

Web Appendix 1: PICO Criteria and Search Strategies

PICO Criteria

Patients: Any patient presenting to the emergency department, or any other clinical setting.

Intervention: Any screening, counseling, or intervention regarding firearms.

Inclusion Criteria

- Studies focusing on medical-based screening, interventions, referrals, and follow-ups regarding prevention of firearm injury, screening, and counseling.
- Studies focusing on attitudes or beliefs of physicians/health care professionals regarding firearm injury prevention, screening, and counseling.
- Studies focusing on beliefs of patients regarding firearm injury prevention, screening, and counseling.
- Settings included emergency department, psychiatry, psychology, pediatrics, internal medicine, family medicine, trauma surgery, and others.

Exclusion Criteria

- Epidemiology of firearm injuries.
- Studies focusing on criminal justice (judges, legislative, police), educational (teachers), community-based public health.
- Reviews of clinical guidelines.
- Narrative or opinion pieces.

Comparison: N/A

Outcomes: Any

Study Design: Any study design, *excluding systematic reviews*, will be included. Case reports, feasibility trials, pilot studies, observational studies, and randomized controlled trials are all eligible.

Language: English

Years: All

Search Strategies

PubMed Searches (5) – limits: humans, English

Search 1: Firearms, Homicide, Suicide, Accidents, and Public health or Emergency Medicine – results: 1037 (without limits: 1181) (excluded 144 on human/English)

((("Wounds, Gunshot"[mh])) OR (((("Homicide"[mh:noexp] OR "Infanticide"[mh] OR "Violence"[mh:noexp] OR "Domestic Violence"[mh] OR "Workplace Violence"[mh] OR "Suicide"[mh] OR "Accidents"[mh] OR injur*) AND ("Firearms"[mh] OR Gun OR Guns OR Rifle OR Rifles OR Shotgun OR Shotguns)))))) AND (("Safety"[mh] OR "Counseling"[mh] OR "Emergency Medical Services"[mh] OR "Emergency Medicine"[mh] OR "Emergency Responders"[mh]))

Search 2: Search 2 + other specialties + screening/interventions – results: 553 (without limits: 583) (#added: 69) (duplicates after import: 484) (excluded 30 on human/English)

((("Wounds, Gunshot"[mh])) OR (((("Homicide"[mh:noexp] OR "Infanticide"[mh] OR "Violence"[mh:noexp] OR "Domestic Violence"[mh] OR "Workplace Violence"[mh] OR "Suicide"[mh] OR "Accidents"[mh] OR injur*) AND ("Firearms"[mh] OR Gun OR Guns OR Rifle OR Rifles OR Shotgun OR Shotguns)))))) AND (("Safety"[mh] OR "Counseling"[mh] OR "Emergency Medical Services"[mh] OR "Emergency Medicine"[mh] OR "Emergency Responders"[mh] OR "Adolescent medicine"[Mh] OR "Behavioral Medicine"[Mh] OR "Community medicine"[Mh] OR "General practice"[Mh] OR "internal medicine"[Mh] OR "pediatrics"[Mh] OR "psychiatry"[Mh] OR "traumatology"[Mh])) AND (("physician's role"[Mesh] OR "prevention and control"[MeSH Subheading] OR "program evaluation" OR "Questionnaires"[MeSH] OR "program development" OR "effective programs" OR "intervention" OR "interventions" OR "Mass Screening"[Mesh] OR "Risk-Taking"[Mesh] OR "Risk Factors"[MeSH Terms] OR "Risk Assessment"[MeSH Terms] OR "preventive medicine"[Mh] OR "social medicine"[Mh] OR "public health practice"[Mh]))

Search 3: Keyword search – results: 1011 (without limits: 1103) (#added: 763) (duplicates after this import: 248) (excluded 92 on human/English)

