Current evidence for infection prevention and control interventions in Emergency Medical Services

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**ONLINE SUPPLEMENTAL MATERIALS**

**Supplemental Tables**

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Supplemental Table 1. PubMed Search Strategy

|  |  |
| --- | --- |
| # | Term |
| 1 | “emergency medical services”[tiab] OR EMS[tiab] OR (“emergency medical services”[mh] NOT (“emergency service, hospital”[mh] OR “advanced trauma life support care”[mh] OR “poison control centers”[mh])) |
| 2 | “emergency medical responder” [tiab] |
| 3 | “Advanced EMT”[tiab] OR “advanced emergency medical technician”[tiab] OR AEMT[tiab] |
| 4 | Paramedic\*[tiab] |
| 5 | “emergency medical services”[tiab] OR EMS[tiab] |
| 6 | “emergency medical technician”[tiab] OR “emergency medical technicians”[tiab] |
| 7 | “emergency responders”[tiab] OR “Emergency Responders”[mh] |
| 8 | “first responder”[tiab] OR “first responders”[tiab] |
| 9 | “law enforcement”[tiab] OR police[tiab] OR police[mh] |
| 10 | Firefighters[tiab] |
| 11 | “fire department”[tiab] |
| 12 | “police dispatcher”[tiab] OR dispatcher[tiab] |
| 13 | “emergency medical dispatcher”[tiab] OR “emergency medical dispatcher”[mh] OR “medical dispatcher”[tiab] |
| 14 | ((911[tiab] OR “9/11” [tiab] OR “9-11” [tiab] OR “9-1-1” [tiab] OR “9 1 1” [tiab]) AND dispatcher[tiab]) |
| 15 | “field dispatcher”[tiab] OR “field responder”[tiab] |
| 16 | Ambulance[tiab] OR ambulances[mh] OR “emergency mobile unit”[tiab] |
| 17 | #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 |
| 18 | Infection\*[tiab] OR Infections[mh] OR Infectious[tiab] OR “infectious disease”[tiab] OR “Virus Diseases”[tiab] OR “Virus Diseases”[mh] OR contaminat\*[tiab] |
| 19 | “Communicable Diseases”[mh] OR “Infectious Disease Transmission, Patient-to-Professional”[mh] |
| 20 | “Covid-19”[tiab] OR “Covid19”[tiab] OR “Covid 19”[tiab] OR “COVID-19”[mh] OR “SARS-CoV-2”[tiab] OR “SARS-CoV2”[tiab] OR “SARS CoV 2”[tiab] OR “SARS-CoV-2”[mh] OR ”2019-nCoV”[tiab] OR “COVID-19 Vaccines”[mh] OR “2019 Novel Coronavirus”[tiab] |
| 21 | Influenza[tiab] OR “Influenza, Human”[mh] OR “flu”[tiab] |
| 22 | Tuberculosis[tiab] OR Tuberculosis[mh] |
| 23 | HIV[tiab] OR HIV[mh] OR “human immunodeficiency virus”[tiab] OR “acquired immunodeficiency syndrome”[tiab] OR AIDS[tiab] OR “Acquired Immunodeficiency Syndrome”[mh] |
| 24 | “Hepatitis B”[tiab] OR “hepatitis-b”[tiab] OR “Hepatitis B”[mh] |
| 25 | “Hepatitis C”[tiab] OR “hepatitis”[tiab] OR “Hepatitis C”[mh] |
| 26 | “Respiratory infection”[tiab] OR “Respiratory Tract Infections”[mh] |
| 27 | #18 OR #19 OR #20 OR #21 OR #22 OR #23 OR #24 OR #25 OR #26 |
| 28 | #17 AND #27 |
| 29 | English[la] |
| 30 | Animals[mh] NOT humans[mh] |
| 31 | Study protocol[ti] OR trial protocol[ti] OR review protocol[ti] OR editorial[pt] OR letter[pt] OR case reports[pt] |
| 32 | #28 AND #29 NOT #30 NOT #31 |
| 33 | Date limits 2006-present |

