Appendix Table F2. Characteristics of studies that did not use statistical methods to attempt to control for confounding or secular trends

| **Author,****Year,****Country** | **Design** | **MRSA Strategy** | **N** | **Control** **(strategy, duration)**  | **Intervention** **(strategy, duration)** | **Study Setting** | **End Points** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Blumberg, et al., 1994,17 South Africa | QEX-BA | Screening of ICU Risk Pts Vs No Screening | C: (n=2315) Int: (n=2605)  | No screening: 1 year  | Screening in ICU and pediatric oncology unit using culture: 1 year | ICU (MICU, SICU, PICU and pediatric oncology) | Identification and treatment of MRSA-positive staff and patients as well as to isolate MRSA-positive patients in the ICU and pediatric oncology units. |
| Bowler et al., 2010,18 USA | QEX-BA | Screening of High Risk Pts Vs No Screening | NR | No screening: 07/05 - 06/06  | Screening of high risk patients using culture: 07/06 - 06/08 | Regional-referral Hospital. | Prevalence and nosocomial transmission of MRSA |
| Boyce et al., 2004,19 USA | QEX-BA | Screening of ICU Risk Pts Vs No Screening | C: (n=not specified) Int: (n=523)  | No screening: Beginning 5 months before spring of 2003  | Screening at time of SICU admission by culture: Beginning in spring 2003 and continue 5 months after that. | SICU | Number of health care-associated MRSA infections acquired in the SICU |
| Chen et al., 2012,20 US | QEX-BA | Screening of surgical patients vs no screening | 1002 | No screening (patients who received preoperative clearance from their primary care physicians) | Screening of surgical patients who received preoperative testing within the study hospital | Hospital | Prevalence of MRSA colonization; impact of the intervention on early wound complications |
| Clancy et al., 2006,21 USA | QEX-BA | Screening of ICU Risk Pts Vs No Screening | C: (n=not specified) Int: (n=1890)  | 01/02 - 03/03 | Screening at time of MICU or SICU admission by culture: 04/03 - 06/04 | MICU/SICU | Primary: Incidence of MRSA infection; Secondary: Percentage of ICU patients colonized or infected with MRSA on admission, mean number of census-days after admission that a clinical specimen was positive for MRSA in patients who developed nosocomial infections |
| de la Cal et al., 2004,22 Spain | QEX-BA | Screening of ICU Risk Pts Vs No Screening | C: (n=140) Int1: (n=258) Int2: (n=401)  | No screening: 07/96 - 04/97  | Screening at time of MICU /SICU admission or those expected to be on ventilation > 3 days using culture: 05/97 - 09/97 | Adult MICU/SICU | Incidence of ICU-acquired MRSA colonization or infection |
| Enoch et al., 2011,23 UK | QEX-BA  | Expanded screening vs limited screening |  | Limited screening | Expanded screening | Hospital | The measurement of bacteremia vs clinical isolates to determine the effectiveness of the interventions |
| Eveillard et al., 2006,24 France | QEX-BA | Expanded Vs Limited Screening | C: Int: (n=455)  | Limited screening of selected high risk patients using culture: 04/02 - 09/02 | Expanded screening of patients admitted to internal medicine ward using culture: 04/03 - 09/03 | Internal medicine ward in a teaching hospital | Prevalence of MRSA carriage on admission  |
| Girou et al., 2000,25 France | QEX-BA | Expanded Vs Limited Screening | C: (n= 370) Int: (n=359)  | Limited screening of high risk patients admitted to dermatology ward using culture: 09/96 - 05/97 | Expanded screening of patients admitted to dermatology ward using culture: 05/97 - 12/97 | Dermatology ward (including 2 ICU beds) | Number of patients with MRSA + screening sample in intervention period without risk factors, Rate of acquired MRSA, Rate of imported MRSA |