(gunshot OR firearms OR firearm OR gun OR guns OR rifle OR rifles OR shotgun OR shotguns) AND ((Homicide OR "Infanticide" OR Violence OR "Domestic Violence" OR "Workplace Violence" OR injur*) OR ("Suicide" OR "suicide attempt" OR "suicidal") OR ("Accidental" OR "accident" OR "accidents")) AND (("Emergency Medical Services" OR "Emergency Medicine" OR "Emergency Responders" OR "EMS" OR "AED" OR "PED" OR "pediatric emergency" OR "Emergency Department") OR ("Psychiatry" OR "Depression" OR "anxiety" OR "schizophrenia" OR "schizophrenic" OR "bipolar" OR "disorder" OR "Behavioral" OR "Social" OR "Psychology" OR "Psychologist" OR "sociologist" OR "social worker" OR "sociology" OR "case manager" OR "case management")) AND ("Prevention" OR "prevention and control" OR "program evaluation" OR "program development" OR "effective programs" OR "intervention" OR "interventions" OR "Mass Screening" OR "Risk-Taking" OR "Risk Factors" OR "Risk Assessment")

Search 4: Social sciences search: results: 119 (114 with English, humans limits) (added 113, duplicates: 1) (excluded 5 on humans/English)

((("Risk Factors"[mh]) AND "Adolescent"[mh]) AND "child behavior disorders"[mh] AND "Violence"[mh])

Search 5: results: 1044 (1189 without English, humans limits) (added 5, duplicates: 1039) (excluded 145 on human/English)

((("Wounds, Gunshot"[mh])) OR ((("Homicide"[mh:noexp] OR "Infanticide"[mh] OR "Violence"[mh:noexp] OR "Domestic Violence"[mh] OR "Workplace Violence"[mh] OR "Suicide"[mh] OR "Accidents"[mh] OR "Attitude of Health Personnel "[mh] OR injur*) AND ("Firearms"[mh] OR Gun OR Guns OR Rifle OR Rifles OR Shotgun OR Shotguns)))) AND (("Safety"[mh] OR "Counseling"[mh] OR "Emergency Medical Services"[mh] OR "Emergency Medicine"[mh] OR "Emergency Responders"[mh]))

Web of Science search (1) – results: 133 (English limit) added: 59. Duplicates: 74. Excluded 7 with English limit.

(TS=(gunshot OR firearms OR firearm OR gun OR guns OR rifle OR rifles OR shotgun OR shotguns) AND TS=((Homicide OR Infanticide OR Violence OR "Domestic Violence" OR "Workplace Violence" OR injur*) OR (Suicide OR "suicide attempt" OR suicidal) OR (Accidental OR accident OR accidents)) AND TS=("Emergency Medical Services" OR "Emergency Medicine" OR "Emergency Responders" OR EMS OR AED OR PED OR Emergency Department) AND TS=((Prevention OR "prevention and control" OR "program evaluation" OR "program development" OR "effective programs" OR intervention OR interventions OR "Mass Screening" OR "Risk-Taking" OR "Risk Factors" OR "Risk Assessment")))

CINAHL and PsycInfo search (1) – results: 749 (232 cinahl and 517 psycinfo) (760 without English limit) (718 with inner duplicates removed) (added: 476) (duplicates removed: 242 and previous inner duplicates an additional: 749-718=31) (excluded 11 with English)

(gunshot OR firearms OR firearm OR gun OR guns OR rifle OR rifles OR shotgun OR shotguns) AND ((Homicide OR "Infanticide" OR Violence OR "Domestic Violence" OR "Workplace Violence" OR injur*) OR ("Suicide" OR "suicide attempt" OR "suicidal") OR ("Accidental" OR "accident" OR "accidents")) AND (("Emergency Medical Services" OR "Emergency Medicine" OR "Emergency Responders" OR "EMS" OR "AED" OR "PED" OR "pediatric emergency" OR "Emergency Department") OR ("Psychiatry" OR "Depression" OR "anxiety" OR "schizophrenia" OR "schizophrenic" OR "bipolar" OR "disorder" OR "Behavioral" OR "Social" OR "Psychology" OR "Psychologist" OR "sociologist" OR "social worker" OR "sociology" OR "case manager" OR "case management")) AND ("Prevention" OR "prevention and control" OR "program evaluation" OR "program development" OR "effective programs" OR "intervention" OR "interventions" OR "Mass Screening" OR "Risk-Taking" OR "Risk Factors" OR "Risk Assessment")

PubMed search 6 (no limits) (Total prior: 1812) (Dups removed: 1201) (Total after: 611):

