

Getting on the Weight List

Transport decisions for

Bariatric Patients



2012 EMS STATE OF THE SCIENCE: GATHERING OF EAGLES XIV

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Case Presentation

- EMS finds patient on third floor bedroom complaining of SOB. He has been unable to move out of the bedroom because of his size for “a long time”. He hasn’t seen a physician in about 10 years.
- On PE the patient is laying on his bed flat on his back and is warm and diaphoretic. His respirations are labored at 40/min, pulse at 66/min, pulse oximetry reading is 80%. He is placed on 100% oxygen with a NRB mask and his pulse oximetry reading increases to 92%. The patient is assisted to a 45 degree upright position and his pulse oximetry increases to 99%. He has no other symptoms and is on no medications. His mother has brought him food and water for years since he was unable to fit through the bedroom doorway.
- The patient’s physical examination notes his large size and the EMS personnel estimate his weight at over 700 pounds.

Do we have the proper equipment?

Do we have the appropriate manpower available?

How can we respect the patients’ needs and sensitivities?

How do we balance patient care needs, moving and transport issues, efficiency, effectiveness, and personnel safety.

HEADLINES IN THE NEWS

- "State's obesity epidemic strains EMTs Expensive equipment needed to care for those as big as 1,600 pounds"
- "Super-size equipment helps D.C. area EMTs move the obese"
- "Super-size medical care grows - Obese patients need specialized equipment, care"



What is a bariatric patient?



A bariatric patient will be defined as anyone regardless of age, who has limitations in health and social care due to their weight, physical size, shape, width, health, mobility, tissue viability and environmental access with one or more of the following areas:

Has a Body Mass Index (BMI) $> 40 \text{ kg/m}^2$ and or are 40kg above ideal weight for height (NICE 2004)

Exceeds the Working load limit (WLL) and dimensions of the support surface such as a bed, chair, wheelchair, couch, Trolley, toilet, or mattress

Future of Obesity in America



Obesity Trends Among U.S. Adults Between 1985 and 2010

Definitions:

- Obesity: Body Mass Index (BMI) of 30 or higher.
- Body Mass Index (BMI): A measure of an adult's weight in relation to his or her height, specifically the adult's weight in kilograms divided by the square of his or her height in meters.
- The number of "super obese" patients, with a body mass index above 50, has jumped from one in 2,000 to one in 400 in less than 15 years.



