



# Taking Your Simulation Program on the Road

Presented by

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Children's Hospitals and Clinics of Minnesota



# Find your Inspiration (and ask for their help)



**STARS** Alberta Shock Trauma Air Rescue Society based in Calgary and Edmonton, Alberta, Canada

**STARS** is dedicated to providing a safe, rapid, highly specialized emergency medical transport system for the critically ill and injured.

Serving medical training needs of rural America, who often have fewer financial resources for training and difficulty accessing advanced training opportunities.

# Identify your Purpose

- Reducing training costs to other organizations by bringing training to them rather than having them send their employees elsewhere.
- Provide training and practice on low frequency, high risk events, such as pediatric resuscitation or a difficult childbirth.
- Promoting your organization.

# Focus on your expertise

Use your organization's expertise as the basis of the design of your mobile unit.

- Nursing schools may have an interchangeable series of advanced task trainers that may not be available to many nursing schools.
- Pediatric facilities can provide specialized pediatric training to staff in general hospitals.
- Trauma facilities might focus on events as complicated as major disaster training or more common pre-hospital transport issues.

# Understand your

- Reputation damage to your entire organization if you go outside of your expertise.
- Without an early and thorough assessment of your customer needs, your mobile unit may not meet training demands, and will be costly to redesign and retrofit.
- As more organizations create mobile simulation capabilities, the competition for less specialized mobile training will increase, possibly resulting in reduced demand and revenues for your unit if you are not focused on your expertise.

# money

and more  
money...

## money

How much money? \$500,000

## money

Vehicle- \$200,000 empty and ready to customize

Customization (building the interior) - \$120,000

AV design and installation- \$100,000

All the stuff you forgot- \$80,000

(e.g. \$2500 extension cords, \$30,000 for exterior  
laminare design and installation)

# money

# Funding Sources

- Grants- search for grants that support your target audience- e.g. rural health, developing health professional training
- Revenues from fees for your services
  - We charge \$2300 per day plus mileage
- Organizational contributions- sell your program internally

# Buying your Vehicle

Try to find a local vendor, but if you can't, try this vendor with experience selling RV's to be used for simulation:

Newmar Corporation

Dutchstar Diesel Pusher – 40 ft.

Dealer we (and STARS) used:

**WALKER TRAILER SALES**

HWY. 122 WEST

NORA SPRINGS, IA 50458

641-749-2321

# Questions to Ask about your Vehicle

- Before you order your vehicle:
  - What does the floor plan of the RV look like before you start construction?
  - Do you need to move the door or the heaters?
  - What are your slide out options?
  - What other obstacles will there be that you need to plan around? (bed hydraulic system?)
  - What are your options for the basement area? (sliding drawers, partitions, electrical receptacles)

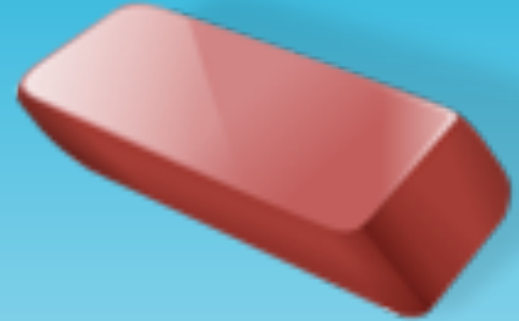
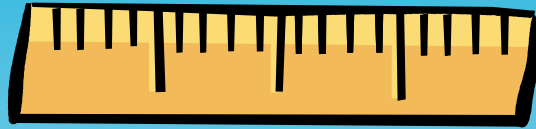
# Questions to Ask about your

- How many people do you need to train at one time and how will you fit them in?
- Where will you store your manikins or other simulation equipment?
- If you need a gurney, where will you store it?
- What kind of supplies will you need and where will you store them?
- How will people get in and out? How will you meet ADA requirements?
- Do you need a debriefing area, and how many people will it need to seat?
- How many people will you need to seat while in transit?

