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

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

New protocols
EMS “contextualization”
Clinical implications of strength of recommendation

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

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

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
EMSCP - Emergency Medical Services Cost Evaluation Project
EMSO - 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