Spinal Cord Injuries: Planning for a Lifetime of Care and Expenses

Speakers:
Jon Gice, CPCU, ARM, Second Vice President, Travelers Major Case Unit
Dr. Kenneth Parsons, Spinal Cord Specialist & Paradigm Medical Director
Kelly Wilson, Chief Marketing Officer, Paradigm Management Services
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- Slides will advance automatically
- Q&A period at end
- You may submit questions at any time
  - Click the “Q&A” button in the upper right
  - Type a question into the lower section of the Q&A panel that appears
  - Ask All Panelists and be sure to click “Send”
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- Replay will be available – look for our e-mail
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The workers’ compensation industry suffers from a chronic problem: failing to acknowledge the true cost of complex claims.

- Industry tends to use a ladder up “strategy“:
  - Calculate conservative claim expense
  - Apply traditional case management
  - Hope for the best!
  - Increase reserves as expenses mount

- Leads to 36%\(^1\) higher cost structure than alternative

- It is killing the financial health of workers compensation insurers

Reasons Behind Underestimating

There are multiple reasons that claims experts miss the cost projection mark.

**Tools Used to Project Expenses**

<table>
<thead>
<tr>
<th>Method</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>Individual Judgement</td>
<td>48%</td>
</tr>
<tr>
<td>Internal Guidelines</td>
<td>19%</td>
</tr>
<tr>
<td>Third-Party Experts</td>
<td>11%</td>
</tr>
<tr>
<td>Predictive Model</td>
<td>6%</td>
</tr>
<tr>
<td>Other</td>
<td>12%</td>
</tr>
</tbody>
</table>

**Reasons for Poor Estimation Practices**

- Judgment used as data proxy
- Lack of credible data
- Unrealistic durations (typically too short)
- More volatility than people realize
- Abundance of optimism for “this case”
- Pessimism for “this case” (will die anyway)
- Negative consequences for over-reserving

Source: “Catastrophic Industry Buyer Values Study” Wilson 2009
Guest Speakers

With us today are two experts to share perspectives on the complexities and keys to success in projecting and managing complex large dollar claims.

JON GICE, CPCU, ARM, CRC, CDMS

An insurance executive with more than 30 years of experience, Jon Gice is the Second Vice President of Travelers' workers compensation major case unit. Bringing an educational background in Rehabilitation Counseling, Mr. Gice built and runs one of the country’s most respected workers compensation claims and managed care programs.

DR. KENNETH PARSONS, MD

Dr. Parsons has been involved in the care of SCI patients for over 30 years. He was the Director of the Spinal Cord Injury Program at The Institute for Rehabilitation & Research, Houston and the Chairman of The Consortium For Spinal Cord Medicine. Dr. Parsons also served as the Vice Chairman of Physical Medicine and Rehabilitation at the University of Texas and as the President of the American Spinal Injury Association.
To be successful, one must plan for a lifetime of care.

Spinal Cord Injury Care Lifetime Roadmap

Date of Injury
- 90 to 180 days
- 1 – 2 years
- +5 years
- +10 year
- +15 years
- +20 years

Emergency Response Team
Center of Excellence
Intensive Care Unit
Emergency Trauma Unit
Home with Outpatient Services
Extended SCI Nursing Care
Stability & Independence
Residential Living
End of Life

Re-hospitalization for Respiratory, Skin, Bowel, Bladder, etc.
There are six key items on this script...

Thou Shalt:

1. Use a “Center of Excellence”
2. Get Home
3. Assure Medical Follow Up
4. Maximize Independence
5. Financially Forecast
6. Never Put on “Auto Pilot”
Rx1: Center of Excellence – the beginning

But it’s more than just the facility...

Consulting Specialist MD

Onsite CAT Case Manager RN

Facilities Providers Interventions Treatments

Data on Past Performance

Knowledge From The “Lab”

Hit ‘em with your BEST SHOT!
Where the person will live has as much to do with the quality of life as the initial Center of Excellence experience.

- Maximizing independence
- Cost effective esthetics
- But who owns the joint?
- What about “re-dos”?
- Residential facilities
- Attendant care
Proper Medical Care is critical throughout the life time.

