OF INFECTIONS CAUSED BY MRSA, DEFINITIONS

Term	Definition
Abscess (not skin)	Circumscribed collection of pus; this can be a collection of pus in an organ (i.e., liver) or within deeper tissues under the skin. Check only if specific internal site is indicated.
AV Fistula/Graft Infection *(added 2009)*	Evidence of infection (e.g. pus or redness) recorded at the site of AV fistula or graft. Please note; the notation of this type of infection in the chart OR the mention of AV fistula/graft removal or surgical revision due to infection will be sufficient to check this box. If there is an infection in a patient who has an AV fistula or graft in place, there is a positive MRSA culture from blood AND the patient is noted to have bacteremia- this DOES NOT mean that the patient has an AV fistula or graft infection. Please check this box ONLY if it is clearly stated in the medical record that this patient has this type of infection. Please note, we will no longer be collecting this type of infection under the "Other (specify)" field.
Bacteremia *(definition change 2009)*	Check if bacteremia is indicated ***and*** there is an MRSA blood. **Please also check Bacterimia if septicemia or sepsis is listed in the chart *or* there is an MRSA blood culture.** *Surveillance Change*: Septicemia and sepsis were added to "bacterimia" in 2009. Changed the definition- removed "and" and replaced with "or"
Bursitis	Acute or chronic inflammation of a bursa **Note*: Do not check if non-infective bursitis is indicated or if there is no association with the MRSA culture.
Catheter Site Infection *(added 2009)*	Check this box for exit site, tunnel OR pocket infections. These infections are indicated by purulence, tenderness or erythema surrounding a CVC exit site OR involving a subcutaneous pocket or tunnel for tunneled catheter or port. DO NOT included dialysis AV fistula or graft infections here. We recognize there are challenges to determining whether or not a patient had a Catheter Site Infection based on the medical record. If a patient clearly has bacteremia and that box is checked, and it is not clear if there is an infection at the site of the catheter, you do not need to spend a lot of time trying to sort this out. **Clarification:* We do not want to capture entries such as "Line Infection", "Exit Site Infection" or "CVC Associated Line Infection" under "Other (specify)". If there is not enough information in the chart to enter infections that are labeled with these terms into another category such as "Bacteremia" or "Catheter Site Infections" please do not enter. If your site would like to keep track of these types of unspecific infections, please enter them into the comments section ONLY. These will be fed back in monthly edit reports. If you have further questions about interpreting this, please contact the CDC ABCs MRSA Surveillance Coordinator. Please also note, a patient with a **peripheral** IV infection should not be included here.
Cellulitis	Diffuse, spreading, acute inflammation within solid tissues. Check if cellulitis is indicated in the discharge summary. *Surveillance Change*: 2010 removed " and is associated with an MRSA culture (usually a skin, wound or tissue culture)".
Chronic ulcer/wound	Acute infection of any extremity involving sites of chronic wounds including

(non decubitus) *(added 2010)*	chronic skin breakdown, may involve bone or soft tissue as well, and may or may not include cellulitis. These infection sites are often characterized as diabetic food/leg ulcers but occur in patients with vascular disease as well. Discharge codes for ulcer or lower limb or chronic ulcer are not sufficient unless there is some indication the ulcer was infected or related to invasive MRSA infection.
Decubitus/Pressure ulcer *(changed wording 2010)*	Ulcer involving tissues overlying a bony prominence that has been subjected to prolonged pressure against an external object such as a bed or wheelchair; includes bed sores, **decubitus ulcers**, trophic ulcers, pressure sore. Usually seen in bed ridden or immobile patients. Do not include patients noted to have a "diabetic ulcer" here, please include patients with a diabetic ulcer as a result of their MRSA infection in the "Chronic ulcer/wound (non decubitus)" check box. **Surveillance Change:* Changed wording of this check box to be consistent with the definition.
Empyema	The presence of pus in a body cavity. Empyema usually refers to collections of pus in the space around the lungs (pleural cavity)
Endocarditis	Inflammation or infection of the endocardium Check only if MRSA endocarditis and is indicated by the clinical team treating the patient documents the patients MRSA isolate represents this syndrome. Do not check if non-infective endocarditis is indicated or if there is no association with the MRSA culture. *Endocarditis should be checked for any of the following forms:* *Native valve:* Endocarditis involving a native (normal or abnormal valve). prosthetic valvular endocarditis. *Prosthetic valve*: Endocarditis involving a prosthetic valve.
Meningitis	Inflammation of the membranes of the brain or spinal cord. To list this as the type of infection caused by MRSA, "meningitis" must be isolated from CSF, or a CSF gram stain must be positive. The following CSF abnormalities alone are not acceptable: any abnormal protein level or an increase in white blood cells (WBC).
Osteomyelitis	Inflammation of bone marrow and adjacent bone (does not include mastoiditis). **Note:* a positive MRSA culture from bone or bone marrow is sufficient to check this box. **Surveillance Change*: added "Note" to definition.
Otitis Media	Middle ear infection.
Pericarditis	Inflammation of the membrane around the heart.
Peritonitis	Inflammation of the lining of the abdominal cavity
Pneumonia	Inflammation or infection of the lung. Aspiration pneumonia and community-acquired pneumonia are acceptable types of pneumonia. If reviewing radiology reports (which is required for question 25 only), radiographic findings that indicate pneumonia include the following: bronchopneumonia, consolidation, and infiltrate. Atelectasis, pulmonary edema and pleural effusion alone should *not* be considered evidence of pneumonia. **If this infection is selected, complete Question 25 a-d completely.**
Skin Abscess	Localized collections of pus causing fluctuant soft tissue swelling surrounded by erythema; includes abscess, boil, furuncle, carbuncle, acne, pustule, cyst. Common body sites include, but not limited to, trunk, extremities, axillae, head