| Jog et al., 2008,26 UK | QEX-BA | Screening of Surgical Pts Vs No Screening | C: (n= 697) Int: (n=765)  | No screening:10/04-09/05  | Screening in cardiac surgery unit using PCR: 10/05-09/06 | Cardiac surgery and general ward in a teaching hospital | SSIs in patients undergoing cardiac surgery. MRSA rates were measured as well. |
| Kelly et al., 2012,27 Ireland | QEX: BA | Screening of surgical patiens vs no screening | 12259 | No screening | Pre-operative assessment clinic in which all patients presenting for elective surgery underwent routine screening for MRSA. Admissions to the trauma ward were swabbed within one hour of admission. | Hospital | MRSA infection and colonization |
| Keshtgar et al., 2008,28 UK | QEX-BA | Screening of High Risk Pts Vs No Screening | C: (1,469,399 person-time) Int: (221,027 person time)  | No screening: 01/00-12/05  | Screening of critical care, elective and emergency surgery wards using PCR: 01/06 - 12/06 | Teaching hospital; critical care, routine and emergency surgical wards. | Rate of MRSA wound infection and bacteremia |
| Kim et al., 2010,29 USA | QEX-BA | Screening of Surgical Pts Vs No Screening | C: (n= 5293) Int: (n=7019)  | No screening:10/05 - 07/06  | Screening at preadmission in patients undergoing elective orthopedic surgery using PCR: 07/06 - 09/07 | Orthopedic surgery ward | MRSA SSI rate |
| Kurup et al., 2010,30 Singapore | QEX-BA | Screening of ICU Risk Pts Vs No Screening | C: (n=not specified) Int: (n=653)  | No screening: 07/06 - 06/07  | MICU screening using culture and SICU screening using PCR: 07/07 - 06/08 | MICU, SICU | MRSA infection rates in the MICU and SICU |
| Lipke et al., 2010,31 USA | QEX-BA | Screening of Surgical Pts Vs No Screening | C: (n=NR) Int: (n=5570) | No screening:02/05 - 01/06  | Screening in patients undergoing selected surgical procedures at preadmission using culture: 02/06 - 01/07 | Community hospital  | MRSA SSI rate |
| Malde et al., 2006,32 UK | QEX-BA | Screening of Surgical Pts Vs No Screening | C: (n=6555) Int: (n=4141)  | No screening:01/96 - 12/00  | Screening for elective and emergency surgery vascular admissions using cultureEmergency admissions 01/01 - 12/04Elective admissions 01/01 - 12/04 | Vascular ward in university hospital | Primary outcomes: Wound infection, Major limb amputation, Mortality. Secondary outcomes: MRSA infection, Colonization or Infection with MRSA |
| Nixon et al., 2006,33 UK | QEX-BA | Screening of Surgical Pts Vs No Screening | C: (n=2341)Int: (n=3253)  | No screening:01/03 - 05/03  | Screening in orthopedic surgery elective patient pre-admission or before transfer using culture:Elective 1/04 - 05/04Trauma 01/04 - 05/04 | Orthopedic ward in a university hospital  | MRSA SSI incidence, MRSA Colonization, Morbidity and Mortality of MRSA patients (colonized and infected) |
| Pan et al., 2005,34 Italy | QEX-BA | Screening of High Risk Pts Vs No Screening | NR | No screening: 01/96 - 06/97 | Screening of high risk patients and wards using culture: 01/00 - 12/01 | Community hospital | Incidence rate of MRSA bloodstream infection |
| Pofahl et al., 2009,35 USA | QEX-BA | Screening of Surgical Pts Vs No Screening | C: (n= 8469) Int: (n=5094)  | No screening: 01/04 - 02/07 | Screening in surgical patients using PCR: (02/15/07 - 07/01/08) | Surgical ward in a tertiary care hospital | MRSA SSI rate |
| Salaripour et al., 2006,36 Canada | QEX-BA | Screening of High Risk Pts Vs No Screening | NR | No screening: 02/00 - 02/01 | Screening of high risk patients using culture: 03/01 – 2005 | Hospital | Rate of Nosocomial MRSA |
| Sankar et al., 2005,37 UK | QEX-BA | Screening of Surgical Pts Vs No Screening | C: (n=164) Int: (n=231)  | No screening: 10/00 - 04/01  | Screening at preadmission in patients undergoing elective total joint arthroplasty using culture: 04/01 - 10/01 | Elective orthopedic ward | Post-operative MRSA infection; length of hospital stay |