- Overall physical evaluations (bladder, bowel, medications, skin, etc.)
- Specialist interventions (skin, neurological, respiratory)
- Continued urologic testing
- Blood work analysis
- Pharmaceutical management
- PT/OT updates (motor/sensory, posture, transfers, ADLs, equipment)
- Radiological studies (CT, MRI, etc.)
- Psychological evaluations and counseling
Attendant Care, Return to Work, Avocations...

- Setting goals and expectations is so critical
- The more we do for someone, the less they do
- Work is good medicine
- Avocations are equally as good
- Much more than dollars are involved
Rx5: Financial Forecasting

A lifetime of care is a costly proposition.

Reserving the Life

- Year 1 and Year 2
- Subsequent Years of Stability
- Final Years of Deterioration
- Permanent Total Disability
- Life Expectancy

So when do you “put it up”?
Rx6: There is no “Auto Pilot”

A commitment and plan to avoid complications.

Common SCI Complications

I’LL BE BACK

OH, MY BACK

PRESSURE SORE

DEPRESSION

MUSCOSKELETAL

PAIN

UTI

PULMONARY

CARDIO

Jon Gice, Second Vice President, Travelers
Poll: SCI Rehospitalization

According to a recent research article published in *Spinal Cord*, what percentage of work-related Tetra SCI rehospitalizations were found to be preventable?

a. **None**
   Rehospitalization is unpreventable with complex, catastrophic injuries like tetraplegic spinal cord injuries

b. **5%**
   Not worth trying to mitigate

c. **47%**
   We can work to manage post-acute care to prevent rehospitalization

d. **100%**
   All rehospitalizations after the acute period are preventable

Source: http://www.nature.com/sc/journal/v44/n6/abs/3101858a.html
From a medical point of view, spinal cord injuries are fraught with complexity.

- Spinal injuries typically involve multiple body systems (spine, respiratory, skin, bladder, bowel, autonomic instability, malnutrition etc.)
- Primary damage (paralysis) is immediate
- Secondary damage (apoptosis or “programmed cell death”) evolves within one to two days
- Treatment early in the secondary injury can result in less cord damage
- 80% of initially “complete” injuries remain so
- 10% of initially complete injuries experience recovery of some lower extremity movement
- Patients are highly fragile and experience a great deal of medical volatility
- Fragmentation of Continuity – Multiple providers introduce complexities, possible missed handoffs and potential medical errors
The Best Medical Way to Help Patients

It is important to plan comprehensively, but execute one step at a time.

Do you know how to eat an elephant?

One bite at a time!
Cost Predictors

There are a number of early indicators of increased cost.

- Higher level of injury
- Ventilator dependence
- Co-existing injuries
- Pre-existing medical conditions
- Complications
  - Pressure ulcers
  - Various infections
  - Malnutrition
  - Inability to wean from vent
    - Silent aspiration
    - Hypoventilation
    - Over sedation
A real life example can help to illustrate the complexities.

Real Life Example:

John Doe, a 64-year-old Caucasian male truck driver, sustained a spinal cord injury and other multiple traumatic injuries as a result of a head-on, truck-to-truck collision. The truck was engulfed in flames when Mr. Doe was found. At that time, he was unrestrained in the back seat and unconscious. He was extricated from the cab, intubated, sedated, and stabilized by emergency responders and then transported to the hospital.

Injuries
- Spinal cord injury (mechanical trauma, lesion level = C6, ASIA A complete)
- Acquired brain injury
- Left jaw fracture (facial bones, mandible)
- Multiple facial and neck lacerations
- Second degree burns to right hand and left leg
- Hip dislocation
- Significant abdominal injury
- Rib fractures, cervical spine fracture, transverse process fractures (thoracic and lumbar)
- Pancreatic contusion
A real life example cont.