	and neck, inguinal, vaginal, buttock, and perirectal. Acceptable syndromes include, **but are not limited to the following**: - gangrene - facial abscess - graft infection (not related to an AV Graft) **Note*: Please do not record "Fistula Site Infection" here, please record under "AV Fistula/Graft Infection".
Septic arthritis	Infection of joint (i.e., wrist, knee, ankle, etc); also infectious arthritis; <u>not</u> rheumatoid arthritis. *Septic arthritis should be checked for any of the following forms:* <u>*Native joint*</u>*:* either acute or chronic infection of the synovial or periarticular tissue involving a native joint. Check is not indication of a prosthetic joint. <u>*Prosthetic joint*</u>*:* either acute or chronic infection involving a prosthetic joint. For example, septic arthritis of a knee replacement. Check ONLY if prosthesis is mentioned in the H&P or discharge summary.
Septic Emboli	The presence of an embolism that is infected with bacteria. Most commonly originated form an extrapulmonary location.
Septic Shock	Condition caused by an infection in the bloodstream which leads to very low blood pressure and low blood flow. Many organs, especially the brain, liver, kidneys and liver malfunction because of inadequate blood flow. "Septic Shock" should be checked if the phrase "Septic Shock" or "Sepsis Shock" is present in the History & Physical or discharge summary.
Surgical incision	Infection of a surgical wound, post-operative wound infection, infection following an amputation etc.
Surgical site (internal)	Infection of a deep tissue surgically removed. Do NOT check if only incision/post-operative incision infection.
Traumatic wound	Infection of a wound that was caused by trauma to the skin (i.e., accident, cut, puncture, insect bite, etc.).
Urinary Tract	Urinary tract infection (UTI)
Other	Other infections caused by MRSA Specify type. Acceptable syndromes include, **but are not limited to:** - kidney infection (pyelonephritis) - epiglottitis (inflammation of the epiglottis) - sinusitis - pharyngitis - necrotizing faciitis - other faciitis - myositis - Toxic Shock Syndrome (not streptococcal) - puerperal sepsis (condition in which a woman has a fever for more than two consecutive days, exclusive of the first postpartum day, within the first 10 postpartum days) - endometritis - mastoiditis - abscess at a site that does not meet the "Abscess (not skin)" definition or

	the "Skin Abscess" definition (please see above). - diskitits - endophthalmitis - eye infection (other) - pancreatits - parotitis - septic thrombophlebitis - *Surveillance Changes:* In 2009 "Sepsis" and "Septicemia" were REMOVED form the "other" category. Sepsis and "Septicemia", starting in 2009, have been collapsed with Bacteremia. In addition, a box was added for AV Fistula/Graft infections, DO NOT enter here.

Table 5.

Question 18:

SPECIFIC UNDERLYING DISEASES: DEFINITIONS, ABBREVIATIONS, AND CLARIFICATIONS

Abscess/Boil	History of localized collections of pus causing fluctuant soft tissue swelling surrounded by erythema; includes abscess, boil, furuncle, carbuncle, acne, pustule, cyst. Common body sites include, but not limited to, trunk, extremities, axillae, head and neck, inguinal, vaginal, buttock, and perirectal. **Clarification:* Check if a patient has recurrent abscess/boils, noted upon admit, but **does not** currently have an active infection.
Alcohol abuse	Includes ETOHA (ethanol abuse). Please check if the alcohol abuse is current or if the timing of the use is unknown. Do not check if it is clearly stated that the patient had a "history" or is indicated as "former" alcohol abuser.
Asthma	Asthma, Bronchial Asthma, also include Reactive Airway Disease (RAD)
Atherosclerotic cardiovascular disease (ASCVD/CAD)	This is also described as Arteriosclerotic Heart Disease, CAD (coronary artery disease), and CHD (coronary heart disease).
Chronic Renal Insufficiency	Chronic renal failure. Includes end stage renal disease. This does not include *acute* renal failure or *acute* renal insufficiency.
Chronic liver disease	Cirrhosis, chronic liver failure. This does *not* include hepatitis A, hepatitis B, hepatitis C infection *without* liver failure and does not include *acute* liver failure.
Chronic Skin Breakdown *(added 2009)*	Check this box if the patient is documented to have had a "history" of any type of chronic skin conditions which compromises the skin, such as eczema, psoriasis, diabetic ulcers or other chronic skin ulcers. DO NOT include patient's with Decubitus/Pressure Ulcers here, please check that specific box. *Surveillance Change:* This variable combines the following: eczema, psoriasis and "other dermatological conditions". Please see the definition below. This Underlying Illness category differs from Core ABCs, Decubitus/Pressure Ulcers is included in this illness catagory.
Current smoker	Includes a smoker of cigarettes or cigars, but does not include smoking crack or other illicit drugs. Smoking crack or other illicit drugs should be listed under "other drug use". Please check if smoking is current or if the timing of the use is unknown. Do not check it is clearly stated that the patient had a "history" of smoking or is indicated as a "former" smoker. HOWEVER, if the person recently quit smoking (i.e. quit smoking within the past 12 months) please check.
CVA/Stroke (Not TIA)	Cerebral Vascular Accident or stroke. Includes any history of CVA/stroke.
Cystic Fibrosis	Hereditary disease that appears usually in early childhood, involves functional disorder of the exocrine glands (as a sweat gland, a salivary