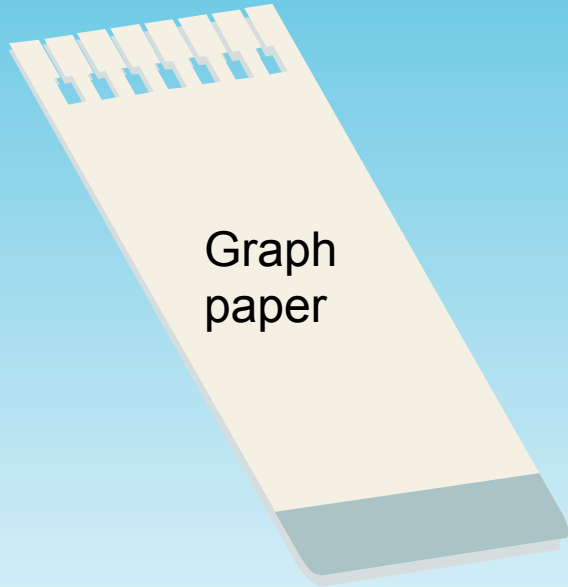
# The Newborn "Bus"



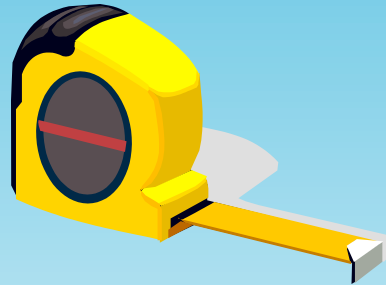
# Tools of the Trade



really big eraser



Graph paper



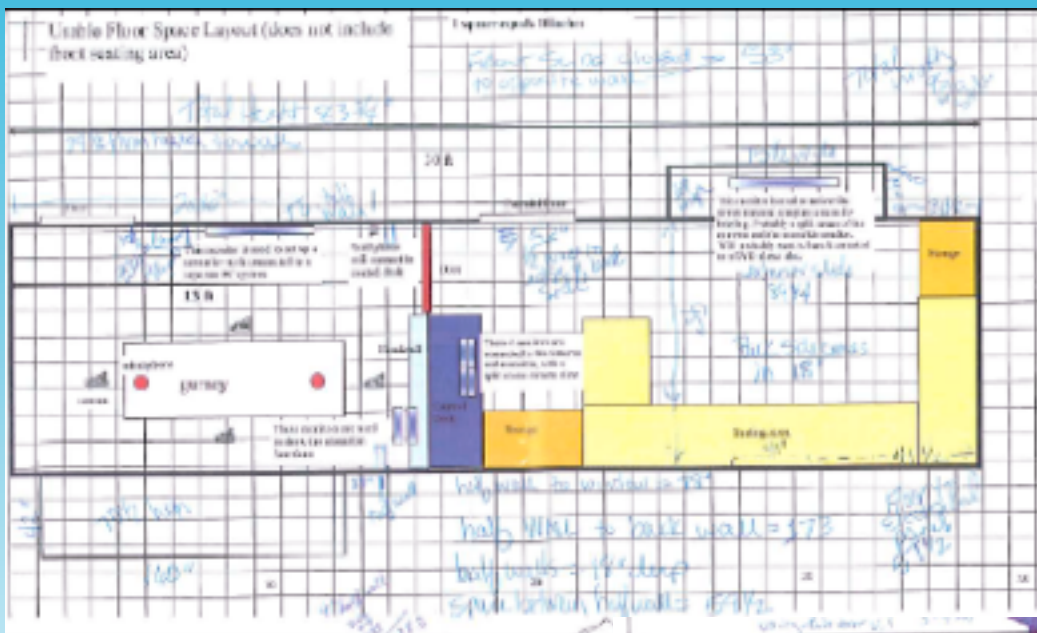
# Take Pictures

Take pictures of existing facilities you want to want to try to duplicate.



