



Does EMS do a good job?

- Ambulance rates are out of control!
- Paramedic models are not effective.
- ALS skills should not be performed in the field.
- EMTs lack the training and knowledge to make life saving decisions.
- Nurses are better trained. Paramedics should be driving nurses to emergency calls.



Are you worth the money you think you deserve?

What rates should we charge and how should the money be allocated?

Do we have the right tools for the job?

Do we actually help anyone?

What really is our job?

Is this all we can do?

How do you know?



Is research useful to EMS

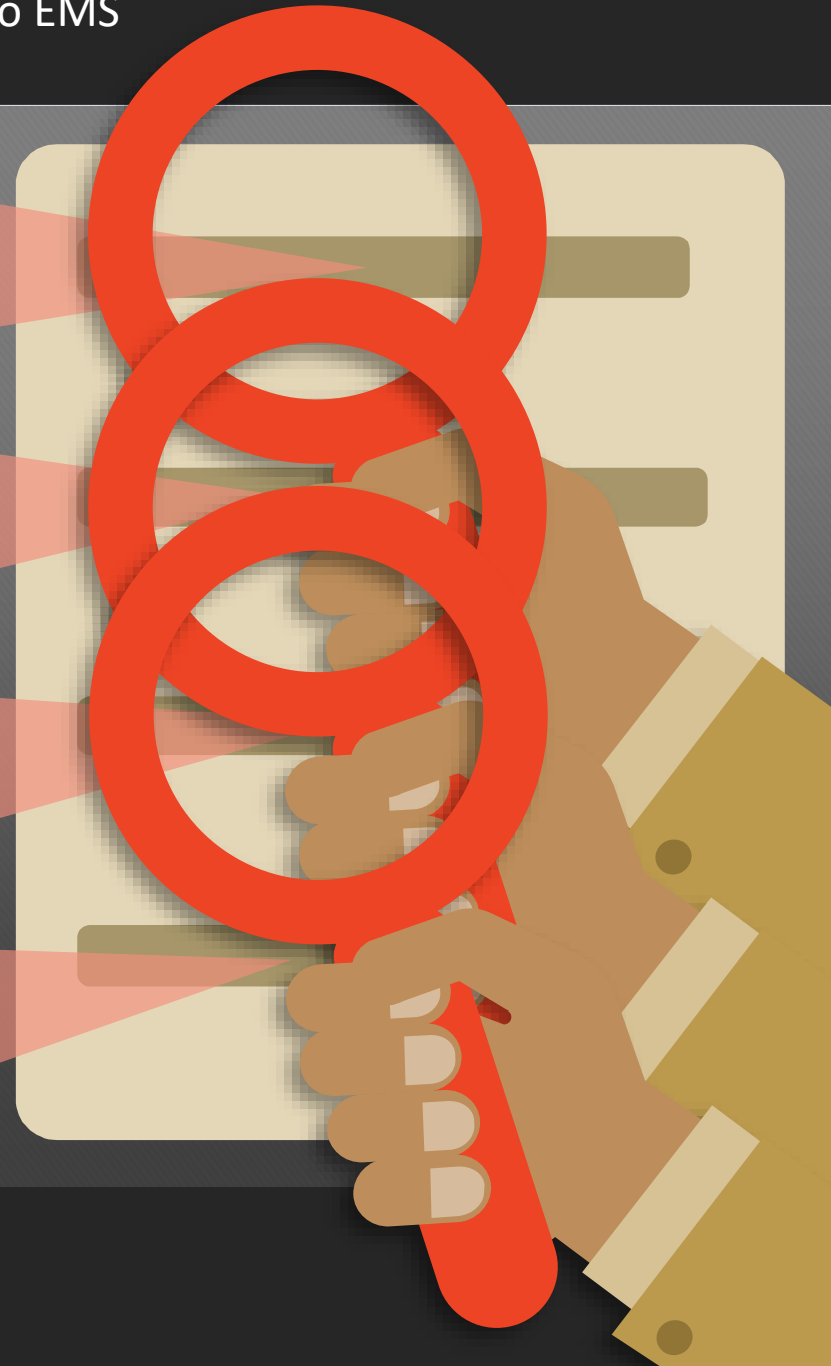
I mean, who cares anyway? I just want a paycheck!

