IMPACT OF EMERGENCY DEPARTMENT CROWDING ON PUBLIC HEALTH AND PATIENT SAFETY

Ronald G. Thomas, M.D., F.A.C.E.P.

Master of Public Health
Capstone Project
The Medical College of Wisconsin
ED CROWDING AND PUBLIC HEALTH

INTRODUCTION

- Magnitude of Emergency Department Crowding
- Emergency Department as “Safety Net Provider”
  - Emergency physicians (5% of all US physicians) handle a quarter of all acute care encounters annually in the U.S.
- Juxtaposition of Emergency Medicine and Public Health
- Impact of Crowded ED Conditions on ED Patient Care and Execution of ED Based Public Health Initiatives
ED CROWDING AND PUBLIC HEALTH

INTRODUCTION

Crowded Conditions in Emergency Departments:

- Hinder ability to render timely care to ED Patients
- Increase the risk of medical errors
- Contribute to adverse outcomes
- Threatens Public Health
ED CROWDING AND PUBLIC HEALTH

PURPOSE

1. Describe the magnitude and effects of ED crowding on patient safety and public health
2. Discuss Public Health relevant model of emergency medical practice
3. Describe existing and developing ED based public health programs and initiatives and the effects of ED crowding on those programs and initiatives
ED CROWDING AND PUBLIC HEALTH

METHOD

Literature Review

Ovid/Medline search designed to:
1. Define and establish the status of the ED as a safety net provider
2. Review trends and characteristics of US ED utilization
3. Define and establish the magnitude and general effects of ED crowding
4. Review the established and developing emergency medical practice public health programs and initiatives
5. Demonstrate the effects of ED crowding on those programs and initiatives
Institute of Medicine definition

A patchwork of hospitals, clinics, financing and programs that serve as the default system to care for those vulnerable populations who fall outside the economic and medical mainstreams.
ED CROWDING AND PUBLIC HEALTH

RESULTS

NATION’S EMERGENCY DEPARTMENTS AS SAFETY NET

- Core Safety Net Providers
  - Those who, either by legal mandate or by explicitly adopted mission, maintain an open door policy, offering access to services for patients regardless of their ability to pay and who deliver a substantial share of their services to uninsured, Medicaid and other vulnerable patients
ED CROWDING AND PUBLIC HEALTH

RESULTS

FACTORS THAT THREATEN THE SURVIVAL OF THE SAFETY NET

- Burden of uncompensated care
- Proliferation of Medicaid managed care programs
  - Rise of non-traditional safety net providers
    - No offering of the comprehensive services of traditional providers
ED CROWDING AND PUBLIC HEALTH

RESULTS

FACTORS THAT THREATEN THE SURVIVAL OF THE SAFETY NET

- Failure of traditional providers:
  - Primary care capacity shrinks
    - Reliance on ED for care increases
    - ED’s role as ultimate safety net more critical
  - Superimposed on hospitals’ compromised inpatient capacity
ED CROWDING AND PUBLIC HEALTH

RESULTS

TRENDS AND CHARACTERISTICS OF EMERGENCY DEPARTMENT VISITS

- US emergency department visits increased past 2 decades
- Decrease in hospitals, emergency departments and inpatient beds
DEFINITION OF EMERGENCY DEPARTMENT CROWDING

- American College of Emergency Physicians

“Situation in which the identified need for emergency services outstrips available resources in the emergency department, hospital or both”
ED CROWDING AND PUBLIC HEALTH

RESULTS

CAUSES AND MAGNITUDE OF EMERGENCY DEPARTMENT CROWDING

- Primary cause of emergency department crowding is boarding
- Definition of boarding
- Magnitude of emergency department boarding
  - American Hospital Association Report
GENERAL EFFECTS OF ED CROWDING ON PATIENT SAFETY

- Long waiting times to be seen by a physician
- Increased number of patients leaving prior to evaluation
- Extended overall length of stay in the ED and hospital
  - Increased morbidity and mortality of critically ill patients
ED CROWDING AND PUBLIC HEALTH