# Drawing the Plans

Examples of our drawings using MS Publisher based on a conglomeration of pictures and taping out space needs on the bus floor



- We drew layouts over and over again, which



# Software applications

## Easiest:

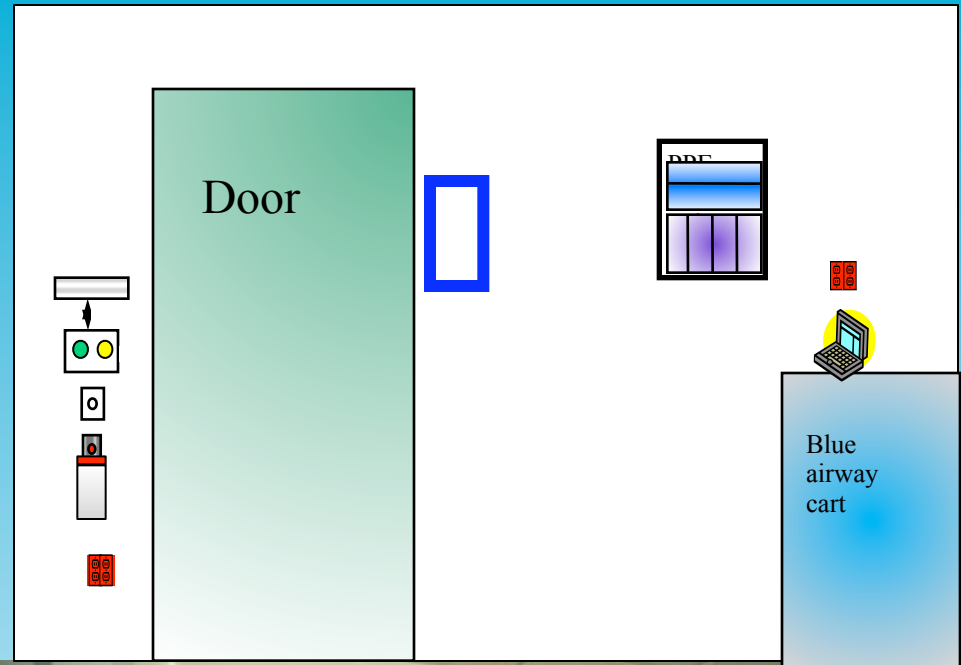
- Microsoft Word drawing tools
- Microsoft Publisher

## More expertise required:

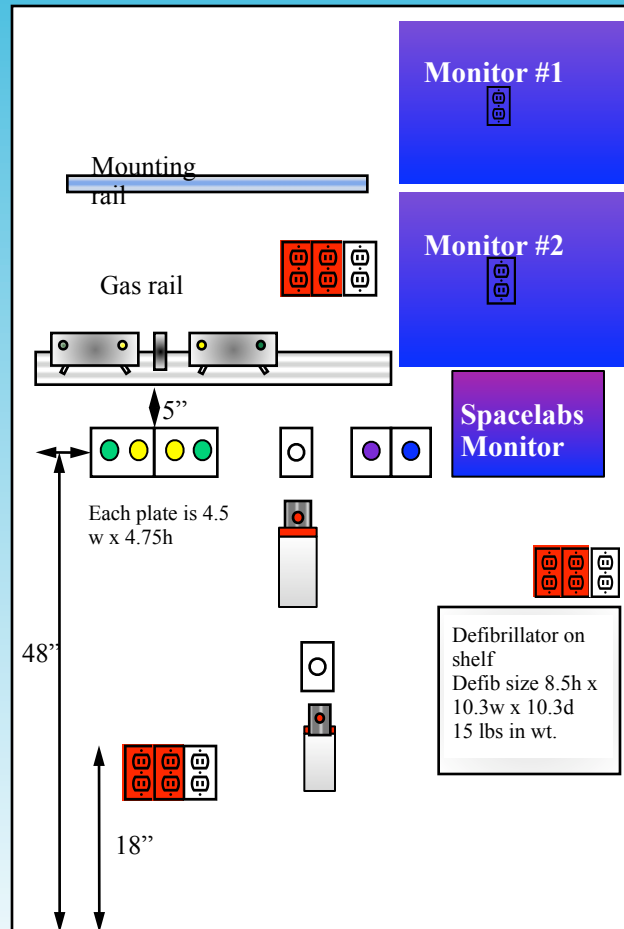
- Adobe products
- Any CAD product for computerized architectural drawings



