UNIT TERMINAL OBJECTIVE

1-3 At the completion of this unit, the paramedic student will be able to integrate the implementation of primary injury prevention activities as an effective way to reduce death, disabilities and health care costs.

COGNITIVE OBJECTIVES

At the completion of this unit, the paramedic student will be able to:

1.3-1 Describe the incidence, morbidity and mortality of unintentional and alleged unintentional events. (C-1)
1.3-2 Identify the human, environmental, and socioeconomic impact of unintentional and alleged unintentional events. (C-1)
1.3-3 Identify health hazards and potential crime areas within the community. (C-1)
1.3-4 Identify local municipal and community resources available for physical, socioeconomic crises. (C-1)
1.3-5 List the general and specific environmental parameters that should be inspected to assess a patient's need for preventative information and direction. (C-1)
1.3-6 Identify the role of EMS in local municipal and community prevention programs. (C-1)
1.3-7 Identify the local prevention programs that promote safety for all age populations. (C-2)
1.3-8 Identify patient situations where the paramedic can intervene in a preventative manner. (C-1)
1.3-9 Document primary and secondary injury prevention data. (C-1)

AFFECTIVE OBJECTIVES

At the completion of this unit, the paramedic student will be able to:

1.3-10 Value and defend tenets of prevention in terms of personal safety and wellness. (A-3)
1.3-11 Value and defend tenets of prevention for patients and communities being served. (A-3)
1.3-12 Value the contribution of effective documentation as one justification for funding of prevention programs. (A-3)
1.3-13 Value personal commitment to success of prevention programs. (A-3)

PSYCHOMOTOR OBJECTIVES

At the completion of this unit, the paramedic student will be able to:

1.3-14 Demonstrate the use of protective equipment appropriate to the environment and scene. (P-3)

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DECLARATIVE

I. Epidemiology
- A. Incidence, morbidity, mortality
  - 1. Injury surpassed stroke as third leading cause of death
  - 2. Estimated lifetime cost of injuries >$114 billion
  - 3. Estimated 19 hospitalizations and 254 emergency department visits for each injury death
- B. Effects of early release from hospital on EMS services
  - 1. Implications are increased access on EMS services for supportive care and intervention
- C. Related terminology
  - 1. Injury
    - a. Defined as intentional or unintentional damage to the person resulting from acute exposure to thermal, mechanical, electrical or chemical energy or from the absence of such essentials as heat or oxygen
  - 2. Injury risk
    - a. Defined as real or potential hazardous situations that put individuals at risk for sustaining an injury
  - 3. Injury surveillance
    - a. Defined as ongoing systematic collection, analysis and interpretation of injury data essential to the planning, implementation and evaluation of public health practice, closely integrated with the timely dissemination of these data to those who need to know
    - b. The final link in the surveillance chain is the application of these data to prevention and control
  - 4. Primary injury prevention
    - a. Defined as keeping an injury from ever occurring
  - 5. Secondary and tertiary prevention
    - a. Defined as care and rehabilitation activities (respectively) that are preventing further problems from an event that has already occurred
  - 6. Teachable moment
    - a. Defined as the time after an injury has occurred when the patient and observers remain acutely aware of what has happened and may be more receptive to teaching about how the event or illness could be prevented
  - 7. Years of productive life
    - a. Defined as the calculation by subtracting age of death from 65

II. Feasibility of EMS involvement
- A. EMS providers are widely distributed amid the population
- B. EMS providers often reflect the composition of the community
- C. In a rural setting, the EMS provider may be the most medically educated individual
- D. More than 600,000 EMS providers in the United States
- E. EMS providers are high-profile role models
- F. EMS providers are often considered as champion of the health care consumer
- G. EMS providers are welcome in schools and other environments
- H. EMS providers are considered authorities on injury and prevention

III. Essential leadership activities
- A. Protection of individual EMS providers from injury
  - 1. Policies promoting response, scene and transport safety
  - 2. Appropriate equipment to providers for eye, back, skin safety

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3. Appropriate equipment to providers for prevention from communicable and chemical exposure
4. Implementation of safety program
5. Establish a wellness program for EMS providers

B. Provide education to EMS providers
1. Fundamentals of primary injury prevention
2. Incorporation into EMS primary and continuing education programs
3. Establish liaison with public and private sector specialty groups for specific education and training

C. Support and promote collection and use of injury data
1. Develop policies that promote documentation of injuries by EMS providers
2. Modify data collection tools so prompt recording of data is feasible and realistic
3. Contribute to local, statewide and national surveillance systems

