



EZ Way Lunch & Learn Webinar Series
Presented by Equitable Safety Group

Risks and Exposures
Building The Business Case for
Safe Patient Handling

Welcome to the EZ Way Lunch and Learn Series. This webinar on “Risks and Exposures” is the third in the series, and was produced by Equitable Safety Group. For a more general presentation on safe patient handling, please visit the ‘webinar’ section of EZ Way’s website to view “Making Cents: The Business Case for Safe Patient Handling”. For a financially oriented presentation, please view “Loss Analytics”.

Your Lunch & Learn Presenter



Don Maynes

Director of Operations for Equitable Safety Group (ESG), has spent 27 years in the insurance industry focusing on loss prevention, risk management, reinsurance, capital investment, and claims.



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It is my pleasure to introduce you to Don Maynes, Director of Operations for Equitable Safety Group and one of the managing partners in the company. Don has spent most of his career working toward program development with the insurance industry, and has a background in several forms of claims, risk management and capital investment.

Goals

- To familiarize you with our methods
- To help you to identify the nature of hazards located in your facility
- To provide you with tools that can be used to assist others in your organization to become better familiar with your findings



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The primary goals of this webinar are to familiarize you with the methods developed by Equitable Safety Group for making the business case; to assist you in determining how worker injuries are likely occurring; and to provide you with the tools needed to help you further familiarize other members of staff safe patient handling and movement practices.

Overview

- **Preventing injuries on the job is a socio-economic process.**
- **You can review that process by using the text...**

“A Fresh Approach to Workplace Safety”



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Workers' compensation claims happen when people exceed their capabilities. Attempting to quantify the nature of that risk is best done by talking with the people directly involved to determine precisely the tasks that each does everyday, and to open channels of communication that will lead to a safer working environment. Preventing those injuries is a socio-economic problem because it includes both social and economic components. For those who are interested, we can provide an article that we wrote entitled “A Fresh Approach to Workplace Safety” that delves into this issue in depth. Simply drop me a note at the email address shown at the end of this presentation, and we'll be happy to forward a copy to you. For our purposes here today please understand that we approach this matter both from an analytical perspective and from that involving human interaction.

Definitions

- **Risk – A condition in which there is a possibility of an adverse deviation**
- **Exposure – A situation created by risk where loss might occur**



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There are many definitions used by various disciplines when it comes to the word “risk”. Same is true for “exposure”. Former Iowa Insurance Commissioner Therese Vaughn spends several pages in her book laying out the parameters of the various definitions available. According to that book, somewhat ironically entitled “The Fundamentals of Risks and Insurance”, there are two common elements in all the definitions: indeterminacy and loss. As we use that term, it is defined as “a condition in which there is a possibility of an adverse deviation or outcome”.

In sort of the same fashion, the word “exposure” can be used differently from time to time. For our use here, the word “exposure” will be defined as “a situation created by risk, where loss might occur.”

In separating the definitions, we can then get to one of the fundamentals of safe patient handling programming, because first we identify the risks that are resident, next we must define the possibility or probability of the exposure that will lead to loss.

Possibility?

➤ Converting to probability

Scaled continuum that leads from impossible to certain



**Absolute
Impossibility**

**Absolute
Certainty**



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When we are conducting analyses of hospitals and long term care facilities, we are constantly confronted with having to ascertain what the probabilities are that some given event will occur in the future. All possibilities exist, and each of those need to be further identified and defined. As we discussed in the Loss Analytics webinar, to overcome some of the uncertainty of ALL the possibilities, and to make it more manageable, we have simply adopted the experience rating techniques used by insurers to forecast what the most likely probability will be.

As this applies to safe patient handling practices, and perhaps more succinctly put, we look at simple trends of what has been happening in your facility over the last three years, and project that out into the years ahead. While we know the outcome will most likely be between the 0 and 1 (as is shown on this continuum), our own records indicate that using that method is closer to absolute certainty than it is to impossibility.

Because making business decision seldom occurs at the “1” level as depicted here, we must rely on the best set of facts to get as close to that as possible. When you’re developing a safe patient environment in your hospitals, or safe resident environment in your long term care facility, you will be required to invest in that approach. The question always is, “How prudent is it that I do that today?”

Investigative Focus

Concentrates on four main areas

1. **The nature of the population served**
2. **The tasks that are required**
3. **Staff verification**
4. **Existing environment (physical layout and existing equipment)**
5. **Patient weights and weighing patterns**



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When we conduct our risks and exposures investigations, we try to answer that question by concentrating on the five main areas shown here.