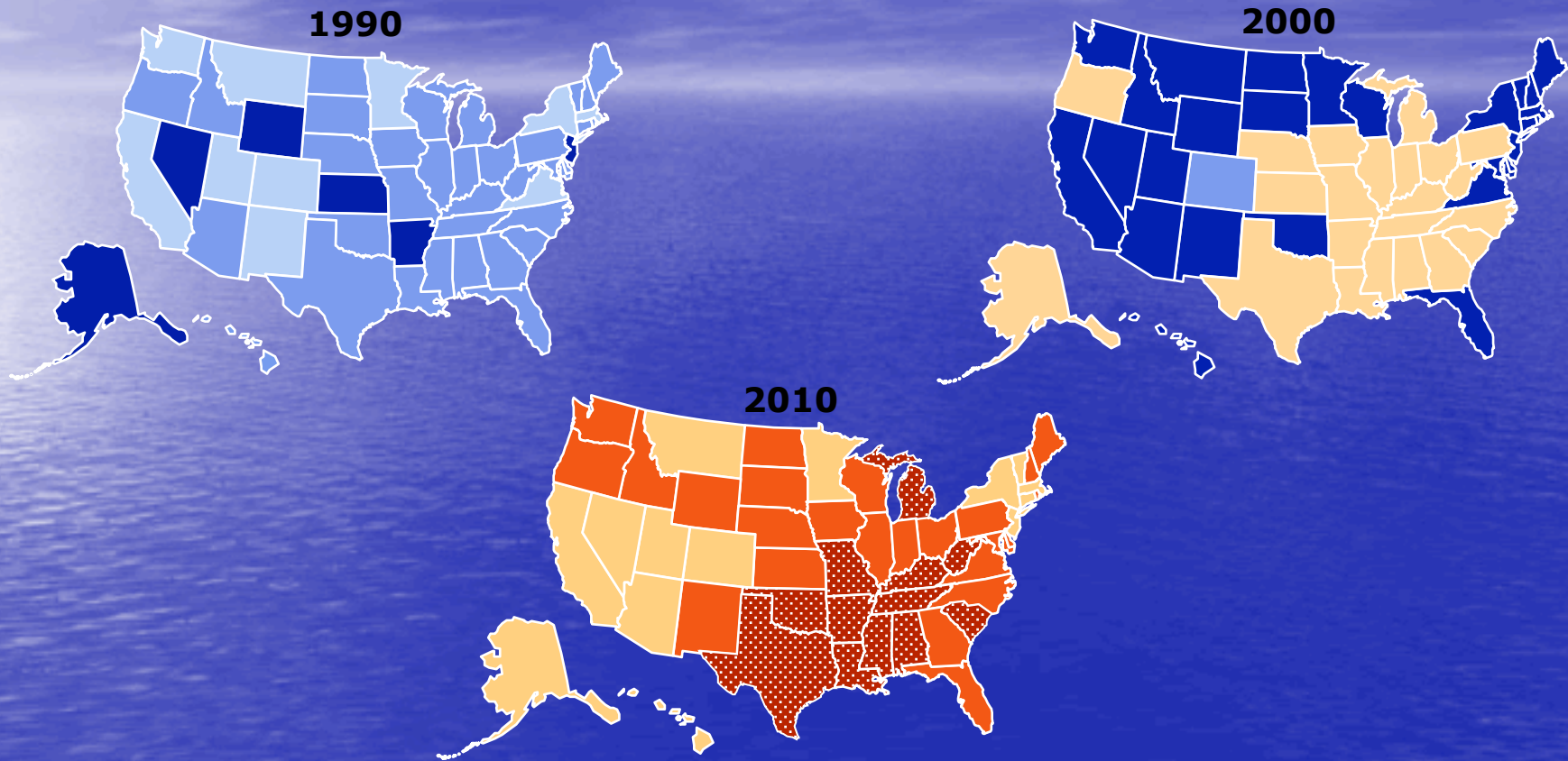
Adult table of Body Mass Index

BMI of	Is considered
< 18.5	Underweight
18.5-24.9	Healthy weight
24.9-29.9	Overweight
>30	Obese