Supplemental Table 2. Embase Search Strategy

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| --- | --- |
| # | Term |
| 1 | ‘emergency medical services’:ti,ab OR EMS:ti,ab OR 'emergency medical dispatch’/de |
| 2 | ‘emergency medical responder’:ti,ab OR ‘emergency medical responders’:ti,ab |
| 3 | ‘Advanced EMT’:ti,ab OR ‘advanced emergency medical technician’:ti,ab OR AEMT:ti,ab  |
| 4 | Paramedic\*:ti,ab  |
| 5 | ‘emergency medical technician’:ti,ab OR ‘emergency medical technicians’:ti,ab  |
| 6 | ‘emergency responder’:ti,ab OR ‘emergency responders’:ti,ab OR ‘rescue personnel’/exp |
| 7 | ‘first responder’:ti,ab OR ‘first responders’:ti,ab  |
| 8 | ‘law enforcement’:ti,ab OR police:ti,ab OR police/exp |
| 9 | Firefighter:ti,ab OR firefighters:ti,ab OR ‘fire fighter’:ti,ab OR ‘fire fighters’:ti,ab |
| 10 | ‘fire department’:ti,ab OR ‘fire departments’:ti,ab |
| 11 | ‘police dispatcher’:ti,ab OR dispatcher:ti,ab  |
| 12 | ‘emergency medical dispatcher’:ti,ab OR ‘emergency medical dispatcher’/exp OR ‘medical dispatcher’:ti,ab  |
| 13 | ((911:ti,ab OR ‘9/11’:ti,ab OR ‘9-11’:ti,ab OR ‘9-1-1’:ti,ab OR ‘9 1 1’:ti,ab) AND dispatcher:ti,ab) |
| 14 | ‘field dispatcher’:ti,ab OR ‘field dispatchers’:ti,ab OR ‘field responder’:ti,ab OR ‘field responders’:ti,ab |
| 15 | Ambulance:ti,ab OR ambulances:ti,ab OR ambulances/exp OR ‘emergency mobile unit’:ti,ab |
| 16 | #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15  |
| 17 | Infection\*:ti,ab OR ‘Infection’/de OR ‘airborne infection’/de OR ‘bloodstream infection’/de OR ‘communicable disease’/de OR ‘skin infection’/exp OR Infectious:ti,ab OR ‘infectious disease’:ti,ab OR ‘infectious diseases’:ti,ab OR ‘viral disease’:ti,ab OR ‘viral diseases’:ti,ab OR ‘virus diseases’:ti,ab OR ‘virus infection’/de OR contaminat\*:ti,ab |
| 18 | ‘communicable disease’/exp OR ‘communicable disease’:ti,ab OR ‘communicable diseases’:ti,ab OR ‘patient-to-professional transmission’/exp |
| 19 | ‘Covid-19’:ti,ab OR ‘Covid19’:ti,ab OR ‘Covid 19’:ti,ab OR ‘coronavirus disease 2019’/exp OR ‘SARS-CoV-2’:ti,ab OR ‘SARS-CoV2’:ti,ab OR ‘SARS CoV 2’:ti,ab OR ‘Severe acute respiratory syndrome coronavirus 2’/exp OR ‘2019-nCoV’:ti,ab OR ‘SARS-CoV-2 vaccine’/exp OR ‘2019 Novel Coronavirus’:ti,ab OR ‘SARSCov2’:ti,ab OR ‘severe acute respiratory syndrome coronavirus’:ti,ab OR COVID:ti,ab |
| 20 | Influenza:ti,ab OR ‘Influenza’/exp OR ‘flu’:ti,ab |
| 21 | Tuberculosis:ti,ab OR ‘lung tuberculosis’/de |
| 22 | HIV:ti,ab OR ‘Human immunodeficiency virus infection’/exp OR ‘human immunodeficiency virus’:ti,ab OR ‘human immuno-deficiency virus’:ti,ab OR ‘human immune-deficiency virus’:ti,ab OR ‘acquired immunodeficiency syndrome’:ti,ab OR ‘acquired immune-deficiency syndrome’:ti,ab OR AIDS:ti,ab OR ‘acquired immune deficiency syndrome’/exp |
| 23 | ‘Hepatitis B’:ti,ab OR ‘hepatitis-b’:ti,ab OR ‘hepatitis B’/exp |
| 24 | ‘Hepatitis C’:ti,ab OR ‘hepatitis’:ti,ab OR ‘hepatitis C’/exp |
| 25 | ‘Respiratory infection’:ti,ab OR ‘respiratory tract infection’/de |
| 26 | #17 OR #18 OR #19 OR #20 OR #21 OR #22 OR #23 OR #24 OR #25 |
|  | Workforce AND Infection terms |
| 27 | #16 AND #26 |
| 28 | English:la |
| 29 | Animals/exp NOT humans/exp |
| 30 | Study protocol:ti OR trial protocol:ti OR review protocol:ti OR editorial:it OR letter:it OR ‘case reports’:it OR ‘conference abstract’:pt |
| 31 | #27 AND #28 NOT #29 NOT #30 |
| 32 | Date limits 2006-present  |