D. Obtain support and resources for primary injury prevention activities
1. Establish internal budgetary support
2. Seek financial resource to sponsor injury prevention programs
   a. "In-kind" services
   b. Fees and equipment
   c. Publicity
   d. Network with other injury prevention organizations
   e. Initiate and attend meetings of local organizations involved or requesting involvement in injury prevention

E. Empower individual EMS providers to conduct primary injury prevention activities
1. Identify and encourage interest and support
2. Establish internal budgetary support, where possible
   a. Provide rotational assignment to prevention programs
   b. Provide salary for off-duty injury prevention activities
   c. Reward and/ or remunerate participation

IV. Essential provider activities

A. Education
1. Implementation of primary personal injury prevention strategies
   a. Wellness
      (1) Exercise and conditioning
      (2) Management of stress
         (a) Personal
         (b) Family
         (c) Work environment
   b. Safe driving
      (1) Fundamental driving techniques
      (2) Restraints
         (a) Self
         (b) Patient
         (c) Riders
      (3) Use of personal protective equipment
         (a) Reflective clothing
         (b) Helmets
      (4) Use of lights, sirens
      (5) Approach to, parking at and leaving the scene
      (6) Driving without drinking

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c. Scene safety precautions
    (1) Availability and use of law enforcement
    (2) Traffic control
        (a) Vehicles
        (b) Bystanders
d. Lifting and moving techniques
e. Recognition of health hazards and potential high profile crime areas
f. Practice on-scene survival techniques
g. Use on-scene survival resources

2. Review the maladies and injuries common to
    a. Infancy
        (1) Low birth weight
        (2) Mortality and morbidity
    b. Childhood
        (1) Intentional events
        (2) Unintentional events
        (3) Alleged unintentional events
    c. Childhood violence
        (1) To self
        (2) To others
    d. Adult
    e. Geriatrics
    f. Recreation
    g. Work hazards
    h. Day care center
        (1) Licensed
        (2) Non-licensed
    i. Early release from hospital
    j. Discharge from urgent care, or other out-patient facilities
    k. Signs of emotional stress that may lead to intentional and unintentional and alleged unintentional events
    l. Self medication
        (1) Dangers of non-compliance
            (a) Borrowing
            (b) Taking medications on time and finishing the regimen
        (2) Storage
        (3) Over-medication

V. Implementation of prevention strategies
    A. Preservation of safety of the response team
        1. As in IV A. 1, 2 above
    B. Patient care considerations
        1. Recognize signs/ symptoms of suspected abuse
            a. Recognition of abusive situations
            b. Resolving conflict without violence
    C. Recognize signs/ symptoms of exposure to
        1. Hazardous materials
        2. Temperature extremes
        3. Vector
        4. Communicable disease

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5. Assault, battery
6. Structural risks

D. Recognizing need for outside resource
   a. Municipal
   b. Community
   c. Religious

E. Documentation
   1. Record primary care
   2. Record primary injury data
      a. Scene conditions
      b. Mechanism of injury
      c. Use of protective devices
      d. Absence of protective devices
      e. Risks overcome
      f. Other as noted by the EMS agency

F. On-scene education
   1. Recognize/ sense possible recurrence
   2. Effective communications
      a. Recognizing the teachable moment
      b. Non-judgmental
      c. Objective
      d. Sense of timing
      e. Consideration of ethnic, religious and social diversity considerations
   3. Informing individuals how they can prevent recurrence
   4. Informing individuals on use of protective devices

G. Resources identified for
   1. Devices
   2. Child protective services
   3. Sexual abuse
   4. Spousal abuse
   5. Elder abuse
   6. Food, shelter, clothing
   7. Employment
   8. Counseling
   9. Alternative health care
      a. Free clinic
   10. Alternative means of transportation
   11. After-care services
   12. Rehabilitation
   13. Grief support
   14. Immunization programs
   15. Vector control
   16. Disabled
   17. Day care
   18. Alternative modes of education
   19. Work-study programs
   20. Mental health resources and counseling

VI. Participation in prevention programs

A. Education and training

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1. Population served
    a. Ethnic
    b. Cultural
    c. Religious
    d. Language
    e. Learning disabled
    f. Physically challenged

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REFERENCES

Centers for Disease Control, 1991

Consensus Statement on the role of Emergency Medical Services in Primary Injury Prevention, February 1996