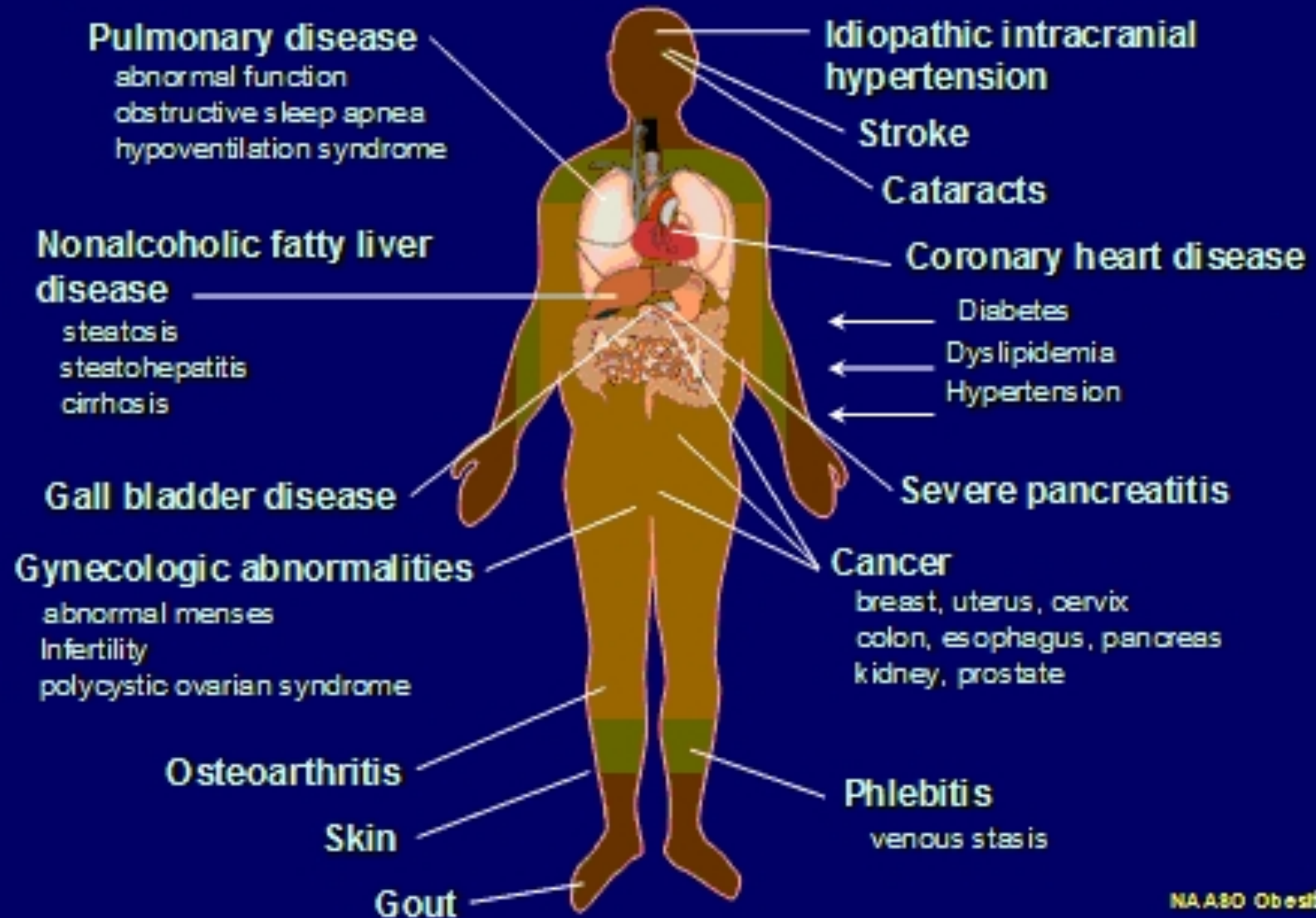
Obesity Trends* Among U.S. Adults

BRFSS, 1990, 2000, 2010

(*BMI ≥ 30 , or about 30 lbs. overweight for 5'4" person)



Physiological Impact of Obesity



Factors to consider

- The dignity of the patient
- The safety of the patient
- The safety of the EMS personnel
- The limitations of the equipment



Treating the obese patient

- Respect the individual and their privacy
- Treat them with dignity and compassion
- Avoid remarks or derogatory terms about size of transport equipment
- Ask the patient how to make the transport easier for them
- Plan ahead and communicate the plan to your team and patient when possible

Bias can be communicated in a roll of the eyes, a reference to the 'jumbo' or 'big-boy' piece of equipment, inappropriately sized medical equipment or the tone in the voice when calling for back-up.

When Removal is Necessary

- Where is patient located?
- Patient Acuity
- How soon does patient need removal
- Safety for patient and personnel
- Necessary tools and manpower



St John's Ambulance Press Pictures

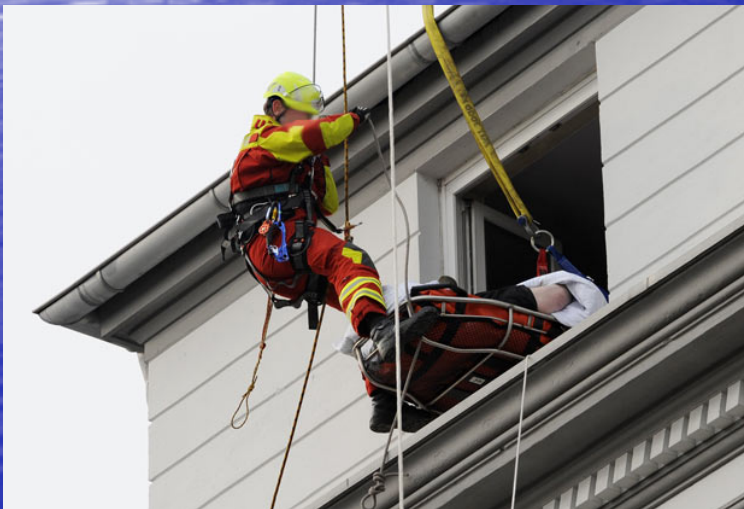
Problems to Avoid

- Dropping the patient
- Injured emergency worker
- Patient embarrassment
- ADA claim



Specific Incident Management

- In a vehicle
- In a home
- Extended Care Facility



Should dispatch be able to identify bariatric patients?