Supplemental Table 3. CINAHL Search Strategy

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| --- | --- |
| # | Term |
| 1 | TI (“emergency medical services” OR EMS) OR AB (“emergency medical services” OR EMS) OR MM (“emergency medical services” NOT (“trauma centers” OR “poison control centers”)) |
| 2 | TI (“emergency medical responder” OR “Advanced EMT” OR “advanced emergency medical technician” OR AEMT OR Paramedic\* OR “emergency medical technician” OR “emergency medical technicians”) OR AB (“emergency medical responder” OR “Advanced EMT” OR “advanced emergency medical technician” OR AEMT OR Paramedic\* OR “emergency medical technician” OR “emergency medical technicians”) |
| 3 | TI (“emergency responders” OR “first responder” OR “first responders”) OR AB (“emergency responders” OR “first responder” OR “first responders”) |
| 4 | TI (“law enforcement” OR police) OR AB (“law enforcement” OR police) OR (MM police) |
| 5 | TI (firefighters OR “fire departments”) OR AB (firefighters OR “fire departments”) |
| 6 | TI (“police dispatcher” OR dispatcher OR “emergency medical dispatcher” OR “medical dispatcher” OR “field dispatcher” OR “field responder”) OR AB (“police dispatcher” OR dispatcher OR “emergency medical dispatcher” OR “medical dispatcher” OR “field dispatcher” OR “field responder”) |
| 7 | (TI ((911 OR “9/11” OR “9-11” OR “9-1-1” OR “9 1 1”) AND dispatcher)) OR (AB ((911 OR “9/11” OR “9-11” OR “9-1-1” OR “9 1 1”) AND dispatcher)) |
| 8 | TI (ambulance OR “emergency mobile unit”) OR (MM ambulances) OR AB (ambulance OR “emergency mobile unit”) |
| 9 | 1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8 OR 9 |
| 10 | TI (Infection\* OR Infectious OR “infectious disease” OR “Virus Diseases” OR contaminat\*) OR AB (Infection\* OR Infectious OR “infectious disease” OR “Virus Diseases” OR contaminat\*) OR MM (Infection OR “virus diseases”) |
| 11 | MM (“Communicable Diseases” OR “Disease Transmission, Patient-to-Professional”) |
| 12 | TI (“Covid-19” OR “Covid19” OR “Covid 19” OR “SARS-CoV-2” OR “SARS-CoV2” OR “SARS CoV 2” OR ”2019-nCoV” OR “2019 Novel Coronavirus”) OR (MM “COVID-19”) OR AB (“Covid-19” OR “Covid19” OR “Covid 19” OR “SARS-CoV-2” OR “SARS-CoV2” OR “SARS CoV 2” OR ”2019-nCoV” OR “2019 Novel Coronavirus”) OR (MM “COVID-19”) OR (MM “SARS-CoV-2”) OR (MM “COVID-19 Vaccines”) |
| 13 | TI (Influenza OR flu) OR AB (Influenza OR flu) OR (MM “Influenza, Human”) |
| 14 | TI (Tuberculosis) OR AB (Tuberculosis) OR (MM Tuberculosis) |
| 15 | TI (HIV OR “human immunodeficiency virus” OR “acquired immunodeficiency syndrome” OR AIDS) OR AB (HIV OR “human immunodeficiency virus” OR “acquired immunodeficiency syndrome” OR AIDS) OR (MM “Human Immunodeficiency Virus”) OR (MM “Acquired Immunodeficiency Syndrome”) |
| 16 | TI (“Hepatitis B” OR “hepatitis-b”) OR AB (“Hepatitis B” OR “hepatitis-b”) OR (MM “Hepatitis B”) |
| 17 | TI (“Hepatitis C” OR “hepatitis-c”) OR AB (“Hepatitis C” OR “hepatitis-c”) OR (MM “Hepatitis C”) |
| 18 | TI (“Respiratory infection”) OR AB (“Respiratory infection”) OR (MM “Respiratory Tract Infections”) |
| 19 | 10 OR 11 OR 12 OR 13 OR 14 OR 15 OR 16 OR 17 OR 18 |
| 20 | 9 AND 19 |
| 21 | (LA English) |
| 22 | MM (Animals NOT human) |
| 23 | TI (“study protocol” OR “trial protocol” OR “review protocol”) OR (PT editorial) OR (PT letter) OR (PT “case reports) |
| 24 | 20 AND 21 NOT 22 NOT 23 |
| 25 | Date limit 2006 - present |
| 26 | 24 AND 25 |