Ensures that care provided will glean the best, safest possible results and patient outcomes.

Demonstrates value of EMS care with reportable outcomes.

Improves working conditions and safety for crews and patients.

Encourages accurate and complete documentation (Research, litigation, reimbursement)



System Inputs

Prehospital components of externally developed guidelines, e.g., AHA, NAESP, BTF, NICE, NZGG
 Protocols from existing EMS systems, e.g., State EMS protocols, Nova Scotia protocols
 External evidence synthesis processes, e.g., Cochrane systematic reviews, EPCs
 Individual researchers, EMS organizations, medical directors, & EMS personnel

Guideline Initiation: EMS Evidence Accumulation & Evaluation

Review proposals for guideline development, adaptation, or adoption
 Identify existing systematic reviews
 Recommend need for (or conduct) systematic review
 Assemble advisory panel with expertise in topic, guideline development, library science, etc.
 Document conflicts of interest for all participants

Evaluation of Effectiveness, Outcomes, Clinical Research, Quality Improvement Evaluations

Guideline/protocol pilot testing & feasibility studies (may occur during development process)
 Monitor local quality improvement benchmarks & indicators, quality improvement processes at all levels
 Apply NEMSIS data in evaluation process
 Outcomes research: EMSOP - local, regional, statewide, national
 Clinical research of specific questions
 Systems research (See EMSOP II & IV)
 Cost effectiveness, cost-utility, cost-benefit analysis (See EMSCAP papers)
 Implementation research - analysis of barriers & facilitators to implementation

Establish Priorities for Guideline Development

Evaluate quality of evidence or guideline, e.g., GRADE, AGREE
 Recommend topics for further guideline development
 Archive material not selected for future use

Guideline Development

Document risks & benefits of intervention - First do no harm
 Develop strength of recommendation, e.g., GRADE
 Document & disseminate rationale for "no recommendation"
 EMS "contextualization"
 Write, adapt, or endorse guideline
 Provide feedback to originating institution or organization

EMS Protocol Development

EMS "contextualization"
 Clinical implications of strength of recommendation

Implementation

Link to national EMS provider certification & recertification
 Link to national EMS agency accreditation
 Develop guideline implementation "tool kits," webinars, manuals, integration into local protocols
 Partner with national orgs. To facilitate interpretation, application & medical direction
 Potentially link to funding and reimbursement, e.g., CMS, 3rd party
 Develop health informatics & clinical decision support software
 Develop quality improvement measures & tools - local, regional, state & tribal

pre-existing protocols

Dissemination of Guidelines/Protocols

Link to EMS Education Agenda for the Future → Core Content → Scope of Practice Model → National EMS Education Standards
 Link to National EMS Education Program Accreditation
 Publications: peer-reviewed journals, trade press, textbooks, government reports
 New products: education materials, quality improvement materials
 Target stakeholder organizations
 Multimedia approach: ems.gov, podcasts, etc.

Abbreviations

AGREE - Appraisal of Guidelines Research and Evaluation
 AHA - American Heart Association
 BTF - Brain Trauma Foundation

CMS - Center for Medicare and Medicaid Services
 EMSCAP - Emergency Medical Services Cost Evaluation Project
 EMSOP - Emergency Medical Services Outcomes Project

NAEMSP - National Association of EMS Physicians
 NEMSIS - National EMS Information System
 NICE - National Institute for Health and Clinical Excellence
 NZGG - New Zealand Guidelines Group

National Prehospital Evidence-based Guideline Model Process

Approved by the Federal Interagency Committee on EMS and the National EMS Advisory Council

In the end, Who really wins?

Explored and Research



How would you complete an Evidence Based Guideline?