- How to do this with sensitivity
- ADA issues
- Is this “protected” information?
- Can it help with prepared response?
- Do people really know how much they weigh?



Removal from a Vehicle

- Limited mobility and unable to assist in extrication.
- Vehicle's seatbelt may not be able to accommodate the girth of the patient leading to increased injury severity.
- Hard to maintain c-spine immobilization during the extrication.
- Prolonged extrication times and need for specialized equipment

Removal from a Vehicle

- Extra providers are likely needed for assistance in extrication, lifting, and transport of the bariatric patient.
- Early notification of fire, police, or specialized transport teams may help reduce the time required to get these patients to the hospital.
- Maintain professional demeanor and patient dignity, doing everything possible to prevent patient embarrassment and minimize bystander proximity.

Removal from the home

- **Routine Access with Adequate Egress**
- **Location in the home**
 - Bathtub
 - Bathroom
 - Attic
- **Difficult or Dangerous Access**
 - Rescue redecorating
 - Removal of furnishings

Removal from ECF

- Some of these facilities specialize in the care of very obese patients
- ECF personnel should communicate to dispatch that patient is large enough to require special consideration
- If ECF has special lifts and ramps, they should be utilized as possible to assist in packaging the patient



Considerations when transporting bariatric patients:

- People – how many?
- Equipment – what kind?
- Cot Limitations



Equipment and Supplies



Moving the patient to the stretcher

Stryker Transfer-Flat



HOVERJACK



Manta® Rescue Aid



Bariatric Stretchers

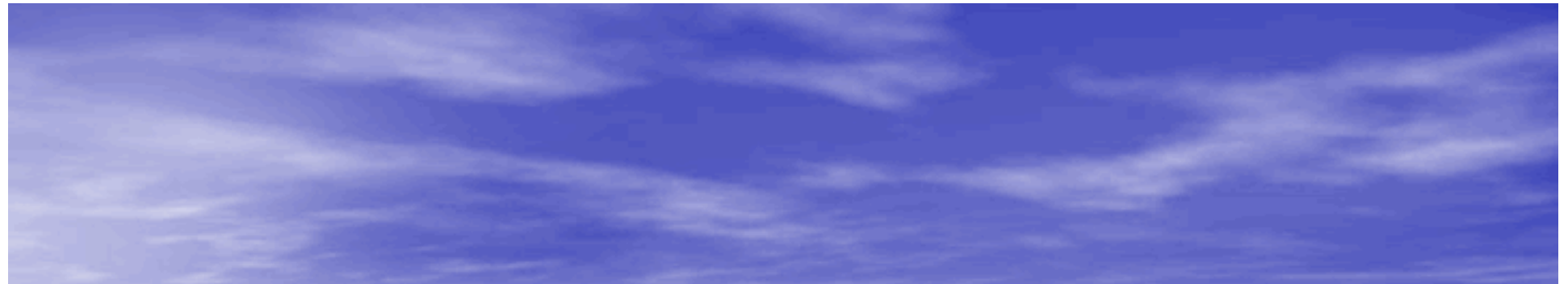
Stryker MX-PRO Bariatric Transport
1600 pounds



Ferno LBS

1000 pounds





THE NEW YORK TIMES; IMAGE COURTESY OF STRYKER



Loading the Patient

MAC's Ambulance Lift



TranSafe Bariatric Cot Loading System.



Mounting Plates
Ramps
Winch
Ramps







- Russ Smith, a Worcester paramedic, sees it regularly — and has the aching back to prove it.
- He displaced two vertebrae and strained muscles in his back while transporting a woman who weighed at least 400 pounds; he missed a month of work recuperating. And one of his colleagues, he said, recently ruptured two discs carrying an obese patient down the stairs of an aging Victorian residence.
- “I would love to have that hydraulic lift Boston is getting,” said Smith, president of Local 95 of the International Association of EMTs and Paramedics union, which represents rescue workers in Worcester. “That would save a lot of careers. And on top of everything else, it’s safer for the patient.”