Looking into the type and nature of patients or residents who are served by your facility is the first step used in trying to determine how to best establish and then operate a safe patient handling practice. While the people served change with some regularity, there are characteristics that typify the person who is enjoying the care. As an example, if your facility caters to people with obesity related illness, then the population (generally) might well consist of heavier people.

Looking next at the types of tasks that are conducted daily, such things as repositioning in bed, changing absorbent pads, transporting, weighing patients or residents, etc. and making comparisons to the population serves as the beginnings of the confirmation of the findings in the loss analysis. It is probably obvious to say that if you see a 400 pound patient, and attempt to lift that person from the floor alone, you're probably going to injure yourself (and perhaps the patient too). The thing that is less obvious, however, is the fact that when your lifting the 65 percent of patients or residents who way less than 250, or in some cases as little as say 90 pounds, but doing that activity over 1,500 times per day, everyday for a year that is simply further confirmation of what was shown through loss analytics.

When we refer to "Staff Verification" we are specifically looking at the injury picture. While the workers' compensation loss run information provides us good background information, when you really ask staff what is happening on their specific department, it is not at all atypical to learn of unreported injuries that occur in healthcare everyday.

Finally, we look at the physical layout of the department, each room, bathroom and

Patient/Resident Characteristics

The number usually present

The dependency level

How many times they are moved and how that's done

What their weights are

Condition "changes" (e.g. PCA's)

Number who become combative



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In order to gather the information required, we must visit each individual department and interview clinical personnel. While the questioning that we use is a bit more detailed than this listing, these represent the broadened categories of the things that we look for in characterizing the population.

Tasks

Two things that we look for:

Frequency that a task is done

Stress of doing the task

Finally, we count the numbers of times a task is done for each and every patient and who is responsible for each one



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We use a listing of 18 separate tasks to accomplish this part of the investigation. The two primary things that we are looking for are the frequency that a task is done, and how the staff envisions the stress of that task to be. Individually counting the numbers of times that each task is done in each department allows you to demonstrate and further quantify the risks being analyzed.

Building the business case then becomes as simple as “if this, then that” comparisons. If you continue your operations in exactly the same fashion as you did in the three previous years, serving the same patients, who require the same tasks, the probability that the outcome will change is nearer an “absolute impossibility”. Building it through our first two steps, then, might be something like this example: Ninety percent of the patients in this unit are totally dependent upon staff for all activities, and 45 percent weigh in excess of 250 pounds, the tasks require repositioning each in bed, which is therefore done 281 times each day, and this is confirmed through the number patient handling claims experienced by this department in the last three years. Just looking at the first two of our four areas, and we’re already starting to show relationships that can be backed by reliable data, and used to forecast ahead.

Staff Confirmation

Staffing patterns (ratios)

Shift length

**Educational and other support
mechanisms**

Injuries (both reported and unreported)

Ambulation

Transporting techniques



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When we seek staff confirmation, we're really asking them to how things are achieved in their units, and what the end results have been (particularly in terms of injuries).

Returning to the scenario we just put forth on the previous slide, if no education was ever provided to a clinical worker in that unit as to how to use a piece of equipment that will mitigate that demonstrated risk, the obvious result will be the same as if equipment were not present in the first place.

