When I was first invited to be your speaker - several months ago -
I was told I could talk about anything I wanted to.

After a lot of thought, I decided I would speak to you about the
status of emergency medical services in MONTANA. But I
wasn't that well informed - I knew a little about EMS in BILLS,
BOISE and GREAT FALLS. But I didn't know
enough about EMS in MONTANA to use that as the subject of my presenta-
tion to you here.

So..... I have spent much of my free time in recent months investigat-
ing the status of EMS in MONTANA. But I figured I would
have to be incognito - unrecognized - in order to get the true picture.
Therefore, I developed an elaborate array of disguises, including
curly blond wigs, false beards, and unusual hats.

Probably, the disguise that got me into more places unnoticed was
this one ..............

*it won't work without the slides
Those of you who work in emergency departments throughout the state, or ambulance services, or fire departments, or the State Health Department, probably didn't realize that this familiar face was actually me - investigating the status of EMS in Montana.

But I wasn't satisfied just looking at the inside of EMS in Montana. I wanted to know what the people think - the consumers viewpoint. Here, you see me disguised as a blond girl, interviewing a resident of Glendive.

Wearing a false beard, I even got a temporary job as a late night disc jockey in Kalispell. I converted the program format from country rock to all talk. Night after night, I invited listeners to call in and discuss the important question, "What is the status of EMS in Montana?"

No part of Montana was immune to my searching questions. I even travelled to Hungry Horse.

I assure you, ladies and gentlemen, that this was not a half-
baked research effort. My staff and I used the latest techniques for sampling public opinion. To determine whether EMS is meeting the needs of your citizens, we went to the mountain.....

**Slide** - The 15 Commandments

... and we saw for ourselves the fifteen commandments that are carved in stone.

**Slide** - People backlighted by underexposed sunlight

In the end, what did we find? What is the status of EMS in Montana? Here, in Bozeman, for the very first time, it is my privilege and honor to present a report on the most extensive EMS research and evaluation campaign ever conducted in the United States. We are prepared to answer the question, "What is the status of EMS in Montana?"

**Slide** - crowd of puppets in auditorium

Let's start with item one of the fifteen commandments - Manpower. Because of the sterling reputation of EMS in Montana, many thousands of would-be EMTs, paramedics, emergency nurses and emergency physicians are flocking to Montana in search of training and a license to do their thing.
Slide - EMS Education Office

Under the watchful and helpful hand of training guru, ________, EMS training has surpassed ________ as a winter sport in ________. Unfortunately, however, ________ staff has not increased in size to keep up with the demand for training and continuing education. Here we see ________, happily writing letters to paramedics who have screwed up their applications for recertification.

Slide - Communications lines with cans

Despite the progress made in all fifteen of the required EMS system components, it is communications where ________ really excels. Where most other states have settled for simplex radio communications, or in some instances, a duplex arrangement, ________ has gone all the way - with a triplex system. Starting with a theme of "back to the basics," the ________ whiz kids got out the old grapefruit juice, orange juice and Gator-Ade cans and connected them with high quality twine to each of the state's EMS resource hospitals.

Currently, a public education program is being planned to explain this advanced communications technology. More than a few patients have been perplexed at the sight of paramedics shouting vital signs into a grapefruit juice can.

Slide - old L.A. County Rescue vehicle

EMS transportation in ________ took a big leap recently when
negotiated a terrific deal for the purchase of a fleet of slightly used rescue vehicles from the County of Los Angeles Fire Department. This fleet of vehicles left California in caravan last October and is expected in for a celebration. drove a hard bargain in negotiating this purchase. He insisted that each of the vehicles be equipped with THE LATEST IN OBSTRUCTED AIRWAY DEVICES.

Another of the 15 required components of an EMS system is that of emergency care facilities....

Slide - Emergency room ("hole") ("pit")

.... and, again, is out ahead of the rest of the country. 97.6% of emergency rooms are categorized, with some enjoying the sought-after status of "hole," others being classed as the "pit," and a few enjoying dual status.