Bariatric Ambulances

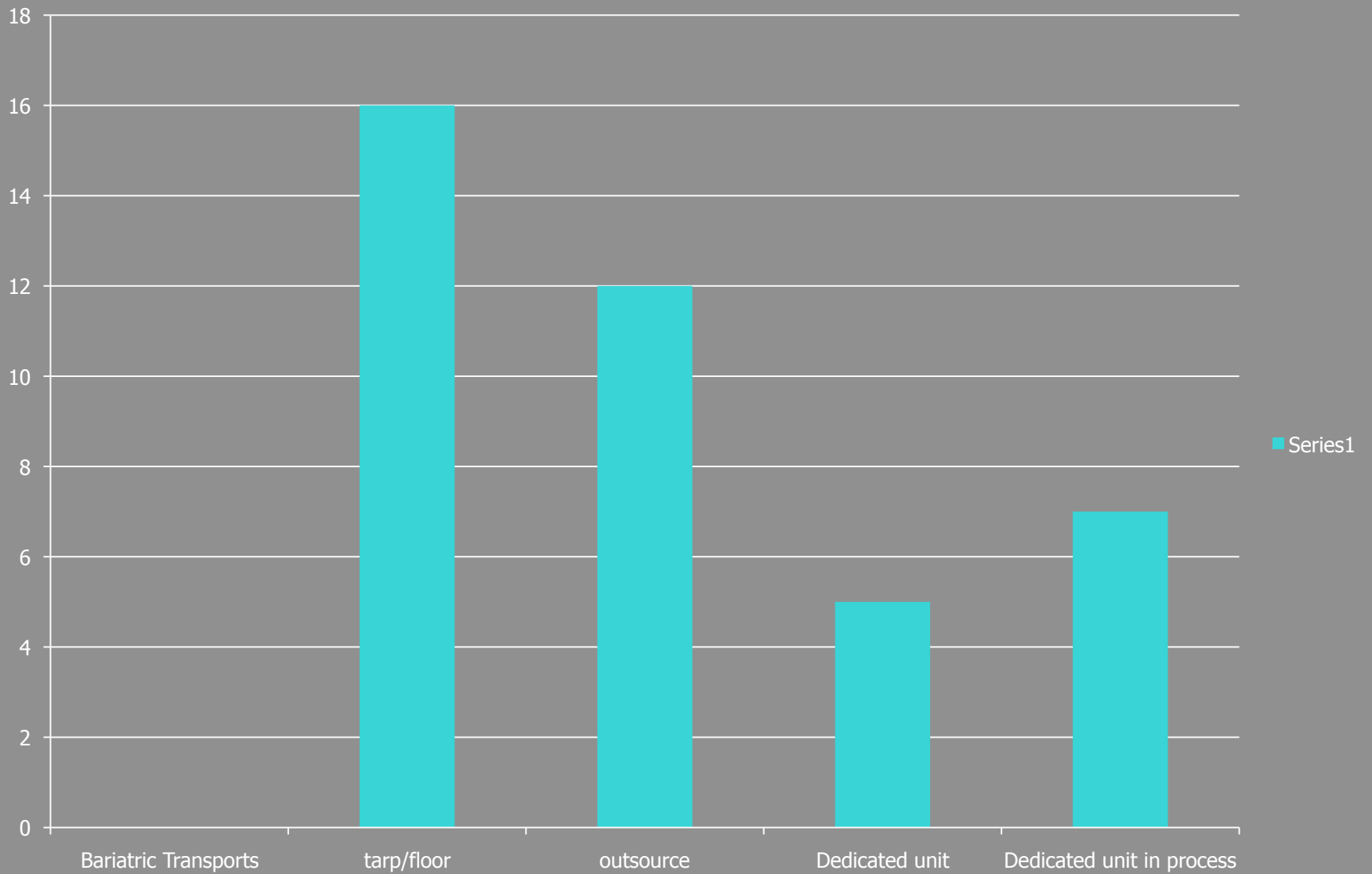
- The ambulances generally have a wider wheel base, heavy-duty suspension and air shocks.
- Winch systems and motorized pulleys assist with loading and unloading.
- Specialized ramps that attach to the rear of the ambulances provide a safe method for loading patients.
- Some ambulances are fitted with hydraulic lifts.
- They provide extra width for improved workspace around patients.