Existing Environment

Number of rooms

Types of rooms

Floor surfacing

Storage

Electrical service

Lighting

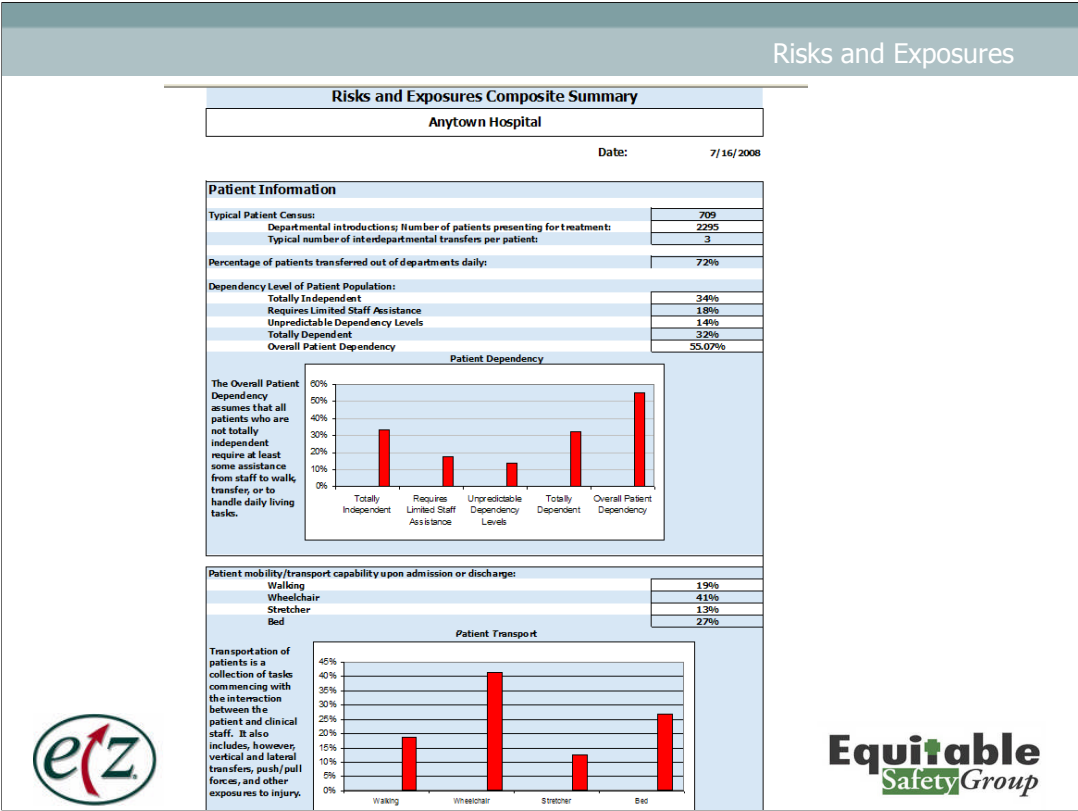
Type and location of equipment



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Most of the information shown on this slide is developed from observation and measurement. These physical aspects of the existing operation, combined with the other three areas that we just covered, is compared to the workers' compensation history, and finally to underwriting guidelines that we use for making equipment recommendations. It is important to note that we do not start with a budget and work backward. We follow each and every investigative step as outlined, and, as I've said in other presentations, let the facts speak for themselves.



Once the interviews are complete, it becomes a matter of “connecting the dots” to develop our overall approach to safe patient handling that is specific to your facility. Going beyond the single unit, we now address the entirety of the facility in a composite form, to further quantify the risks identified. As is shown in this example, and just in the first two of a number of other categories, of the 709 patients who are typically present in this facility, 72 percent are being transferred to some other destination each and everyday, only 19 percent are doing so by walking (note over one fourth are being transported in a bed), and over half demonstrate at least some level of dependency on staff for assistance. In the accompanying loss analysis, it very well might show a lot of claims that occur due to repositioning or laterally transferring those patients. These numbers help to quantify the “why”, and give at least partial explanation as it applies to the costs being borne for worker injuries.

Determining Minimum Clinical Requirements

The “Minimum Clinical Requirements” determine the least amount and type of equipment needed to mitigate the risks and, are determined by our published underwriting guidelines specifically for that purpose



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“Hospital Patient Lift & Transfer Equipment- an Overview”

By Ken Aebi, BS, Don Maynes, and Jan Frustaglia, RN,BS,CCM,COHN-S

Critical to the development of any comprehensive injury reduction program in a healthcare facility is a thorough review and analysis of the various patient-handling requirements. No one type of equipment meets the needs of today's diverse patient population.

The two critical factors in a successful safe patient handling program are staff compliance and having the appropriate equipment easily accessible and functional one hundred percent of the time. The clinical staff must be involved early to define the types of patient movement risks, to develop the policy to address those risks, and in selecting the equipment that they feel will best mitigate the risks. Including the clinical staff early in the process will help develop their buy-in to the total program. Equally important is the daily reinforcement of the program by the hospital's senior management. This reinforcement needs to be in the form of active promotion of the policy by acknowledging successes in reducing injuries, and disciplinary actions when the policy is not followed.

A comprehensive department survey to determine the *Minimum Clinical Requirements* of patient lifts and transfers performed in each department must be done as the first step in safe patient handling. The report from a survey will lead to policy development, and specifications of appropriate lifting equipment. *Minimum Clinical Requirements* has determined five basic elements to a survey:

1. The dependency level of the patients being transferred
2. The staff perception of the difficulty of the transfer
3. The frequency of the transfer or activity
4. The working environment in which the task is being performed
5. The weight and weighing requirements of the patients

Other considerations such as room size, storage space, floor covering, and ceiling integrity must be considered.