# Airway cart , phone



# Headwall, Patient Monitor



# Creating Construction Lists

## Vehicle Interior Construction

### Contractor will perform the following:

#### Entire vehicle-

1. Supply and install commercial flooring
2. Create basement access areas to run electrical and AV cabling
3. Create ceiling access areas to run electrical and AV cabling, including a drop ceiling for future access and overhead lighting.
4. Install all AV access for cabling and bracketing as designed by our AV consultant (equipment will be supplied by Children's)
5. Supply and install adequate overhead lighting, including switching and wiring for the lights
6. Supply and install lift that accommodates people in wheelchairs or heavy (+800 lbs.) equipment. Installation by others
7. Supply and install additional side access door for lift
8. Relocate exterior awning so it does not interfere with the operation of either door
9. Relocate furnaces in front and rear sections, and small work area above front furnace

**Subtotal:\$46,732**

# Vendors

Product	Vendors we use
<b>Vehicle</b>	
Vehicle or trailer dealer	Newmar Corp. or local dealer
Vehicle registration, drivers licenses, safety inspections	State Dept of Transportation
Driver training	Technical Community college
Exterior Wrap	Signs and graphics companies
Aluminum entry system	Craftsmen Industries
<b>Interior Equipment</b>	
Carts and medical equipment	Armstrong Medical, Charnstrom, Logiquip
Sink pump	CD RV Parts
Suction machine	Sunrise Medical
Used gurney	EMS USA
Gas and vacuum valve parts for bus	Harris Companies
Medication trays	Health Care Logistics
Bins, glove holders, eye protection	Marketlab
Hand cleaner foam and brackets	Ecolab
Laryngoscope supplies	Pocket Nurse
<b>AV Equipment</b>	
AV equipment	Crutchfield
Headsets	Eartec Co
Computer/AV cables	Electriduct, Pacific Custom Cable
AV equipment and video production	Hoffman Communications
<b>Marketing</b>	
Brochure production, printing, mailing	Morgan Williams
<b>Other equipment</b>	
Equipment cases	Specialty Cases
Tensa barriers	Crowd Controller

See handout for complete list

# The Daily Building Process

## Sim Center Design Team

Often daily contact- by phone or in person

Construction Vendor

AV Vendor

Children's Materials Management

For items purchased separately:  
e.g. sink, carts, clock

Vehicle dealer

For technical help with RV mechanics and maintenance

Simulation manikin vendors

For technical help with the manikins since the computers and compressors would not be directly adjacent to the simulators.

Graphic design team

for the exterior and graphic applicator (2 separate vendors)

**Actual building time period: 10 weeks**

**From absolute start to working unit: 11 months, including 3 month unexpected major setback (maybe you should expect those)....**

# Maintenance

- Storage
- Fuel and fuel additives
- Cleaning interior and exterior
- Regular engine maintenance- Cummins for the engine, truck dealer for transmission
- RV parts maintenance- Camping World or similar type of retailer, or your vehicle dealer if convenient

# Other Issues

- Weather
- Drivers
- Insurance
- State and Federal trucking regulations and Homeland Security

# How it works now that it's completed it's inaugural year...

**Judging by comments from our external customers, the mobile simulation lab is a success:**



Supports understanding of PALS guidelines.



It makes me feel that I really need more training and practice.



Great learning experience, would like to do more often.

Thanks for attending this workshop.  
We hope it was helpful.

Course # 3006

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The End