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EAGLES QUERY ON BARIATRIC TRANSPORTS



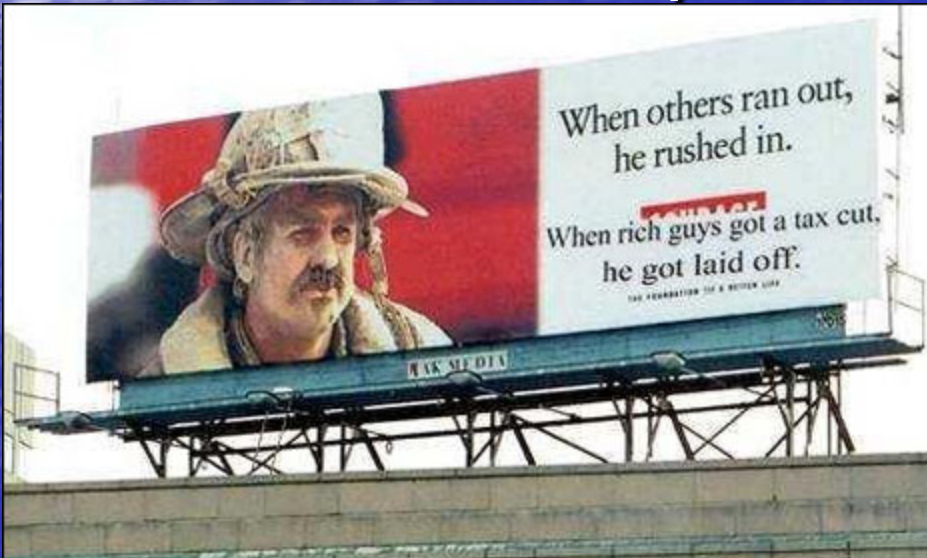
Costs of Bariatric Transport

- A bariatric ambulance that can transport patients weighing up to 1,000 pounds costs \$110,000 to build compared with \$70,000 for a standard ambulance.
- A bariatric cot costs around \$4,000, four times the price of a regular cot.



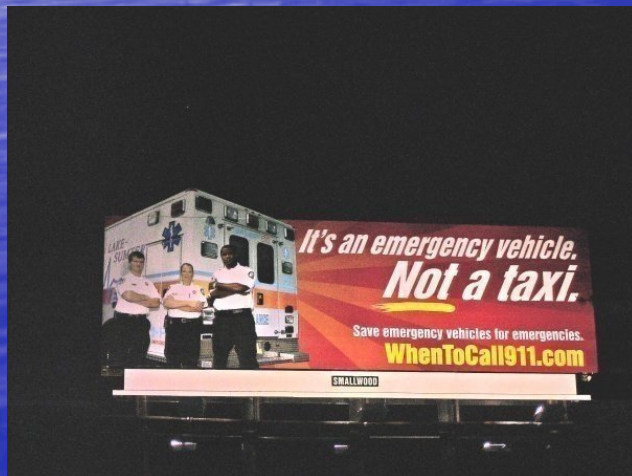
Where will the money come from?

- In age of shrinking EMS budgets and personnel layoffs, how to justify the extra cost for bariatric transport equipment?
 - Grants
 - Hospitals and health systems
 - Homeland Security