Types of Equipment

There are two major categories of patient lift and transfer equipment used in hospitals for patients with some level of dependency:

- Vertical lifts, and
- Lateral transfer devices.

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In order to remain consistent with the recommendations that we make, once the information has been gathered, we then make comparisons to our published underwriting guidelines for the minimum amounts of equipment required to mitigate the risks and exposures that have been identified. These guidelines specify the types of equipment required by type: whether that's a ceiling lift, airflow device, bathing system, or bed tug.

The Minimum Clinical Requirements Report

To determine the equipment investment required, we use generic pricing

As you work with your equipment vendor, you can adjust these prices to reflect more exacting budget values

Risks and Exposures Composite Summary		
Minimum Clinical Requirements		
	Number Required	Generic Pricing
Additional transport devices required:		
Wheelchairs:	0	\$ -
Manual stretchers:	0	\$ -
Convertible chairs:	0	\$ -
Manual gurneys:	0	\$ -
Powered gurneys:	0	\$ -
Powered Tugs:	2	\$ 11,000
Additional lift and transfer equipment required:		
Manual vertical floor lifts:	0	\$ -
Powered vertical floor lifts:	8	\$ 32,000
Sit/Stand lifts:	6	\$ 30,000
Ceiling Track:	0	\$ -
Ceiling Track Systems:	56	\$ 280,000
Mechanical Draw Sheets:	0	\$ -
Lateral Transfer Stretchers:	0	\$ -
Lateral Transfer Chairs:	0	\$ -
Air Assisted Lateral Transfer Mattresses:	10	\$ 40,000
Slipp Sheets:	9	\$ 1,485
Gait Belts:	40	\$ 1,200
Additional bed/equipment required:		
Power adjustable:	0	\$ -
Scales:	0	\$ -
Turn assist:	0	\$ -
Power transports (non-tug)	0	\$ -
Additional bathing/showering equipment required:		
Shower Trolley:	0	\$ -
Shower Chair:	0	\$ -
Hi-Lo Tub:	0	\$ -
Walk-in Tub:	0	\$ -
Total:		\$ 395,685



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Once the unique Minimum Clinical Requirements are determined for each department, we, again, provide a summary of all equipment needed within the facility. From this information we can determine, using generic pricing, what the capital investment will be for purchase of the equipment. Following our work, you will be meeting with your equipment vendors to determine more exacting pricing. In yet another spreadsheet within our workbook, you can enter those prices, and this model will automatically adjust to become your budget for safe patient handling equipment.