(added 2009)	gland, or a kidney), and is marked especially by faulty digestion due to a deficiency of pancreatic enzymes, by difficulty in breathing due to mucus accumulation in airways, and by excessive loss of salt in the sweat.
Decubitus/Pressure Ulcer *(changed wording 2010)*	A history of an ulcer involving tissues overlying a bony prominence that has been subjected to prolonged pressure against an external object such as a bed or wheelchair; includes bed sores, **decubitus ulcers**, trophic ulcers, pressure sore. Usually seen in diabetic and bed ridden or immobile patients. **Note:* Do not include patients noted to have a "diabetic ulcer" here, please include patients with a diabetic ulcer as a result of their MRSA infection in the "Chronic Skin Breakdown" check box. *Note:* Changed the wording of the check box from "Decubitus Ulcer" to Decubitus/Pressure Ulcer" to be more reflective of the definition.
Dementia *(added 2009)*	Significant loss of intellectual abilities such as memory capacity, severe enough to interfere with social or occupational functioning. Include Alzheimer's, Senility or Pre-senile dementia here. *Note:* This underlying condition will be used for the Charlson Comorbidity Index
Diabetes mellitus	Includes either type I *or* type II (both "insulin-dependent" and "adult-onset"). Also includes glucose intolerance and new-onset diabetes. Do not include patients noted as "pre-diabetic". It is not necessary to look at the results of glucose tolerance test in laboratory results section of the chart for an indication of diabetes. Common abbreviations: DM, AODM, IDDM, NIDDM.
Eczema (removed 2009)	*Acute or chronic inflammatory skin inflammation; dermatitis* *This condition was added to "Chronic Skin Breakdown" in 2009*
Emphysema/COPD	COPD=chronic obstructive pulmonary disease. Includes chronic bronchitis.
Heart failure/CHF	Congestive heart failure, including cardiomyopathy.
Hematologic Malignancy	Malignancy of the hematopoietic system; includes leukemia, Hodgkin's Disease, multiple myeloma. *Note: Do not include monoclonal gammopathy of undetermined significance (MGUS) here. Please enter this under "Other, specify".

Hemiplegia/ Paraplegia *(added 2009)*	***Hemiplegia*** is a condition where there is a paralysis of one half of a patient's body, usually occurring as a complication of, but not limited or restricted to, a "cerebral vascular accident" (or "stroke") ***Paraplegia*** is a condition where there is impairment in motor and/or sensory functions of the lower extremities. This condition is usually the result of spinal cord injury or a congenial condition which affects the neural elements of the spinal canal. The area of the spinal canal which is affected in paraplegia is either the thoracic, lumbar, or sacral regions. **Note:* Please DO NOT include patients noted to have "hemiparesis" or "parapadesis" in this category. Please include them in the "Other, specify" field. This variable will be used to calculate the Charlson Comorbidity Index.
HIV	Check if the case is HIV positive.
AIDS or CD4 count <200	Check if AIDS is listed in the chart or if the case is HIV+ and the case's CD4 count was *ever* <200, then mark "AIDS" as an underlying cause, even if AIDS is not a diagnosis noted in the chart. (The CD4 count from the *current* illness/admission being investigated may be used to determine if the person has AIDS and is most often listed in the admission history and physical or discharge summary; prior charts do not need to be reviewed.)
Immunosuppressive therapy	If the chemotherapy is ongoing, if patient is between cycles, or if within 2 weeks of completion, this should be checked. Use of steroids is considered an underlying disease or condition only if they are long-term systemic steroids (this does NOT include topical creams, steroids used only for short course treatment such as one week, and inhaled steroids used for asthma).
Influenza (within 10 days of initial culture)	Clinical or laboratory diagnosis within 10 days before or after initial sterile site culture date. ***Check only if influenza is specifically noted as suspected or confirmed in the discharge diagnosis.*** Do not check if "cold", flu-like illness, influenza-like illness (ILI) is only indicated
IVDU	Intravenous drug user. Please check if the IV drug use is current or if the timing of the drug use is unknown.
Metastatic Solid Tumor *(added 2009)*	A cancerous tumor formed by transmission of a malignant cell from a primary cancer located elsewhere in the body, e.g. a patient with pulmonary metastases from prostate cancer. This variable will be used to calculate the Charlson Comorbidity Index.
Obesity	The condition of being significantly overweight. Please check if there is mention that the patient is obese in the medical record. Calculating an obese BMI value using the height and weight data should not be used to complete this variable.
Other condition	Other underlying illnesses that are not already listed in Question 18.