Slide - Nagel and paramedic trainees

When it comes to the requirement of critical care centers, really displays the innovation which has made her such a pioneering state in EMS and other things. Here we see one of the state's 487 designated trauma centers - but this one is different. Faced with a tight budget, this trauma center is staffed by day laborers from the MIEG CUTTERS union. Actually, the program is part of a federal effort to determine who should be educated as trauma surgeons and who shouldn't.
If this group of potential surgeons shows promise here in the on-the-job training program, they'll qualify for admission to the MITS program. That's M-I-T-S - MONTANA Instant Trauma Surgeon.

**Slide - Police Car**

In MONTANA, the requirement for involving public safety agencies has been satisfied by training police officers as first responders. After two years, it can be reported that in 86.3% of all medical emergencies in MONTANA, a police officer is first to respond. In 92.6% of all medical emergencies....

**Slide - Police car crashed**

...the first responder is last to arrive.

**Slide - Line drawing**

Eighth among the 15 requirements carved in stone on the EMS mountain is that of consumer participation. Again, MONTANA has outdone itself. Here, we see DREW DAWSON peeking out the drapes of his office window at a crowd of angry consumers on the street below.

**Slide - Line drawing**

Accessibility is another of the 15 requirements. In this and the following slides, we'll see how MONTANA TELEPHONE SYSTEM WORKS
The tenth EMS commandment is a system for transfer of critical patients to specialized care facilities. Again, Montana has established a model for the nation. Due to the poor road conditions in the winter months, Montana's transfer system uses aircraft. There's one small problem, however, and those transfers from Butte to Billings are an example.

As the transfer flights pass over , the local doctors and nurses tend to get a little hostile.

As we all know, we cannot plan an improved EMS system without a lot of information - otherwise known as "data." Furthermore, unless that data is uniform, it's relatively worthless for planning purposes. Recognizing that fact, uniform recordkeeping was included among the fifteen EMS commandments. And is one of the few states to establish such a system statewide.

But there have been a few problems. For example, all these
records and reports have been arriving at the State Health Department and there isn't enough help to process them.

**Slide - Line drawing**

Last summer, as a lady was walking her dog past the State Health Department building in Helena, an employee of the EMS Division opened a third floor window and turned on a fan. The resulting paper avalanche killed the lady's dog.

**Slide - Line drawing (EMS BILLBOARDS)**

The federal government's grand design for EMS includes a component called EMS public information and education. And Montana has set a pace that few other states can match. In fact, during 1988, 22 lives were saved by EMS billboards in Montana.

**Slide - Line drawing (PEOPLE HOLDING SIGNS)**

By involving the media in Montana's EMS program....

**Slide - Line drawing (MM IN BED W/RADIO)**

residents of Montana are bombarded by the EMS message day and night, by radio....

**Slide - Line drawing (PEOPLE WATCHING TV)**

.... and by television ....

**Slide - Line drawing (AIRPLANE)**

.... but the innovation that really is putting Montana on
the map as a leader is its use of air ambulances to publicize the importance of the EMS program.

**Slide** - Line drawing (AIRPLANE)

Possibly you've seen this airplane over your city or town, dropping EMS pamphlets and brochures.

**Slide** - Line drawing (SKY WRITING)

Or possibly you've seen it painting the sky with that heartwarming message - "EMS Saves Lives."

Before this program can be fully effective, however, someone's going to have to solve the problem with the natives in Bozeman.

**Slide** - Line drawing (SIGNS)

**Slide** - Line drawing (NED)

Evaluation is another very important goal of the Montana EMS program and the nation's foremost expert on evaluation of EMS systems has been imported from California to help with the job. When he's finished, he'll be able to give us the hard numbers. We'll then know just how many lives are being saved by EMS in Montana, and how many more could be saved if things were a little bit different.

Reports and records are the basic work product of the EMS evaluation specialist....
but as we all know, the reports and records are being used to cover up a dead dog in Helena. Meantime, the EMS evaluation expert is working on a new aerodynamic design for the airplane used in Montana's air ambulance system.