Complexity: Active Problems (25) and Risks (79)

**Integument System**

**ACTIVE PROBLEMS**
- Skin breakdown

**RISKS**
- Delayed wound healing
- Disfigurement
- Fragile skin
- Hypertrophic scarring

**Cardiovascular/Hemodynamic System**

**ACTIVE PROBLEMS**
- Complete spinal cord injury with tetraplegia

**RISKS**
- Bleeding disorder
- Orthostatic hypotension
- Thromboembolic disorder

**Neurologic System**

**ACTIVE PROBLEMS**
- Increased metabolic needs
- Obesity

**RISKS**
- Anemia
- Diabetes mellitus, insulin dependent
- Liver dysfunction
- Malnutrition
- Pancreatic dysfunction
- Syndrome of inappropriate antidiuretic hormone secretion (SIADH)

**Respiratory System**

**ACTIVE PROBLEMS**
- Mechanical respiratory compromise

**RISKS**
- Airway incompetence (tracheostomy)
- Aspiration
- Long-term ventilator dependence
- Vocal cord dysfunction

**Gastrointestinal/Abdominal System**

**ACTIVE PROBLEMS**
- Neurogenic bowel

**RISKS**
- Clostridium difficile
- Fecal impaction
- Gastritis
- Gastrointestinal bleeding
- Incontinence of stool
- Pancreatitis

**Metabolic System**

**ACTIVE PROBLEMS**
- Obesity

**RISKS**
- Anemia
- Diabetes mellitus, insulin dependent
- Liver dysfunction
- Malnutrition
- Pancreatic dysfunction
- Syndrome of inappropriate antidiuretic hormone secretion (SIADH)

**Infectious Diseases**

**MANAGED PROBLEMS**
- Pneumonia
- Sinusitis

**RISKS**
- Abscess/empyema
- Infection
- Osteomyelitis
- Pneumonia, recurrent
- Recurrent fevers of unknown origin
- Sepsis
- Urinary tract infections (UTI)
- Wound infection

**Genitouriologic System**

**ACTIVE PROBLEMS**
- Neurogenic bladder
- Sexual dysfunction
- Urinary retention

**RISKS**
- Bladder stones
- Decreased renal function
- Epididymitis
- Hydronephrosis
- Incontinence of bladder
- Renal failure
- Renal/ureteral stones, recurrent
- Urethral stricture

**Musculoskeletal System**

**ACTIVE PROBLEMS**
- Complex nature of multiple fractures
- Facial fractures
- Generalized weakness and lack of endurance
- Injury crossing major joints
- Major facial deformity and/or dysfunction
- Orbital fractures
- Significant weight-bearing restrictions required for recovery
- Spinal instability

**Psychosocial/Behavioral System**

**ACTIVE PROBLEMS**
- Altered self-image
- Behavioral/psychological maladjustment

**RISKS**
- Abuse of prescription medication
- Anxiety disorder
- Depressive disorder
- Lack of insight
- Post-traumatic stress disorder (PTSD)
- Suboptimal compliance with recommendations
- Unrealistic perception of handicap

**Familial/Social/Legal**

**ACTIVE PROBLEMS**
- Suboptimal housing
- Temporarily unable to live independently in residential setting

**RISKS**
- Family dysfunction related to injured worker’s disability
- Inability to live independently in long-term residential setting
- Personal care attendant issues
- Problems with primary support group
- Unrealistic expectations for recovery or treatment

**Other**

**ACTIVE PROBLEMS**
- Dental injury
- Intensive adaptive equipment needs

**RISKS**
- Iatrogenic complications to treatment
- Periodontal issues
- Reduced hearing
- Reduced vision (significant)
- Secondary injury due to falls or accidents related to disability
- Surgical procedures with suboptimal results
- Unclear speech (dysarthria)
Complexity: Coordination – Example of FIRST MONTH

Facilities During First Month of Injury
- Community hospital
- Emergency medical center
- Acute hospital
- Acute rehabilitation hospital

Doctors During First Month of Injury
- Trauma surgeon
- Neurosurgeon
- Otolaryngologist
- Radiologist
- Orthopedist
- Pulmonologist
- PMR consultant

Procedures/Surgeries During First Month of Injury
- Closed reduction - hip, left
- Anterior disectomy and fusion C6-C7; interbody graft; anterior cervical plate Atlantis T translational plate, microdissection, neck
- Posterior decompression, open reduction; foraminotomy and decompression right C6-C7 nerve root and partial laminotomy, cord decompression; posterior interspinous wiring C6-T1, neck
- Posterior fusion, C6-C7 laminectomy, decompression, and foraminotomy, neck
- Open reduction internal fixation, jaw
- Incision and drainage, neck

Medications During First Month of Injury – >20

Acute Care Lab Tests During First Month of Injury – >44

Diagnostic Tests During First Month of Injury – >23
A real life example cont.