Other dermatological conditions (removed 2009)	*Include, a history of, any other skin or soft tissue condition or infection. Includes mastitis or breast abscess, hydradenitis supperitiva, lymphadenitis (inflammation of the lymph nodes), necrotizing faciitis or cellulitis, Fournier's disease, Scalded Skin Syndrome, paronychia, erythrasma, ichthyosis,* *This condition and all conditions captured by this variable were added to "Chronic Skin Breakdown" in 2009.*
Other Drug Use	Any illicit drug use other than intravenous drug use. Please check if the drug use is current or if the timing of the drug use is unknown. **Surveillance Change:* this category was added to CRF in 2007. Prior to 2007 this was captured under Other.
Peripheral Vascular Disease (PVD) *(added 2005)*	Diseases of blood vessels outside the heart and brain. PVD, Peripheral Artery Disease (PAD), Arteriosclerosis obliterans (*Added 2005*)
Premature Birth	Birth of a baby before the 37th week of pregnancy according to last menstrual period (LMP). This condition will be selected if in the chart there is an indication for that the patient for fills the criteria of being pretem **and** they are under the age of 2 years old.
Psoriasis (removed 2009)	*Skin condition; eruption of maculopapules on the skin.* *This condition was added to "Chronic Skin Breakdown" in 2009.*
Rheumatoid arthritis	RA, *not* osteo arthritis
Sickle Cell Anemia	Includes persons with HbSS, HbSC or HbS-beta thalassemia. Common abbreviations: SCD, SS disease, SC disease.
Solid Organ Malignancy	Malignancy of a solid organ such as liver, kidney, pancreas, heart, lung, or of other organs such as colon, bladder and skin melanoma **only**. **Note:* If a patient presents with a metastases of this tumor, check "Metastatic Solid Tumor" instead.
Spider/Insect Bite (removed 2007)	*Includes suspected or confirmed spider or insect bites (spider, brown recluse, insect, mosquito, bug, arthropod) as reported in the medical record, usually in the H&P. If another source of bite is indicated (human, animal or unknown), enter as "Other Dermatological Condition" and specify the type of bite.* **Note: Bites are typically reported by the patient. Source of bite maybe or may not have been visually confirmed; check if any bite is confirmed or suspected. Record descriptive information in the comments.* *This variable was removed in 2007.*
Systemic Lupus Erythematosus	SLE or lupus
Peptic Ulcer Disease (Gastrointestinal Ulcer Disease) *(added 2009)*	Discrete mucosal defects in portions of the gastrointestinal track (usually gastric or duodenal) exposed to acid and pepsin secretion. Also called "Gastrointestinal Ulcer Disease" or just "Ulcer Disease". Please DO NOT document "GERD" here. **Note:* This underlying condition will be used for the Charlson Comorbidity

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Table 6.

Question 18:

GLOSSARY FOR COMMONLY NOTED UNDERLYING ACRONYMS AND SYNDROMES, AND ASSOCIATED ABCS UNDERLYING DISEASE OR ILLNESS

Acronyms/Symptoms/Syndromes/ Treatments	**Associated ABCs MRSA underlying disease or illness**
Agammaglobulinemia	Immunoglobulin deficiency
ALL (Acute Lymphocytic Leukemia)	Leukemia
Alzhiemer's	Dementia
AML (Acute Myelogenous Leukemia)	Leukemia
AODM (Adult Onset Diabetes Mellitus)	Diabetes mellitus
ASCVD	Atherosclerotic cardiovascular disease
CAD (Coronary Artery Disease)	Atherosclerotic cardiovascular disease
Cardiomyopathy	Heart failure/CHF
Cerebrospinal fluid leak	CSF leak
CHD (Chronic Heart Disease)	Atherosclerotic cardiovascular disease
CHF (Congestive Heart Failure)	Heart failure/CHF
CVA (Cerebral Vascular Accident)	Stroke/CVA
Chronic Bronchitis	Emphysema/COPD
Cigarettes	Current smoker
Cigars	Current smoker
CLL (Chronic Lymphocytic Leukemia)	Leukemia
CML (Chronic Myelogenous Leukemia)	Leukemia
COPD (Chronic Obstructive Pulmonary Disease)	Emphysema/COPD
Cortisone (steroid)*	Immunosuppressive therapy
Cortone (steroid)*	Immunosuppressive therapy
Decadron (steroid)*	Immunosuppressive therapy
Dexamethasone (steroid)*	Immunosuppressive therapy
DM	Diabetes mellitus
ETOHA (Ethanol abuse)	Alcohol abuse
Gastrointestinal Ulcer Disease	Peptic Ulcer Disease
HbS-beta thalassemia	Sickle Cell Anemia
HbSC	Sickle Cell Anemia
HbSS	Sickle Cell Anemia
Hydrocortisone (steroid)*	Immunosuppressive therapy
IDDM (Insulin-Dependent Diabetes Mellitus)	Diabetes mellitus
Ig deficiency	Immunoglobulin deficiency
IgG deficiency	Immunoglobulin deficiency
IgM deficiency	Immunoglobulin deficiency