The final two elements in Montana's EMS system are disaster planning and mutual aid. They're kinda boring, and you're probably getting tired of all this, so I'll just wrap it up quickly by reporting that all Montana disasters are planned and that some of your fire departments have devised a way to make those mutual aid responses as quick as possible.

Obviously, I've just been fooling around. I didn't really dress up like a girl and interview people in Glarus. None of the foregoing is true - to the best of my knowledge. And now that I've proven to you that I don't know a thing about the status of EMS in Montana, I'd like to share some thoughts with you about the status of EMS generally in this country.

Now, normally, in my personal and professional life, I try to find ways of expressing myself without resorting to profanity. But certain aspects of local and national issues in EMS leave
me without the appropriate words to express myself.

For example, as I travel around the country looking at EMS programs, I find two basic kinds of people - the vast majority who are honest with themselves and their community, and the minority who deal mostly in bovine excrement - also known as bullshit. Unfortunately, most of this latter group are in positions of authority and, unfortunately, I have difficulty referring to this latter group without resorting to profanity.

Now, it's possible that this message won't fit your circumstances here in Montana. It's possible that everyone in Montana who has impact on EMS avoids the B.S. syndrome. I'll let you be the judge of that.

But if there's anybody here who has a tendency to deal in EMS B.S., I'm going to make you feel uncomfortable. Not out of rudeness, but because B.S. in EMS can mean only one thing - people are dying for lack of a real EMS system.

If my hunches are correct - if there are some remnants of EMS B.S. in a few places in Montana - you can take some small comfort in knowing that it's a national epidemic. And, although it's costing lives, and for that reason must be eradicated, there are some very important signs that EMS B.S. is going out of fashion.
The best way to eradicate EMS B.S. is to clearly identify it, so that everybody can distinguish between EMS truth and EMS B.S. So - today, I'm going to take a chance on being judged impolite. I'm going to share with you some very typical examples of EMS B.S. You can decide whether they fit in Montana. But first, we need to set the stage:

"System" is a word that seems to give us problems. If we are to build and operate emergency care systems, we should have a mutual understanding of what a system is or should be. In medical terms, a system is defined as "a grouping of related structures; the whole organism," or, "An interrelationship of organs because of their function." I think the medical definition is appropriate to what we are trying to do, or should be trying to do.

In all my experience in this business, I have never seen a community that was able to create and operate an emergency care system without stumbling and falling over questions concerning what a "system" really is and how its supposed to work. Frankly, we have not been able to explain what a system is, how it is supposed to work, how to put one together, and then how to keep it together. The traditional descriptions, including those in the federal law and regulations, don't seem to work. They don't seem to create the appropriate images in peoples' minds.

It seems to me that we have needed some kind of analogy; some example of a system that everyone understands and takes for granted. We grappled with this issue as we were putting together last October's issue of JEMS. It occurred to us that one of the world's most magnificent systems was all around us, and that there were some lessons to be learned from that system as we try to describe an emergency care system.
I'm talking about our country's system of commercial air transportation. Most everyone of us has made at least one trip in an airliner. Though it may not occur to all passengers, as we fly from point to point, we are being managed, transported and cared for by one of the most amazing systems of precision, safety and reliability mankind has ever devised.

To illustrate, consider what commercial air travel would be like without the system:

As you board the jetliner, you step into the cockpit to check the pilot's license (you never know who's gonna be flying one of those things). Satisfied that the pilot knows a rudder from a strut, you rush for a seat (the airline sells all the tickets they can and then lets the passengers fight for seats). Straps hang from the ceiling to accommodate those passengers who will have to stand during the flight.

As the plane starts to move from the gate, you look out the window and notice that the tires are threadbare - but it's too late to complain. Your plane already is drag racing a TWA 727 to the runway. Quickly, you grab the stereo earphones and tune in to the air traffic control channel. The controller is speaking to the pilot in frenzied terms:

"Stand by at your present location," he says.