Complexity: Outcome Targets

- **Acute Medical Stabilization** – transition out of the acute hospital level of care
- **Pulmonary Management** – establishment of protocols to maintain physiologic stability
- **Musculoskeletal and Orthopedic Trauma Management** – transition to maintenance care
- **Wound Management** – primary wounds are healed, plan in place to address chronic wounds
- **Skin Maintenance and Protection** – breakdowns healed and a plan in place to maintain current skin integrity
- **Pain Management** – acute pain resolved and long-term plan for chronic pain in place
- **Medication Management** – ongoing medication plan (medications and plan for self/family administration)
- **Bladder Management** – optimized bladder function
- **Bowel Management** – optimized bowel function
- **Nutritional Program** – a nutritional program established
- **Communication** – all necessary/possible means of communication have been fully evaluated
- **Self-Care** – requisite physical preparation and functional training for the injured worker for self-care activities
- **Wheelchair Mobility** – completed preparation and equipment needs addressed
- **Transfers** – injured worker can perform transfers to/from applicable surfaces with acceptable independence
- **Residential Reintegration** – the injured worker is able to live in the least restrictive residence possible
- **Compensatory Cognitive Strategies** – completion of cognitive therapy for restorative treatment
- **Daily Living Competencies** – transition into the targeted long-term residential setting
- **Long-Term Care Support Systems** – long-term, durable management plan has been implemented
- **Community Reintegration** – injured worker is able to participate in community-based activities
- **Return to Work** - Determination of Potential – treating physician(s) has rendered an opinion regarding return to work
- **Medical Protocols for Long-Term Health Maintenance** – plan for all chronic medical conditions to maintain long-term physiologic health in the residential setting
Evidence Based Medical Guidelines

Expertise is needed to address the gaps that exist relative to evidence based medical guidelines in spinal cord injuries.

- CPGs are written based on the best evidence available at the time of writing and they will require revision over time.

- They are not “cook books” of care.

- The strength of evidence is such that CPGs are useful to assist in the clinical decision making process and the prevention of complications.

- They provide some guidance in making reasonable predictions about setting goals and reserves e.g. Expected Outcomes.

- Optimal outcome requires an expert team! They don’t follow “cook books” but their experience achieves better outcomes and prevents costly complications.
Poll: Catastrophic Reserve Spending

According to NCCI, what percent of catastrophic case reserves have already been spent by the 3 year mark?

a. 15%
b. 40%
c. 75%
d. 90%

Financially, it is far better to plan and manage to a set plan than to manage by increments.

How Not To Estimate:

- Durable Medical Equipment
- Surgeries
- Facilities
- Pharmaceuticals
- Kitchen Sink
- Risk Load
- Reserve Estimate

Financial Implications

- Most people fear putting too much into their reserves (you don’t need the kitchen sink in there!)
- You do need:
  - Known medicine
  - Risk adjusted estimates for unknown / highly probable complications
  - Adequate duration for acute rehabilitation
  - Estimates for post-acute care
  - Early resolution of housing issues
We hope you will take away the following:

Spinal Cord Injuries involve a lifetime of care

Planning for a lifetime of care requires an understanding of the complexities that will be encountered throughout the IW’s lifetime

Better outcomes are possible when you plan upfront and involve the right resources throughout

We can help!
Please submit your questions for our panelists to address

Today’s speakers

Kelly Wilson
Chief Marketing Officer
Paradigm Management Services

Jon Gice
Second Vice President
Travelers

Dr. Kenneth Parsons
Spinal Cord Specialist
Paradigm Medical Director

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