IVDU	Intravenous drug user
Kenacort (steroid)*	Immunosuppressive therapy
Kenalog (steroid)*	Immunosuppressive therapy
Liver failure	Cirrhosis
Methylprednisolone (steroid)*	Immunosuppressive therapy
NIDDM (Non Insulin Dependent DM)	Diabetes mellitus
Pediapred (steroid)*	Immunosuppressive therapy
Prednisolone (steroid)*	Immunosuppressive therapy
Prednisone (steroid)*	Immunosuppressive therapy
Prelone (steroid)*	Immunosuppressive therapy
SCD (Sickle Cell Disease)	Sickle Cell Anemia
SC disease	Sickle Cell Anemia
SCID (Severe Combined Immunodeficiency)	Immunoglobulin deficiency
Senile/ Pre-Senile	Dementia
Solu-Cortef (steroid)*	Immunosuppressive therapy
SoluMedrol (steroid)*	Immunosuppressive therapy
SS disease	Sickle Cell Anemia
Steroids*	Immunosuppressive therapy
Triamicinalone (steroid)*	Immunosuppressive therapy
Wiskott-Aldrich Syndrome	Immunoglobulin deficiency

* Use of steroids are considered an underlying disease or condition ONLY if they are long-term systemic steroids (inhaled steroids are typically not considered an underlying disease or condition

Table 7.

Question 18:

Commonly noted diseases or syndromes that are ***NOT*
considered an Invasive MRSA ABCs underlying disease or syndrome

Please note: starting in 2010, at CDC we will no longer be looking at SPECILL2 or SPECILL3. PLEASE if you are unsure if a conditions is an underlying condition or if it can be classified into one of the existing check boxes on the CRF, contact the ABCs MRSA Surveillance Coordinator.

Acute Liver Failure/Disease
Acute Renal Failure/Disease
Anemia
Atrial fibrillation
Blood disorders- including hyponatremia, leukocytopenia, leukocytosis, pancytopenia, neutropenia, etc.
Hepatitis A without liver failure
Hepatitis B without liver failure
Hepatitis C without liver failure
HTN (hypertension)
Inhaled steroids
Mental Illness- including Bipolar Disorder, Mental Retardation and Schizophrenia
Organic Brain Syndrome
Steroid Topical Creams
Steroid Short term Therapy (<8 days)
UTI (Urinary Tract Infection)

Table 8.

Question 19:

TYPES OF DEVICES

***Note:** This resource is **NOT COMPLETE**. The purpose of this list is to act as a guide. If at any time, you have a question as to how you should classify a medical device, please contact the ABCs MRSA Surveillance Coordinator.*

Type	Common names
Urinary	Foley catheter, Suprapubic catheter, urostomy
Respiratory	Ventilator, tracheostomy
Gastrointestinal	G-tube, PEG tube, colostomy, ileostomy, gastrostomy
Central vascular catheter	Single, double or triple lumen, Shiley (dialysis), Broviac, Hickman, PICC, Swan Ganz catheter, Pulmonary artery catheter, Port-a-cath, passport, Vas cath, perm cath. Does not include peripheral IV or AV fistula/graft

***See Appendix 2 for detailed descriptions**

Table 9

Question 21 c
KEY TERMS THAT CAN BE CLASSIFED AS "NO EVIDENCE OF PNEUMONIA"

No Evidence of Pneumonia
Air space DZ
Bibasilar Atelectasis
Bony Metastasis
Borderline Cardiomegaly
Cardiomagaly
Cardiomegaly
Cavitary Mass
Congestion
COPD Changes
Diffusely Increased Vascu
Elevated LeftHemidiaphrah
Embolus
Fluid Overload
Hyperinflation
Hypoinflation
Hypoventilatory Cahnges
Increased Markings Compat
Left Lwr Lobe Hypoinflati
Lesions
Lung Mass
Lungs Are Clear
Minimal Densiy Atelectati
No Focal Infiltrates Seen, No Focal Pulmonary Infiltrate
Normal
Normal Exam
Parenchyma Pulmonary Fib
Possible Septic Emboli
Pulmonary Edema
Pulmonary Nodules
Seizur Left Hemiporesis
Trachael Stenosis

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Appendix 1.

Active Bacterial Core Surveillance (ABCs)
Residency Guidelines for Surveillance

ABCs defines a case of invasive bacterial disease as isolation of *H. influenzae, N. meningitidis*, group A *Streptococcus*, group B *Streptococcus*, *S. pneumoniae,* or methicillin-resistant *Staphylococcus aureus* from a normally sterile site in a resident of one of the defined ABCs surveillance areas (see ABCs Protocol).