Your pilot responds with typical independence of a free spirit.

"Stick it in your ear, Tower!"

With that, the pilot opens all throttles and you bump across the grassy field, onto the runway and into the air, leaving the TWA pilot in a cloud
of kerosene smoke.

Slide - 704

Being an experienced passenger, you dig out your map and start looking for landmarks on the ground. Nothing looks familiar. Obviously, you're going the wrong way. You go to the cockpit door and knock. After you've knocked several times, the door opens, several empty beer cans roll out, and a disheveled stewardess says:

"Yeh, whaddayawant?"

"Is the pilot in?," you ask

"Yeh, whaddaya want him for?"

I just wanted to let him use my map. I think we're going the wrong way.

"I'll tell him," she says, slamming the door in your face.

Slide - 109

Obviously, that's a ridiculous and far-fetched description of modern commercial aviation. But a few small changes and the story might accurately depict one's experience when suffering a medical emergency in many parts of the United States. To the extent that the patient must rely on the system to take care of his safety and his life-death needs - without having to think for himself, without having to check the skills and credentials of the people caring for him, without having to investigate the capability of hospitals in the community - the ill or injured emergency patient in the United States (anywhere in the United States) should expect, and has a right to, a system that serves him with the safety and reliability he might expect on a flight from New York to L.A.
How safe is it to get sick or have an accident in America? Well, it's a whole lot safer than getting sick or having an accident in Saudi Arabia or Somalia. But beyond that, we really don't have a very reliable picture. We just have bits and pieces of information about emergency care in various parts of the country.

One of the most startling reports in recent years was published by Dr. Bruce Houtchens, an associate professor of surgery at the University of Utah. Dr. Houtchens and his research team evaluated the records of 65 trauma patients who were delivered to 20 rural community hospitals in four states. They measured the care which was rendered to these patients against well defined, accepted national standards for trauma care. The rate of error exceeded 49% on the average. All 65 of the patients died in the respective hospitals, while under the care of a local physician. The numbers sound a little sterile, but the facts surrounding each of the 65 individual cases are downright shocking. For example, a 21-year-old male who had been involved in an auto accident was admitted "unconscious."

The diagnoses were: "Facial laceration, facial fractures, crushed chest, internal injuries, shock, fractured humerus, fractured femur bilaterally."

According to the medical record, this patient's blood pressure was "unobtainable." No respiratory support was given except oxygen by cannula. An IV was started, and lactated Ringer's was given slowly (one liter over four hours) along with albumin. Two units of blood were set up but none were given. The patient received no endotracheal tube, no N-G tube, no chest nor abdominal tap, no chest tube, nor a Foley catheter. No x-rays
were taken. The record contained no reference to immobilizing of the patient's fractures.

This unconscious patient was sedated with Valium on orders of the physician. While the patient was in profound shock, the physician occupied himself by suturing lacerations of the patient's nose and chin. He was sent to the ward and ordered to have "hot water bottles to legs and arms." He died four hours, 30 minutes after arrival. There was no resuscitation attempt. There was no autopsy.

**Slide - 714**

Can we call that a system, or even a part of a system? Can you imagine what it would be like to fly in an airliner if the people who ran the airline, or the air traffic control centers, and the airplanes themselves, were as incompetent as the physician described in that case.

**Slide 715**

A real system makes certain that the consumer doesn't have to guide the process to make sure it works properly. If the patient is unconscious, as was the young man in the case I have just described, he is unable to have any impact on those processes and people in whose hands his very life rests. Similarly, once you are strapped in your seat and your jetliner is airborne, your very life is in the hands of people over whom you have no control. If there are doing their own thing, with no regard for one another, or if they are incapable of doing their own thing as it should be done, your life is at risk.

