Goal of the Summit

"Enhancing ambulance transport safety through shared knowledge of technical data"

TRB TRANSPORTATION RESEARCH BOARD OF THE NATIONAL ACADEMIES

Ambulance Transport Safety Summit
Bridging the gap between what we do and what is known

EMS Subcommittee of the TRB Ambulance Transport Safety Summit

October 29th , 2009

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Outline to cover

- Emergency Response System Integration
- Alternates to Transport System

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The service that allows sick patients to go home or stay home!

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What we know

- There are more people to move
- We need to move less people
- Technology is the bridge

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Community-Based Health Care

Focused Factories

Home Care Services · Extended Care Facility · Community Mental Health · Ambulatory Surgical · Primary Care

The Unscheduled Care System
EMS – ED – Urgent Care – Ask-A-Nurse

Women's Services · Diagnostic Services · Clinical Decision and Observation Services · Medical Patient Hospitalist Service · Surgical Centers of Excellence · Specialty Services

Hospital-Based Health Care

More Users, More Needs

THE HANSSEN MOLE HUNT • DODGING THE DOW

U.S.News & WORLD REPORT

CRISIS IN THE ER

Turnaways and huge delays are a surefire recipe for disaster. What you can do
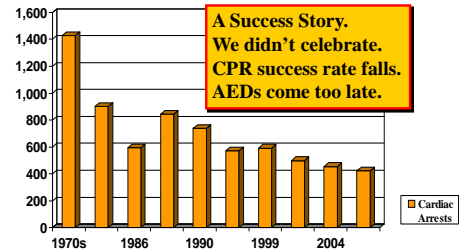
- Send the Unfocused to the emergency system
- Complicated, multisystem disease patients
- More needing transport assistance
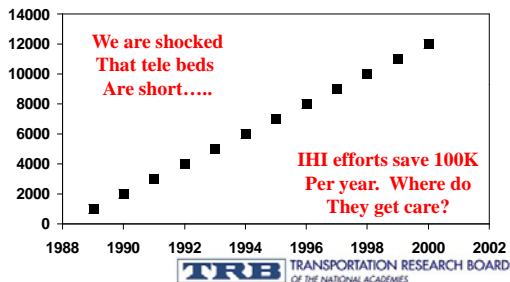- Example: Changing nature of ACS patients

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Montgomery County Cardiac Arrests

A Success Story.
We didn't celebrate.
CPR success rate falls.
AEDs come too late.

(Bar chart: Cardiac Arrests by year — 1970s, 1986, 1990, 1999, 2004; values ranging up to ~1,400)

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Adding 1000 people per year back to the population

We are shocked
That tele beds
Are short…..

IHI efforts save 100K
Per year. Where do
They get care?

(Scatter plot: values 0–14000, years 1988–2002)

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Adding 1000 People a Year

- WE SHOULD CONGRATULATE OURSELVES!!
- Cardiovascular at risk population, who must use the ED
- No surprise they present with Chest Pain, Dyspnea, TIAs,….
- Overall, ED population is older, sicker, and more medical

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ED Visits 1992-2006

	1992	2006
All ED Visits per 1000 population	*357*	*405*
Age 45-64	258	343
Age 65-74	314	485
Age over 75	558	602

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What ES Does 1992-2006

	1992	2006
CPR	291,000	166,000
Intubate	408,000	299,000
DOA	878,000	249,000

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What ES Does 1992-2006

	1992	2006
Wound Care	11.5 m	11.9 m
Orthopedic Care	7.1 m	7.1 m
ENT Care	2.5 m	4.4 m
Self Inflicted Wounds	160,000	594,000

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Applying Tests 1992-2006

Diagnostics	1992	2006
Xray	37 m	41.6 m
CT or MRI	2.16 m	13.8 m
Cor Enzymes	3 m	13.8 m
EKG	11.9 m	20.4 m

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Changing ES Patient Mix

Legend: Mental Health, Injury, Illness
X-axis: 1980s, 1990s, 2000s, 2010s
Y-axis: 0% to 100%
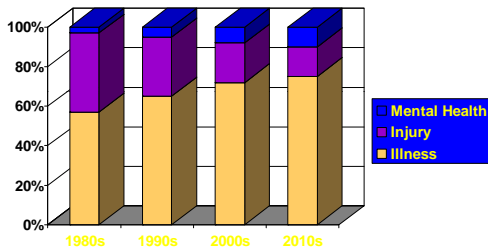
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Emergency Service Utilization is Predictable

General Population
EMS — 80/1000 Population
Emergency Department
Walk-ins to ED — 325 / 1000 Population
Transfer 0.3 - 4%
Admit 11 - 30%
Treat & Release 65 - 85%
Another Transport
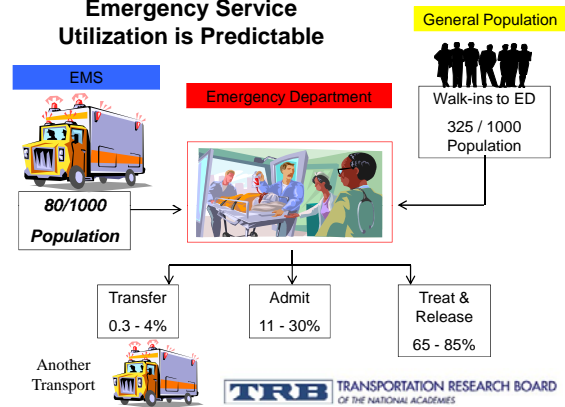
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ES: The Door to Inpatient Beds