Residency status for ABCs is based on the county of residence of the case patient. ABCs has developed the following guidelines to help clarify unusual residency situations. These guidelines follow the residency rules from the U.S. Census and the Council of State and Territorial Epidemiologists (CSTE) position statement. When the two guidelines differ, ABCs defaults to the U.S. Census guidelines because ABCs uses U.S. Census data as the denominator when calculating rates of disease. However, for some situations, the ABCs residency guidelines were formed based on general surveillance principles. We have noted where ABCs residency guidelines differ from those of the U.S. Census.

Cases should be reported by the location of the person's "usual residence" within an ABCs surveillance area. Usual residence is defined as the place where the person lives and sleeps *most of the time*. It is not necessarily equivalent to a person's voting residence, legal residence, or where the person became infected or was exposed to a disease. For the most part, determining usual residence is straightforward; however, there are special situations where residency status becomes unclear.

A. People Away on Vacation or Business

People away on vacation or a business trip at the time of culture should be counted in the jurisdiction of their usual residence.

B. People without Housing

People without a usual residence should be counted in the jurisdiction where they were staying on the day of culture.

People in shelters with sleeping facilities for persons without housing, for abused women, or for runaway or neglected youth will be counted at the shelter. If the shelter is unknown or it is unclear whether or a not a case is staying in a shelter, use the hospital in the surveillance area where the case was identified (and cultured).

C. People with Multiple Residences

Commuter workers will be counted at the residence where they stay most of the

week.

Snowbirds (people who live in one state but spend the winter or a portion of the year in another state with a warmer climate) will be counted where they live most of the year.

Children in joint custody will be counted at the residence where they live most of the time. If time is equally divided, they will be counted where they are staying on the day of culture.

People who own more than one residence will be counted in the jurisdiction where they live most of the time.

People who move between residences without any regular cycle will be counted in the jurisdiction where they live most of the time. If their time is equally divided, they will be reported based on where they were staying on day of culture. (Note: this situation is not covered by the U.S. Census guidelines; therefore, CSTE guidelines will be followed)

D. Students

College students living away from home while attending college will be counted by the jurisdiction of the residence they live most of the year; in other words, where they are living at college.

College students living at their parental home while attending college will be counted at their parental home.

Boarding school students will be counted by the jurisdiction of the residence they live most of the year; in other words, where they are living while attending boarding school. (Note: this differs from the U.S. Census guidelines; the U.S. Census guidelines base residence on parental home)

E. Live-ins

Foster children will be counted where they are living on the day of culture.

Live-in nannies and roomers/boarders will be counted at the residence where they stay most of the week.

F. Military or Merchant Marine Personnel in the U.S.

Military or merchant marine personnel will be counted at their usual residence whether it's on- or off- base and/or at their vessel's homeport.

G. Institutionalized Persons

Patients in general hospital or wards, including newborn babies should be counted at their usual residence. Newborn babies are counted at the residence in which they will be living.

***People who are institutionalized for indefinite or long-term* stays** should be counted in the jurisdiction of the facility where they are staying at the time of culture. Examples of such facilities include: chronic or long-term disease hospitals or wards; people in nursing or convalescent homes for the aged or dependent; patients staying in hospice facilities; people staying in homes, schools, hospitals, or wards for the physically handicapped, mentally retarded, or mentally ill; people in drug/alcohol recovery facilities; inmates of correctional institutions, including prisons, jails, detention centers, or halfway houses; children in juvenile institutions such as residential care facilities for neglected or abused children or orphanages.

Staff members living in hospitals, nursing homes, prisons, or other institutions should be counted in the jurisdiction of their usual residence if they report one (the place they live or sleep most of the time) or otherwise by the jurisdiction where the institution is located.

H. People in Non-institutional Group Quarters

Migrant farm workers will be counted at their usual U.S. residence if they report one otherwise at the worker's camp.

People at hostels, YMCAs/YWCAs, or public/commercial campgrounds; members of religious orders living in monasteries or convents; and people staying at Job Corps or other post-high school residential vocational training facilities will be counted at their usual residence (the place they live or sleep most of the time) if they report one or otherwise at the facility they are staying.

I. Foreign Citizens

Citizens of foreign countries who have established a household or are part of an established household in the U.S. while working or studying, including family members with them will be reported by the jurisdiction of their usual residence/ household.

Citizens of foreign countries who are living in the U.S. at embassies, ministries, legations, or consulates will be reported by the jurisdiction where the facility is located.

References:

The U.S. Census guidelines can be found at:
http://www.census.gov/population/www/censusdata/resid_rules.html.

The CSTE position statement on residency rules can be found at:
http://www.cste.org/PS/2003pdfs/2003finalpdf/03-ID-10Revised.pdf.

Appendix 2.

Catheters and Devices by Location/Type

Note: This resource is NOT COMPLETE nor is it meant to be comprehensive.
If at any time, you have a question regarding a medical device; please contact the ABCs MRSA Surveillance Coordinator.