| Schelenz et al., 2005,38 UK | QEX-BA | Expanded Vs Limited Screening | C: (n= 1075) Int: (n=1075) | Limited screening: likely to have used culture:Started 16 months before August 2000  | Expanded screening: Started September 2000 and continued for 16 months. | Cardiothoracic surgical ward | MRSA acquisition and infection rates |
| Simmons et al., 2011,39 USA | QEX-BA | Screening of ICU Risk Pts Vs No Screening | Not specified | No screening: 01/07 - 06/08  | ICU screening using PCR: 07/08 - 12/09 | ICU | ICU-acquired MRSA rate, Hospital-wide MRSA rate |
| Sott et al., 2001,40 UK | QEX-BA | Screening of Surgical Pts Vs No Screening | C: (n=113)Int: (n=123)  | No screening: Year 2005 (12 months) | Screening at preadmission in patients undergoing elective primary total hip replacement using culture: Year 2006 (12 months) | Orthopedic unit | MRSA post-operative sepsis |
| Souweine et al., 2000,41 France | QEX-BA | Screening of ICU Risk Pts Vs No Screening | C: (n= 233) Int: (n=351)  | No screening: 05/94 - 04/95 | Screening on ICU admission using culture:05/95 - 04/96 | MICU/SICU | Patients infected or colonized by MRSA in the ICU |
| Supriya et al., 2009,42 Scotland | QEX-BA | Screening of Surgical Pts Vs No Screening | C: (n= 84) Int: (n=31) | No screening: 02/06 - 02/07 | Screening at preadmission in head and neck cancer surgery patients using culture: 07/07 - 01/08 | Tertiary referral center | MRSA infection rates |
| Thomas et al., 2007,43 UK | QEX-BA | Screening of Surgical Pts Vs No Screening | C: (n=101) Int: (n=47)  | No screening:01/02 - 09/04  | Screening for all patients referred for PEG insertion using culture: 10/04 - 08/06 | Endoscopy unit in a hospital | Peristomal MRSA Infection |
| Thompson et al., 2009,44 UK | QEX-BA | Expanded Vs Limited Screening | C: Int: (n=914)  | Limited screening of high risk patients in ICU using culture:01/01 - 11/06 | Expanded screening of all ICUs using culture: 12/06 - 06/08 | ICU | Prevalence of MRSA in admissions and its acquisition and bacteremia rates within ICU  |
| Trautmann et al., 2007,45 Germany | QEX-BA | Expanded Vs Limited Screening | NR  | Limited screening of high risk patients using culture: 01/02 - 12/02 | Expanded screening of high risk patients plus SICU using culture: dates NR | Surgical ICU | NR |
| Walsh et al., 2011,46 USA | QEX-BA | Screening of Surgical Pts Vs No Screening | C: (n= 2766) Int: (n=2496) | No screening: 01/04 - 01/07  | Screening at pre-admission of patients undergoing elective cardiothoracic surgery using culture: 02/07 - 01/31/10 | Cardiothoracic surgery ward and ICU in a community hospital | MRSA SSI rate |
| Wernitz et al., 2005,47 Germany | QEX-BA | Screening of High Risk Pts Vs No Screening | C: (n= 36,118) Int: (n=36,962)  | No screening: 09/99 - 03/01  | Screening of high risk patients using culture: 05/01 - 11/02 | Acute care university teaching hospital:  | Frequency of hospital-acquired MRSA infection  |
| West et al., 2006,48 USA | QEX-BA | Expanded Vs Limited Screening | C: Int: (n=7,712)  | Limited screening on ICU admission using culture: 09/01 - 06/02 | Expanded screening of ICU admission plus those at high risk admitted to general wards using culture: 07/02 - 10/03 | Tertiary care facility + suburban hospitalICU in a community hospital | Rate of nosocomial MRSA infection. |

BA: Before after; C: Control; CG: Control group; IC: Infection control; ICU: Intensive care unit; Int: Intervention; MICU: Medical intensive care unit; MRSA: Methicillin-resistant *Staphylococcus aureus;* N: No;NR: Not reported; PCR: Polymerase chain reaction; PEG: Percutaneous endoscopic gastrostomy; PICU: Pediatric intensive care unit; QEX: Quasi-experimental; SICU: Surgical intensive care unit; SSI: Surgical site infection