32% — 1983
53% — 1993
64% — 2008
Y-axis: Percent 10% to 60%
X-axis: Years
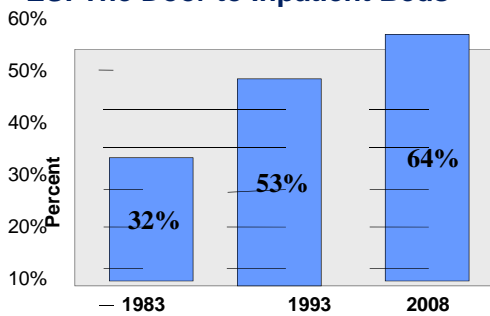
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What we don't know

- Who is safe NOT to move
- Getting to: Right Patient,
- Right Place
- Right Time
- Right People
- Right Tools

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Solution in the EMS

- IOM: "A Regional Accountable Emergency System"
- Deliver Great Care
- Lead Successful Prevention Programs
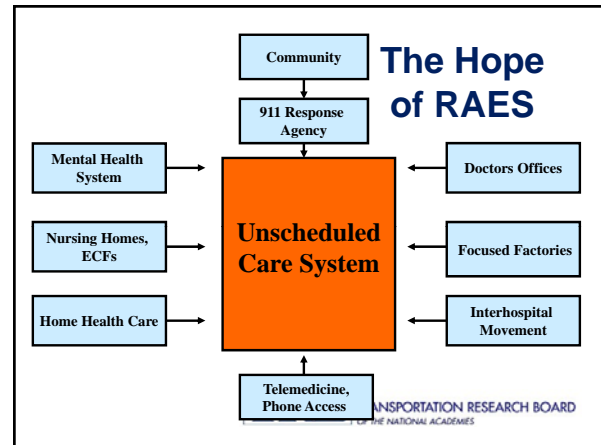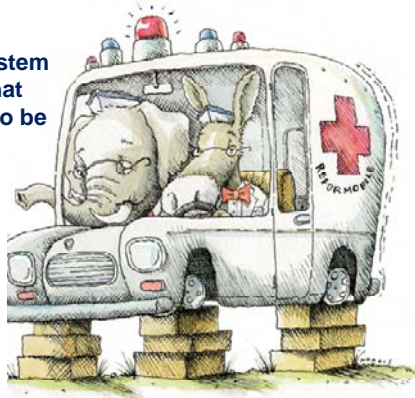- Make Health Care System Functional
- Disaster prep

Driving Issues

- The Emergency System is not Overcrowded, it is Underplanned
- Terrible Economic Climate
- EMTALA = Emergency System is access to care
- Hospitals close, specialists consolidate at fewer sites
- Prevention works
- Still a *Terrible* tort climate
  - **No reduction in demand for all-hazards preparedness**

The Best Emergency System is the One that Doesn't Have to be Used?
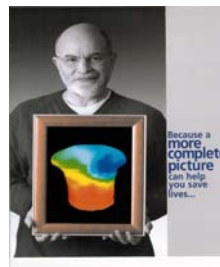

The Hope of RAES

What we need to know

- How to apply technology in most efficient manner
- How to move in the safest and most timely manner
- How to apply financial limits to our aging population

Apply Technology

- ACS Patient Monitor Systems
- Data Repository
- Telemedicine for home care
- OnStar linkage?

Technology: The Easy Patient Medical Record

Physiology
Anatomy
Pathology
Click for Payment Source
Surgical History
Click to Enlarge
Today's Workup
Potential Problems
Click to Choose
Today's Therapy
Click to Choose
Today's Diagnosis
Click to Choose
Provider ID
Pharmacology
Current Medications
Patient Problem List
Present Problem List

Move in the safest and most timely manner

Specialty Centers

"Spec Units"

ED

H

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RAES Linkage

911

Hospital Calls

Health Centers

Telemedicine, Phone Systems

RAES Capture Point

Phone Advice

EMS Response

Provider Response MD, RN, Tech

Home Health Care

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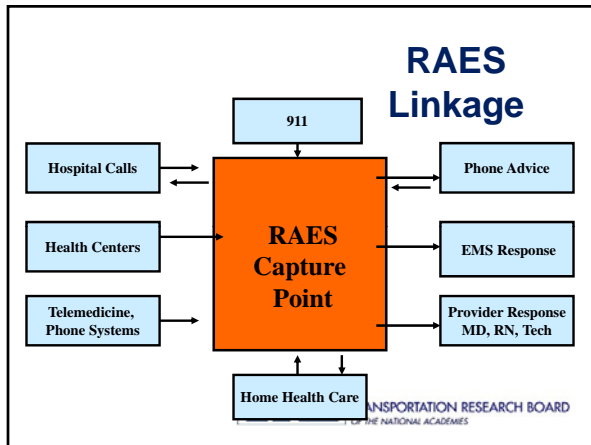
Applying Financial Limits to an Aging Population

How to Cure U.S. Health Care

- The Equity Issue
- "Death Panels"
- "Altered Stds of Care"
- We haven't used statistics to plan
- Tell the story more effectively

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Summary

- What we know
  - There are more people to move
  - We need to move less people
  - Technology is the bridge
- What we don't know
  - Who is safe NOT to move
- What we need to know
  - How to apply technology in most efficient manner
  - How to move in the safest and most timely manner
  - How to apply financial limits to our aging population

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Questions??

- Please raise your hand or type in the message box

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