CVC= Central Vascular Catheter
D= Device
PC= Peripheral catheters, NOT CVC

Central Vascular Catheters and Devices

Name	Type	Specifics and Notes
Broviac catheter	CVC	Central venous
Central venous catheter	CVC	Large vessels
Double-lumen catheter	CVC	
Groshong catheter	CVC	Superior vena cava
Hemodialysis catheter	CVC	
Hickman catheter	CVC	Central venous
MediPort	CVC	Port, central venous line
Passport	CVC	
Peripherally inserted central catheter (PICC)	CVC	
Perm cath or Permacath	CVC	Catheter
PICC (Peripherally inserted central catheter)	CVC	
Port-A-Cath	CVV	Port, central venous line
Shiley Catheter	CVC	Hemodialysis
Subclavian catheter	CVC	
Swan-Ganz catheter	CVC	Pulmonary artery
Tunneled catheter aka: Hickman, Broviac, Groshong	CVC	Into jugular or subclavian
Vas cath	CVC	Often for dialysis

The following are **NOT** CVCs:

Name	Type	Specifics and Notes
Arterial line (peripheral arterial line)	PC	Radial or other peripheral artery, not CVC
Midline catheter	PC	Inserted in upper arm vein
Peripheral IV	PC	
External jugular (EJ) line	PC	Peripheral IV in neck vein
Peritoneal dialysis catheter		Not vascular
Tenckhoff catheter		Peritoneal dialysis, not vascular
TIPS (transjugular intrahepatic portosystemic shunt)	D	Device, transjugular shunt
Hydrocephalus shunt	D	Shunt to drain cerebrospinal fluid (CSF) from the brain; device
Ommaya reservoir (Ommaya port)	D	Device implanted to deliver chemotherapy agents to the cerebrospinal fluid, not vascular
AV fistula, graft or shunt	D	Natural (fistula) or synthetic (graft) connection created for hemodialysis; are not catheters
Dialysis fistula, graft or shunt	D	Natural (fistula) or synthetic (graft) connection created for hemodialysis; are not catheters

http://www.merckmedicus.com/pp/us/hcp/thcp_dorlands_content_split.jsp?pg=/ppdocs/us/common/dorlands/drlnd/ten_00/100000863.htm
Dorland's Medical Dictionary list of catheter types

http://www.cookmedical.com/uro/products.do
List of Cook Urological Products

http://www.lymphomainfo.net/therapy/catheter.html
Information about intravenous catheters

http://www.medcyclopaedia.com/search.aspx?s=catheters&mode=1&scope=&syn=
Encyclopedia of medical terms, catheters

Appendix 3.

Antibiotic generic name, trade name and code.
Note: Use the "Database Code" to complete the "Other (specify)" field for question 20

Generic	Trade	Database Code
Amikacin	Amiken	AKN
Amoxacillin/Clavulanate	Augmentin	AMXCL
Amoxacillin	Amoxil, Polymox	AMX
Amphotericin	Amphotec	AMT
Amphotericin - Topical		AMTT
Ampicillin/Sublactam	Unasyn	SAM
Ampicillin	Omnipen, Polycillin, Principen	AMP
Azithromycin	Zithromax, Z-Pak	AZT
Aztreonam	Azactam	ZAC
Bacitracin		BAC
Cefaclor	Ceclor	CEC
Cefadroxil	Duricef, Ultracef	CFR
Cefazolin	Ancef, Kefzol, Zolicef	CZ
Cefdinir	Omnicef	CDR
Cefepime	Maxipime	CPM
Cefixime	Suprax	FIX
Cefmetazole		CMT
Cefoperazone	Cefobid	CFP
Cefotaxime	Claforan	CTX
Cefotetan	Cefotan	CTT
Cefoxitin	Mefoxin	FOX
Cefpodoxime proxetil	Vantin	CPD
Cefprozil	Cefzil	CPR
Ceftazidime	Fortaz, Tazicef, Tazidime	CAZ
Ceftibuten	Cedax	CDN
Ceftizoxime	Cefizox	ZOX
Ceftriaxone	Rocephin	CRO
Cefuroxime	Ceftin	CXM
Cephalexin	Keflex	LEX