(weapon OR weapons OR gunshot OR firearms OR firearm OR gun OR guns OR rifle OR rifles OR shotgun OR shotguns) AND ((Homicide OR "Infanticide" OR Violence OR "Domestic Violence" OR "Workplace Violence" OR injur*) OR ("Suicide" OR "suicide attempt" OR "suicidal") OR ("Accidental" OR "accident" OR "accidents")) AND (("Emergency Medical Services" OR "Emergency Responders" OR "EMS" OR "AED" OR "PED" OR "pediatric emergency" OR "Emergency Department") OR ("Psychiatry" OR "Depression" OR "anxiety" OR "schizophrenia" OR "schizophrenic" OR "bipolar" OR "disorder" OR "Behavioral" OR "Social" OR "Psychology" OR "Psychologist" OR

"sociologist" OR "social worker" OR "sociology" OR "case manager" OR "case management" **OR pediatrics OR emergency medicine OR internal medicine**) AND ("Prevention" OR "prevention and control" OR "program evaluation" OR "program development" OR "effective programs" OR "intervention" OR "interventions" OR "Mass Screening" OR "Risk-Taking" OR "Risk Factors" OR "Risk Assessment")

Web Table 1

JADAD SCORING SYSTEM			
Randomization	0 – not randomized / inappropriate randomization	1 – randomized but not described	2 – randomized appropriately
Double Blind	0 – not double blind or inappropriate blinding	1 – double blind but not described	2 – double blinded appropriately
Withdrawals / Dropouts	0 – no description	1 – description of withdrawals and dropouts given	

Supplemental Table 1. A Description of the Jadad Scoring System for Randomized Controlled Trials. Total scores range from 0 to 5, with 5 being the best possible score. Scoring system applied to randomized controlled trials or other studies that used an interventional methodology (i.e. quasi-experimental). (20)

Web Table 2

NEWCASTLE-OTTAWA SCALE FOR COHORT STUDIES				
Representativeness of exposed cohort	1 – Truly representative of the average ___ in the community	1 – Somewhat representative	0 – Selected group of users	0 – No description of the derivation of the cohort
Selection of nonexposed cohort	1 – Drawn from same community as exposed cohort		0 – Drawn from a different source	0 – No description of derivation of nonexposed cohort
Ascertainment of exposure	1 – Secure record (e.g., medical records)	1 – Structured interview	0 – Written self report	0 – No description
Demonstration that outcome of interest not present at start of study	1 – Yes		0 – No	
Comparability of participants (may combine for 2 points)	1 – Study controls for ___ (select most important factor)	1 – Study controls for any additional factors		
Assessment of outcome	1 – Independent blind assessment	1 – Record linkage	0 – Self report	0 – No Description
Follow-up long enough for outcomes to occur	1 – Yes		0 – No	
Adequacy of follow-up of cohorts	1 – Complete follow-up / all subjects accounted for	1 – Subjects lost to follow-up unlikely to introduce bias	1 – Description provided of those lost to follow-up	

Supplemental Table 2. A Description of the Newcastle-Ottawa Quality Assessment Scale for Cohort Studies. Total scores range from 0 to 9, with 9 being the maximum score and indicative of a higher quality study (22).

Web Table 3

NEWCASTLE-OTTAWA SCALE FOR CROSS-SECTIONAL STUDIES / SURVEY (ADAPTED)				
Representativeness of survey sample	1 – Truly representative of the average target population (all subjects or random sampling)	1 – Somewhat representative (not random sampling, but based on solid sampling strategies)	0 – Small or biased subgroup of potential respondents	0 – No description of the sampling strategy
Sample size	1 – Justified and satisfactory		0 – Not justified	
Nonresponse rate	1 – Response rate satisfactory (>70-75%)		0 – Unsatisfactory (<70%)	0 – No description of response rate
Comparability of participants (may combine for 2 points)	1 – Study controls for ___ (select most important factor)	1 – Study controls for any additional factors	0 – Nonresponders differ from responders in important ways	
Validity of outcomes	1 – Independent blind assessment of behavior	1 – Medical record review	0 – Self-report	0 – No description
Ascertainment of exposure / risk factor (max 2 points)	2 – Validated measurement tool	1 – Nonvalidated tool but tool available / described	0 – Nonvalidated measurement tool and not described	
Statistical test	1 – Test clearly described and appropriate		0 – Test not appropriate or not described	

Supplemental Table 3. A Description of the Newcastle-Ottawa Quality Assessment Scale for Cross Sectional Studies and Surveys. Total scores range from 0 to 9, with 9 being the maximum score and indicative of a higher quality study (22).