**Slide - 117**
In describing his study and its results, Dr. Houtchens has had some interesting things to say about prehospital emergency care. He says, "As rural ambulance services are being markedly upgraded, more survivors and more critically injured accident survivors will be transported to community hospitals." In other words, one part of the total emergency care system - the prehospital part - may in some cases be working better than another part - the in-hospital phase. Improvements in prehospital emergency care are producing more survivors and the problem of dealing with the complex medical problems of those survivors is being delivered to hospitals. Twenty years ago, most of them would have gone directly to the morgue.

A real system would have included two features that were not included in Dr. Houtchens' report. First, the medical and nursing personnel at the community hospital would have been trained adequately to provide initial evaluation and management of the major trauma patient. Secondly, they would have been able to initiate a transfer of the patient to medical center in the event that major surgery was needed. And, most importantly, these things would happen without the patient having to ask for them.

A real system handles each necessary process automatically.

Even though it has been reported that prehospital emergency care has been and is being markedly upgraded, there is very little reason for those of us who work in prehospital care to get smug.

A few days ago, I had a call from an EMT who also is a University-based health researcher. He and several of his colleagues had just finished a
long-term study of prehospital care in a midwestern state; the study had been commissioned by that state's health department. The study involved several hundred EMTs, both career and volunteer. It included personal interviews, written exams, questionnaires and field observation in several thousand actual emergency cases. You'll probably never see the results of that study. The State Health Department has buried it.

Why would they want to bury the results of the study? Among other things, it concludes that the performance of one in seven of the several hundred EMTs was so poor as to actually cause further injury to the patient. It made no difference whether they were career or volunteer - both suffered an equal number of turkeys. Longer EMT training courses did not necessarily produce better EMTs than the standard-length EMT courses, although there was some indication that some EMT instructors were much better than others and it showed in the performance of their students.

Slide -

A system is not a system if it tolerates clearly identified and measured incompetence in 14% of its prehospital personnel. In one out of seven cases, the victim remains a victim and takes pot luck with the grim reaper. Now that that State Health Department has the evidence, and has chosen to bury it, it becomes a party to the negligence.

For a long time, I've been chasing ambulances - not as a lawyer, mind you. I find it necessary to stand in the crowd, anonymous, and try to size up whether there is a system at work. It gives me lots of story material, both good and bad. But it also depresses me to see prehospital people still doing
Slide - 198

Are there hospitals in your area that are incapable of properly caring for critical emergency patients but accept and admit those patients nonetheless? Are there doctors working in emergency rooms in your area who lack the skills of advanced life support - and who require the intervention of long suffering emergency nurses to keep them out of trouble? Are there emergency rooms in your region that advertise emergency services and then don't have a physician on duty? Or request a paramedic unit to respond to the emergency room when they get in over their head?

Do rural and suburban physicians in your area always transfer critical patients to the most appropriate facility? If you have advanced life support in your area, do all the emergency room physicians and nurses truly understand what prehospital ALS is all about? Do they know what drugs and equipment the paramedics carry on their units? Have they ever bothered to ride with the paramedics and see for themselves what it's like to care for patients on the street?

Have you heard about a proposal in Michigan that would end the requirement for State testing of EMTs in that state? I'm a lawyer. I've been licensed for ten years. I've never been retested - and I'm presumed to be fully competent in all areas of the law. That's B.S., folks.
The Chief Justice of the United States has estimated conserva-
tively that one-half of the trial lawyers in this country are
incompetent. Could it be the result of a philosophy that once
we are trained, we'll always be competent? Could it be due
to the sheer fictional argument that there is no such thing
as skill decay? Or that we as individuals will of our own
initiative recognize our professional shortcomings and then
remedy them? That's B.S.

I sincerely hope that our friends across Lake Michigan will
take a good hard look at the State's efforts to get out from
under its responsibility to assure quality performance by EMTs.
It's been offered as a reasonable solution to economic diffi-
culties. But I suspect it's a pile of EMS B.S.

On a national scale, some of the most persistent dishonesty
in EMS relates to the subject of medical control of ALS. In
many locations, it is presumed that every hospital in town can
appoint somebody as part-time medical director of the paramedic
program and medical control will result. B.S. In many locations,
it is presumed that a committee of doctors can adequately provide
medical control of the local paramedic program. B.S.