RESULTS

GENERAL EFFECTS OF ED CROWDING ON PATIENT SAFETY

- Delay to diagnosis and treatment due, in part, to triage delays and ambulance diversion
  - Sepsis
  - Coronary syndrome including acute myocardial infarction
  - Surgical emergencies
  - Stroke
ED CROWDING AND PUBLIC HEALTH

RESULTS

GENERAL EFFECTS OF ED CROWDING ON PATIENT SAFETY

- Crowded conditions and over-burdened ED staffs do not provide much capacity to accommodate any surge, especially the large-scale surge of a disaster.
ED CROWDING AND PUBLIC HEALTH

RESULTS

ESTABLISHED AND DEVELOPING EMERGENCY MEDICAL PRACTICE PUBLIC HEALTH PROGRAMS AND INITIATIVES

- Emergency Medicine has embraced a Public Health approach
- EM has assumed a leadership role in the design and implementation of expanded systems of health and social care
ED CROWDING AND PUBLIC HEALTH

RESULTS

ESTABLISHED AND DEVELOPING EMERGENCY MEDICAL PRACTICE PUBLIC HEALTH PROGRAMS AND INITIATIVES

- Emergency Medicine addresses the treatment of individuals with acute problems
- Public Health addresses the prevention of threats to the health of the community
ED CROWDING AND PUBLIC HEALTH

RESULTS

ESTABLISHED AND DEVELOPING EMERGENCY MEDICAL PRACTICE
PUBLIC HEALTH PROGRAMS AND INITIATIVES

PUBLIC HEALTH RELAVANT MODEL OF EMERGENCY MEDICAL PRACTICE

- The insight that many of the acute illnesses and injuries suffered by emergency department patients result from preventable or modifiable health risks

- Both disciplines think about the health of populations as well as individuals
ED CROWDING AND PUBLIC HEALTH

RESULTS

ESTABLISHED AND DEVELOPING EMERGENCY MEDICAL PRACTICE PUBLIC HEALTH PROGRAMS AND INITIATIVES

Emergency Medicine and Public Health interact in 4 areas:
1. Surveillance of diseases
2. Injuries and health risks
3. Delivering clinical preventive services
4. Developing policies to protect and improve the public’s health
Well established public health programs in emergency medicine include:

- Injury prevention/intimate partner violence
- Screening, brief intervention and referral in:
  - Alcohol abuse
  - Substance abuse
ED CROWDING AND PUBLIC HEALTH

RESULTS

ESTABLISHED AND DEVELOPING EMERGENCY MEDICAL PRACTICE PUBLIC HEALTH PROGRAMS AND INITIATIVES

Well established public health programs in emergency medicine include:

- Sexually transmitted infections screening, treatment and prevention
- Screening, treatment and referral of mental health disorders
- Occupational and environmental exposures
ED CROWDING AND PUBLIC HEALTH
RESULTS

EMERGENCY DEPARTMENT BASED PUBLIC HEALTH INITIATIVES

- Catalogued by the Public Health Interest Group of the Society for Academic Emergency Medicine
- Many of these initiatives are listed in Healthy People 2020
ED CROWDING AND PUBLIC HEALTH

RESULTS

The Society for Academic Emergency Medicine Public Health Interest Group objective is to promote public health activities in emergency medicine through coordinated efforts in:

1. Patient education
2. Public awareness, media
3. Policy, environmental and system issues
4. Professional education, training clinical practice
5. Research, scientific presentations
6. Relationship development, resource sharing
ED CROWDING AND PUBLIC HEALTH

RESULTS

EVIDENCE EXISTS THAT ED BASED PUBLIC HEALTH INITIATIVES SAVE LIVES AND ARE COST EFFECTIVE

ADVOCACY GROUPS CONCLUDE THAT SCREENING LEADING TO EARLY DETECTION OR INTERVENTION FOR AN OTHERWISE OCCULT CONDITION IN THE ED IS FEASIBLE AND WORTHWHILE
ED CROWDING AND PUBLIC HEALTH