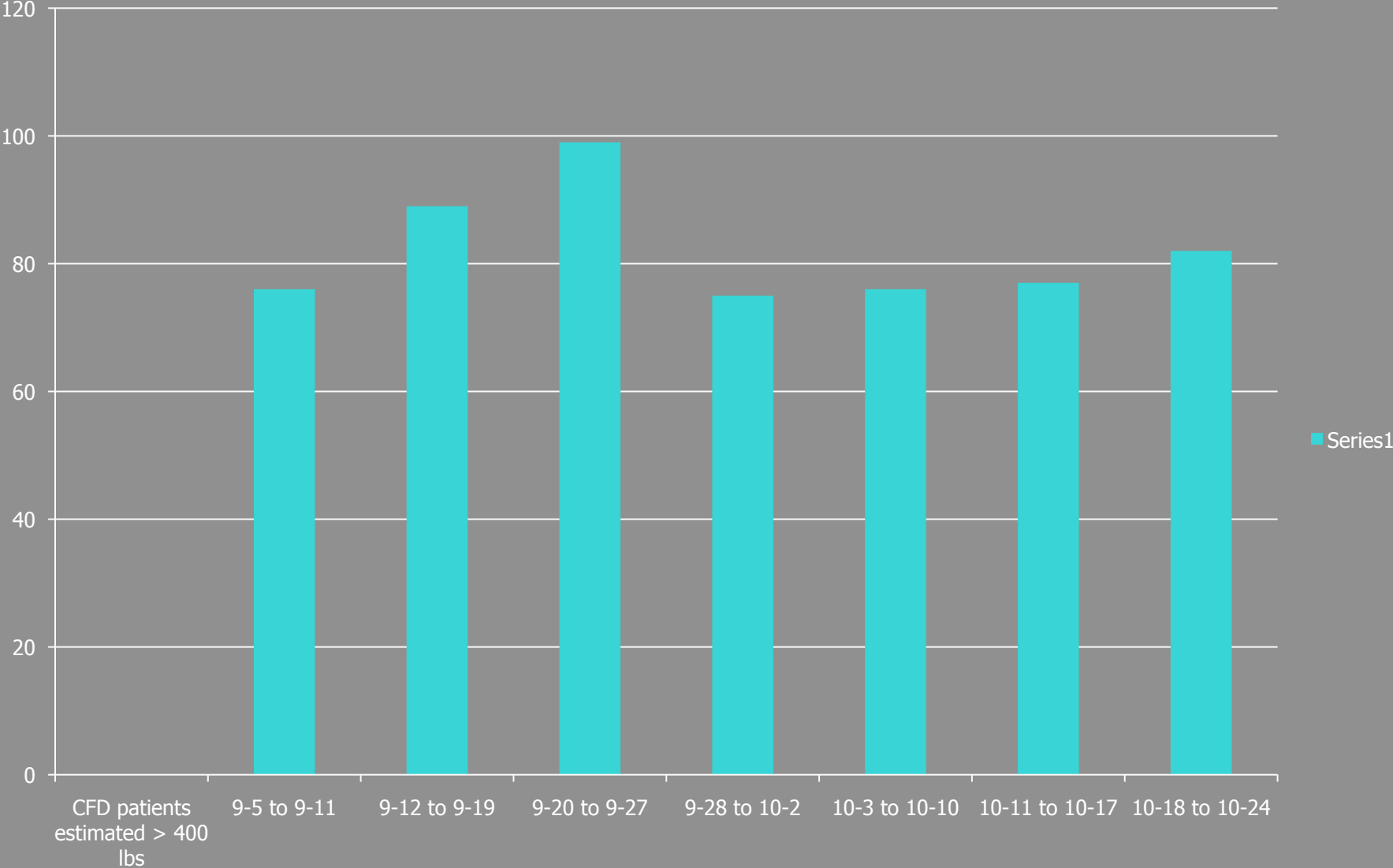


What about outsourcing to private ambulance companies?

- Differing levels of prehospital care
- Labor issues
- Billing issues
- Viability of business model



CFD QUERY ON BARIATRIC TRANSPORTS



CFD Bariatric Appraisal

- Crew arrives and determines they would call a specialized bariatric unit for transport of a patient and call for the EMS Field Officer.
- The EMS Field Officer arrives and concurs with the transport crew's assessment. The EMS Field Officer calls the Fire Alarm Office and has them place a 'marker' on the run. This marker is queried weekly to determine how many actual uses would've occurred during that week.

CFD Considerations for Bariatrics

- Retro fit transport vehicles for bariatrics and everyday use
 - Risk of vehicle tied up when needed
 - Less room on vehicle for other needed equipment and gear
- Retro fit transport vehicle for bariatrics, leave unmanned and call only when needed
 - Expense of extra person at station or have someone retrieve and bring to scene
 - Crew loads patient and ride to hospital in bariatric vehicle. Driver of bariatric truck will drive crew's regular medic to hospital.
 - After unloading patient, driver takes bariatric unit back to storage place
 - Crew gets back in regular vehicle in service

Bariatric 101

- Write a protocol
- Obtain equipment and supplies
- Train EMS personnel
- Develop creative approaches



**PROTOCOL FOR THE MOVING AND
HANDLING
OF THE BARIATRIC PERSON IN
HOSPITAL AND THE COMMUNITY**

QUESTIONS



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