There is no place in these United States where a multiplicity of
hospitals and a multiplicity of so-called medical directors is
adequately controlling the medical aspects of an ALS system.
Many excuses are offered for every hospital to have radiotelemetry
contact with every paramedic unit. Many excuses are offered for each hospital employing a so-called medical director of the ALS program. Most of these excuses are pure B.S. The real reason for this ineffective and fragmented approach to medical control of ALS is competition - competition for patients. Everybody's afraid that their competitors will get ahead of them. It's been referred to as an "EMS arms race."

When you combine competition with tribal behavior, you usually get to the heart of resistance against the regional approach to EMS. The modern allegiance to county lines and other geopolitical barriers is no less primitive than the hairy creatures who once carried clubs to keep neighboring tribesmen from invading their territory.

Awhile ago, I referred to the analogy of air travel. What if each county in the U.S. insisted on some right to control air traffic which flies over its land. How safe would it be to fly from Denver to Chicago? What if a dozen neighboring counties each had an air traffic control center, none of which communicated with one another, and each of which applied its own standards?

That may sound ridiculous. But not when you consider that many emergency patients are just as much captives of the system as are airline passengers. To the extent that the patient or the passenger must rely on the system to make the right moves, he is
a captive at risk. If the "system" places a higher priority on boundary lines than it does service without regard to boundary lines, the risk is deadly. When a life is at stake, any effort to defend or support the primitive respect and allegiance to geopolitical boundary lines is pure and unadulterated B.S.

At least a hundred times in the last year or so, I've tried to share with my audiences the universal cure for EMS B.S. The universal cure also is the universal antidote for medical-legal conflict in EMS. It's very simple - if you'll always care for the patient as you yourself would want to be cared for if you were the patient, you'll be doing your job just as it should be done.

I'd like to share with you another technique for keeping clear of EMS B.S. It involves dreams and visions from the supernatural......

Most of us have had a similar dream at some time during our life. It's really a nightmare, and it has you in a position of grave peril - like standing on a railroad track in front of an oncoming train. You try to move but you can't. It's as though your arms and legs won't work. The
train keeps bearing down on you 'til you finally wake up in a cold sweat with your heart pounding.

To me, that's much like suffering a serious illness or injury and falling into the hands of prehospital care people who are not working as a system. Everything is going wrong. You want to wake up and tell them how to care for you but you can't wake up. Somebody keeps checking your blood pressure but nobody has noticed that your airway is filling with blood. You have a cervical spine fracture but they didn't bother to immobilize your neck. When they load you in the ambulance, they put the new kid in the back with you because they want the more experienced guy driving the ambulance. After all, it cost $30,000. The kid is fooling around with the oxygen equipment. He can't seem to figure it out. Meanwhile, your brain is starting to die for lack of oxygen and the driver is taking dead aim on dips, potholes and sharp curves as your head rolls and flops.

Just before you awake from this nightmare, the kid hollers to the ambulance driver, "What hospital we goin' to?" The driver calls back, "The one that had that party for us."

Is that nightmare far-fetched? You would be surprised how close it is to reality in a lot of places. And the bad dream is not just limited to prehospital situations. Take the 21-year-old patient in Dr. Houtchens' study. If his consciousness could have floated above him during his four and a half hours in the hospital, how would he have felt. He might have said, "Doctor, Please, I'm lapsing into irreversible shock. Do something about it. I don't give a damn about those lacerations on my face. You're
supposed to try to save my life." If the patient had known anything about how the system is supposed to work, his floating consciousness might have screamed for the doctor to call the University medical center, or the nearest trauma center, and arrange for a transfer.

In order to claim that we have a system, every element of the system must care for the patient as we would want to be cared for if we were the patient. I've never placed much stock in reports of supernatural events. Nonetheless, wouldn't it be interesting if we could envision the critically injured patient's consciousness floating in the air above him, watching our every move and keeping score. It might change the way we do things.