Cephalothin		CF
Ciprofloxacin	Cipro, Ciloxan	CIP
Chloramphenicol	Chloromycetin	CHL
Clarithromycin	Biaxin	CLR
Clindamycin	Cleocin	CC
Cloxacillin	Tegopen	CLOX
Dapsone	4,4'-diaminodiphenyl sulfone (DDS)	DPN
Daptomycin	Cubicin	DAPT
Dicloxacillin	Dycill, Dynapen, Pathocil	DICLOX
Diphenylsulfone		DPS
Doxycycline	Vibramycin	DOX
Enoxacin	Penetrex	ENOX
Ertapenem	Invanz	INV
Erythromycin	E-mycin, Erythrocin, Ilosone, EryPed, Pediazole, EES, EryTab	ERY
Erythromycin – topical		ERYT
Ethambutol	Myambutol	EBL
Fluconazole	Diflucan	FZL
Gatifloxacin	Tequin, Zymar	GAT
Gentamicin	Garamycin, Genopic	GM
Gentamicin - topical		GMT
Grepafloxacin		GREP
Imipenem	Primaxin	IPM
Itraconazole	Sporanox	ITR
Ketoconazole	Nizoral	KTO
Levofloxacin	Levaquin, Quixin	LEVO
Linezolid	Zyvox	LINEZ
Meropenem	Merrem IV	MER
Methicillin	Staphcillin	MET
Metronidazole	Flagyl	MAZOL
Mezlocillin		MZ
Minocycline	Minocin, Dynacin	MIN
Moxifloxacin	Avelox, Vigamox	MXF
Mupirocin	Bactroban	MUP
Nafcillin	Unipen	NAF
Neomycin	Mycifradin	NMY
Neosporin		NEO

Nitrofurantoin	Furadantin, Microdantin, Macrobid	NIT
Norfloxacin	Noroxin	NOR
Nystatin	Mycostatin, Nilstat, Nystop	NYS
Ofloxacin	Floxin, Ocuflox	OFL
Oxacillin	Prostaphlin	OX
Penicillin	Bicillin, Pfizerpen	PEN
Pentamidine	Pentam, Nebupent	PNT
Piperacillin/Tazobactam	Zosyn	ZOS
Piperacillin	Pipracil	PIP
Polysporin		POLY
Primaquine		PMQ
Quinupristin/Dalfopristin	Synercid	QD
Rifampin	Rifadin, Rimactane, Rifater, Rifamate	RA
Rifaxamin	Xifaxan	RFX
Silver Sulfadiazine	Silvadene	SIL
Sparfloxacin		SPAR
Telithromycin	Ketek	TEL
Tetracycline	Achromycin V, Tetracyn, Tetrex	TET
Ticarcillin/Clavulanate	Timentin	TICCL
Ticarcillin	Ticar	TIC
Tigeocycline	Tygacil	TIG
Trimethoprim/Sulfamethoxazole	Bactrim, Septra	SXT
Tobramycin	Nebcin, Tobrex	TOB
Tobramycin – Topical		TOBT
Trovofloxacin		TROV
Vancomycin	Vancocin	VA
Vancomycin – Topical		VATOP
Voriconazole	VFEND	VZL
Unknown/Not Specified		UNK
Antibiotic Beads		BEADS

Appendix 4.

Recurrent and Persistent Disease

Indicate whether or not this patient was previously infected by MRSA as in a previous case report. The specimen in this case must have been isolated *30 or more* days after the most recent previous MRSA isolate.

Recurrent disease is defined as a patient with invasive MRSA disease who has already been assigned a state ID and has a culture that was collected more than 30 days after the initial culture; a new case report form will be completed **and** a new state ID will be assigned. However the patient will retain their original patient id. Recurrent disease (Q24) will be marked "yes" on the new CRF **and** the original state ID will be filled in, in the space provided. If the culture date is less that 30 days after the initial culture the case will be considered ***persistent disease*** and indicated on the original CRF; a new CRF will **not** be filled out and a new state ID will not be assigned.

New culture	Days after index culture	Q15	Q16	Q24	New CRF?
Sterile, same	1 to 6	N	N	N	**No**
Sterile, same	7 to 29	**Y**	N	N	**No**
Sterile, same	30+	N	N	**Y**	**Yes**
Sterile, other	1 to 29	N	**Y**	N	**No**
Sterile, other	30+	N	N	**Y**	**Yes**

New culture: Subsequent culture in question (i.e., CRF already started for initial sterile site culture)

Days after index culture: Number of days after initial sterile site culture that the new culture was collected.

Q15-Q24: Answers to questions referenced on case report form given the criteria of the new culture; if more than one culture, any "Y" should supercede an "N".

New CRF: Indicates if a new case report should be complete and a new STATEID assigned given the criteria of the new culture; if more than one culture, if a new case report form is indicated for either, a new case report form should be completed for the new culture and a new STATEID assigned. If a new case report form is required, all of the above criteria apply with the new culture collection date as the initial culture.

Pneumonia supplemental questions: If you have a case of recurrent disease in a patient that has pneumonia, please complete these questions around the correct "initial" culture date.

NOTE: If there are any questions regarding whether or not a case is recurrent or persistent disease, please contact the ABCs MRSA Surveillance Coordinator at CDC.

Example: A patient is admitted to the hospital on 5/1/2004 and their initial culture is taken on that date. This case is assigned the state id of SNB9990. However, that patient is culture positive as second time (during the same hospital admission) for invasive MRSA on 6/1/2004. This second culture is more than 30 days after the first culture date, so you would assign a new state id to this initial culture taken on 6/1/2004. In this case the state id is SNB9991. The CRFs for both state id SNB9990 and SNB9991 would have the SAME admit and discharge dates. However, you would check question 19, "Culture collected 3 or more days after date of hospital admission" for state id SNB9991.