Unit Demand

This report is used to show the spread of the equipment throughout the facility

Unit Name	Ceiling Track		Percent Track In Unit	Ceiling Track		Ceiling Track Systems		Powered Ganneys		Powered Vertical Floor	
	Rooms	Required		Required	Cost	Required	Cost	Required	Cost	Required	Cost
ACU	36	0 \$	0%	0 \$	-	0 \$	-	0 \$	-	0 \$	-
Acute Therapy services - PT, OT & Speech	0	0 \$	0%	0 \$	-	2 \$	15,000	0 \$	-	0 \$	-
Anesthetium	16	0 \$	0%	0 \$	-	0 \$	-	0 \$	-	1 \$	-
Behavioral Health - 2 E Senior Unit	0	0 \$	0%	0 \$	-	0 \$	-	0 \$	-	1 \$	-
Branch / Pncr. Track / Pn Probes in NICU	0	0 \$	0%	0 \$	-	0 \$	-	0 \$	-	0 \$	-
Burn Center	0	0 \$	0%	0 \$	-	0 \$	-	0 \$	-	0 \$	-
Cardiac Cath / EP Lab & Cath Lab	9	0 \$	100%	0 \$	-	9 \$	45,000	0 \$	-	0 \$	-
Cardiac Cath / EP Lab & Cath Lab	0	0 \$	0%	0 \$	-	0 \$	-	0 \$	-	0 \$	-
CCU - CPCI	32	15 \$	100%	15 \$	22,500	17 \$	85,000	0 \$	-	1 \$	-
Chemis Infusion	0	0 \$	0%	0 \$	-	0 \$	-	0 \$	-	0 \$	-
CVIC	12	6 \$	100%	6 \$	9,000	6 \$	30,000	0 \$	-	0 \$	-
Dialysis	8	0 \$	0%	0 \$	-	0 \$	-	0 \$	-	0 \$	-
ED (Trauma Center)	0	0 \$	0%	0 \$	-	0 \$	-	1 \$	9,100	0 \$	-
Family Focused Care	66	0 \$	0%	0 \$	-	0 \$	-	0 \$	-	1 \$	-
GI	0	0 \$	0%	0 \$	-	0 \$	-	0 \$	-	1 \$	-
Heart Hospital Operating Room	0	0 \$	0%	0 \$	-	0 \$	-	0 \$	-	0 \$	-
Imaging	0	0 \$	0%	0 \$	-	0 \$	-	0 \$	-	2 \$	-
IRC - Cath Lab	0	0 \$	0%	0 \$	-	0 \$	-	0 \$	-	0 \$	-
Ambulatory Outpatient Clinic	0	0 \$	0%	0 \$	-	0 \$	-	0 \$	-	0 \$	-
Labor & Delivery	26	0 \$	0%	0 \$	-	0 \$	-	0 \$	-	0 \$	-
6 A Medicine	13	5 \$	77%	5 \$	7,500	5 \$	25,000	0 \$	-	0 \$	-
Med Psych	7	0 \$	0%	0 \$	-	0 \$	-	0 \$	-	1 \$	-
6 B Med Surg	27	0 \$	22%	0 \$	-	6 \$	30,000	0 \$	-	0 \$	-
MediSurg ICU	54	0 \$	100%	0 \$	-	54 \$	270,000	0 \$	-	2 \$	-
MediSurg Shutdown (Moving to new tower)	16	0 \$	100%	0 \$	-	16 \$	80,000	0 \$	-	0 \$	-
MPCU Medical Progressive Care	32	0 \$	19%	0 \$	-	6 \$	30,000	0 \$	-	0 \$	-
3 B Neuro Surgical	26	0 \$	0%	0 \$	-	0 \$	-	0 \$	-	2 \$	-
NICU	0	0 \$	0%	0 \$	-	0 \$	-	0 \$	-	0 \$	-
Non-Invasive Cardiology & Vascular	0	0 \$	0%	0 \$	-	0 \$	-	0 \$	-	0 \$	-
Oncology	25	7 \$	59%	7 \$	10,500	6 \$	30,000	0 \$	-	0 \$	-
OR, Pre-op, PACU	40	0 \$	0%	0 \$	-	0 \$	-	0 \$	-	0 \$	-
Ortho	30	0 \$	100%	0 \$	-	30 \$	150,000	0 \$	-	1 \$	-



Our Unit Demand report shows the spread of the equipment by department and throughout the facility, and again is based on generic pricing. There are several more categories of equipment in this model that specify the type of equipment that will be used in that department in the future.

Investment Summary

In the end, you will want to have a precise investment summary that shows the returns available, based upon the savings that you defined using loss analytics.

Investment Summary		
	Annual Values	Notes
Claims Experience for All Departments	\$ 6,465,577	1
Projected Annual Savings of Injury Prevention Programming	\$ 1,030,852	2
Equipment Depreciation Costs (Seven Year Straight Line)	\$ 193,501	3
Cashflow Savings	\$ 837,352	4
Capital Requirement	\$ 1,354,505	5
Internal Rate of Return	318.45%	6
Return on Investment	1.31 years	

Values shown are developed claims costs. No consideration is given to any additional staff costs, loss adjusting expense, or legal fees.
Savings projections calculated based on underwritten method.
Straight-Line seven year method used, equipment life expectancy is ten years.
The difference between claims savings and annualized equipment costs.
Initial investment based on generic pricing (actual pricing should be less).
IRR based on seven year time period.



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The Investment Summary shows the primary components of the investigative work that you've now done. It starts with a summary of all previously paid claims costs, and the savings you expect to generate. Next it shows the actual equipment "cost" by looking at the amount of depreciation that will be taken into account each year. Next, it shows the difference between the savings and the depreciation costs. Finally it shows the amount of capital that will be required to be invested into the program, then measures the internal rate of return and return on investment against only those savings. This results in a conservative approach to the application of capital resources that have a truly meaningful impact on all members of staff. And that's what such programming is really all about.



Supporting the business of healthcare
workplace safety, the people who make it
work, the equipment manufacturers who
serve that need, and the patients who
experience the result.



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At Equitable Safety Group, we support the business of healthcare workplace safety, the people who make it work, the equipment manufacturers who serve that need and the patients who experience the result. It has been our pleasure to provide this information to you, and remain available whenever questions or further needs for our service arise.

Contacts

...to learn more how ESG
and EZ Way can help you
implement your program

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Thank you for attending today.