RESULTS

Effects of Emergency Department Crowding on Emergency Medicine Public Health Programs and Initiatives

- Lack of privacy interferes with obtaining information regarding risky behavior and domestic violence
- Identification and patient counseling of risk factors for stroke and cardiac disease are not happening
- The primary barriers to enhance these public health programs and initiatives are time, resources and crowded conditions
ED CROWDING AND PUBLIC HEALTH

DISCUSSION

- Emergency Medicine established as Safety Net Provider
- Due to increasing societal factors Nation’s EDs faced with overcrowding and unsafe conditions
- Benefits are derived from emergency department based Public Health programs and initiatives
- Social and public health concerns must be integrated into daily treatment plans, especially in the emergency department
ED CROWDING AND PUBLIC HEALTH

DISCUSSION

- Nation’s EDs becoming a place for acute emergency care and for primary health care and public health measures
- There is sufficient evidence to support public health measures in the ED
- ED crowding has many untoward consequences regarding patient care and affects the ability of physicians to deliver prompt and effective emergency acute care placing patients’ safety in jeopardy
ED CROWDING AND PUBLIC HEALTH

DISCUSSION

- ED crowding creates barriers to executing ED based public health programs and the development of ED based public health initiatives.
- As EDs remain crowded, resources diverted from solving ED crowding for whatever well-intentioned public health purpose is considered inappropriate by some.
ED CROWDING AND PUBLIC HEALTH

CONCLUSION

- ED is a vital component of America’s health care safety net
- Overcrowding in emergency department treatment areas threatens public health
- The juxtaposition of emergency medicine and public health has resulted in long standing emergency department based public health programs and initiatives
ED CROWDING AND PUBLIC HEALTH

CONCLUSION

- Emergency department crowding jeopardizes execution of existing emergency department based public health programs and the development and implementation of developing and potential programs.

- Implementation of preventive and public health care measures is difficult in a crowded emergency department due to the lack of resources and privacy.
ED CROWDING AND PUBLIC HEALTH

CONCLUSION

- The main cause of ED crowding is inadequate inpatient capacity for a patient population with an increasing severity of illness.
- Potential solutions for ED overcrowding will require multidisciplinary system-wide support.
ED CROWDING AND PUBLIC HEALTH

CONCLUSION

- Until emergency department crowding has been addressed and remedied, the emergency department based public health programs will not receive the resources necessary for their success
ED CROWDING AND PUBLIC HEALTH

ACKNOWLEDGEMENTS

David E. Nelson, Ph.D., MS
Michael Carius, M.D., F.A.C.E.P
Peter Jacoby, M.D., F.A.C.E.P.
Jessica Gillis, MPH
Beverly Carlson
ED CROWDING AND PUBLIC HEALTH

REFERENCES

1. National Hospital Ambulatory Medical Care Survey: 2006 Emergency Department Summary.
5. The Emergency Medical Treatment and Active Labor Act, as established under the Consolidated Omnibus Budget Reconciliation Act (COBRA) of 1985 (42 USC 1395 dd); 1194. Federal Register, 59:32086–127.
ED CROWDING AND PUBLIC HEALTH

REFERENCES

ED CROWDING AND PUBLIC HEALTH

REFERENCES

REFERENCES


ED CROWDING AND PUBLIC HEALTH

REFERENCES

46. Emergency Department Utilization: Trends and Management. Tufts Managed Care Institute, November/December 2001.
52. Institute of Medicine, Community-Based Emergency Care: At the Breaking Point. Washington, DC: National Academies Press; 2006:42.
ED CROWDING AND PUBLIC HEALTH

REFERENCES


57. Cowan, RM, Trezciak, S, Clinical review: Emergency department overcrowding and the potential impact


REFERENCES

ED CROWDING AND PUBLIC HEALTH

REFERENCES


ED CROWDING AND PUBLIC HEALTH

REFERENCES