Supplemental Table 4. SCOPUS Search Strategy

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| --- | --- |
| # | Term |
| 1 | TITLE-ABS-KEY ( "emergency medical services" OR ems “emergency medical responder” OR "emergency medical responders" OR "emergency medical responder" OR "emergency medical responders" OR "advanced emt" OR "advanced emergency medical technician" OR aemt OR "advanced emts" OR "advanced emergency medical technicians" OR aemts OR paramedic\* OR "emergency responder" OR "emergency responders" OR "emergency medical technician" OR "emergency medical technicians" OR "first responder" OR "first responders" OR "law enforcement" OR "police" OR firefighter OR firefighters OR "fire fighter" OR "fire fighters" OR "fire department" OR "fire departments" OR "police dispatcher" OR dispatcher\* OR "emergency medical dispatcher" OR "medical dispatcher" OR (( 911 OR "9/11" OR "9-11" OR "9-1-1" OR "9 1 1" ) AND dispatcher\*) OR "field dispatcher" OR "field dispatchers" OR "field responder" OR "field responders" OR ambulance OR ambulances OR "emergency mobile unit") AND TITLE-ABS-KEY (infection\* OR Infectious OR “infectious disease” OR “Virus Diseases” OR contaminat\* OR “communicable disease” OR “communicable diseases” OR “Covid-19” OR “Covid19” OR “Covid 19” OR “SARS-CoV-2” OR “SARS-CoV2” OR “SARS CoV 2” OR ”2019-nCoV” OR “2019 Novel Coronavirus” OR SARSCoV2 OR “severe acute respiratory syndrome coronavirus” OR influenza OR flu OR tuberculosis OR HIV OR “human immunodeficiency virus” OR “human immuno-deficiency virus” OR “human immune-deficiency virus” OR “acquired immunodeficiency syndrome” OR “acquired immune-deficiency syndrome” OR AIDS or “hepatitis B” OR “hepatitis-b” OR “hepatitis C” OR “hepatitis-C” OR “respiratory infection”) |