Introduction
Prior to developing a Life Care Plan, the Life Care Planner does a thorough medical records review. This provides information about diagnosis, past medical-surgical treatment, premorbid healthcare conditions, complications and treatment, therapeutic modalities (Physical Therapy, Occupational Therapy, and Recreational Therapy), diagnostic and lab reports, medications, supplies, equipment, and therapeutic evaluations, e.g., for driving or assistive technology.

Now the Life Care Planner has the foundation for a nursing assessment, preferably performed in the client's home environment, although in some instances, the Nurse Life Care Planner does not have the opportunity or privilege of evaluating the client.

Collaboration with the healthcare team provides for further recommendations for likely future care and treatment. The Nurse Life Care Planner collects data using the nursing process, projects needs, and researches projected costs for future care, equipment, and supplies.

Resource references are invaluable tools in Life Care Planning. Here are some of my personal favorites for preparing an adult spinal cord injury Life Care Plan.

This handbook describes the roles of the health care team in Life Care Planning for all diagnoses. For SCI, there is a life care plan example and a section on life care planning for the person with a SCI. This covers: causes of SCI, classifications, incomplete syndromes, complications, functional outcomes, future needs, medical follow up, medications, risk factors, supplies, and aging.

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This textbook provides perspective on spinal cord injury from the early stages in critical care, including maintaining optimal physiological functions, reestablishing mobility, and independence in community reintegration.

In Chapter 4, there are explanations of autonomic nervous system dysfunction, upper and lower motor neuron sequelae, ankylosing spondylitis, rheumatoid arthritis and osteoporosis, and other issues.

Chapter 9 deals with enhancing feelings of self worth, changes in body image, theories of adaptation, processes promoting psychosocial adaptation, and chemical dependency.

Chapter 10 deals with sexual health, from consequences of spinal cord injury to management approaches and treatment of sexual issues.

Chapter 15 through 22 deal with respiratory management, cardiovascular issues, nutritional needs, urinary function and issues, reestablishing bowel control, maintaining skeletal system integrity, maintaining the protective functions of the skin and resuming activities of daily living.

Especially useful for the Nurse Life Care Planner:
- Anatomy and physiology related to system function or dysfunction after SCI
- Specific management considerations of consequences of SCI
- Equipment needs
- Supply needs
- Likely functional outcomes based on level of injury
- Potential complications and management
- Aging with a spinal cord injury or long-term implications and management
- Preventative healthcare
- Restorative treatment
- Pharmacological treatment and surgical interventions
- Health and fitness concerns

**Spinal Cord Injury Information Network**

There are 14 Spinal Cord Injury Model Systems in the US. The National Institute on Disability and Rehabilitation Research has funded the University of Alabama at Birmingham (UAB), Spain Rehabilitation Center. UAB has been collecting data from the SCI Model Systems since 1973. The outcomes are published on the web page. There are multiple SCI-related topics, which include: medical issues, psychosocial needs, equipment and accessibility, publications, disability organizations, education, and training, to name a few.

Of interest to the Nurse Life Care Planner is the section titled “Facts and Figures at a Glance.” The most recent publication as of this writing is dated April 2009. This publication lists statistics including: incidence of SCI, prevalence of SCI survivors, age at injury, gender, race/ethnicity, etiology, neurological level and extent of lesion, occupational status at the time of injury, residence, marital status, length of stay, lifetime costs and life expectancy.
This is a comprehensive resource for coping with medical, emotional and practical challenges. It has three sections: trauma, hospitalization and rehabilitation; the challenges of readjustment; and successful living with spinal cord injury.

The intended audience is the consumer and family struggling with SCI-related issues. There are many sections written by consumers with individual perspectives on living with a spinal cord injury.

Of interest to the Nurse Life Care Planner is Chapter 7, which describes independent living, housing issues, problems related to accessibility in apartments and condominiums. Transportation needs are discussed, including public transportation, rail systems, air travel, ships, ferries and private transportation.

Spinal Cord Injury and the Family
Michelle J. Alpert M.D. and Saul Wisnia

The book provides a comprehensive overview of how SCI affects the individual as well that person’s family and friends. Both authors have a spinal cord injury. They describe how they “do it the same way anybody else does, but differently.”

Chapters include how to adjust to a SCI in return to home and back to productivity. The authors share input and stories from many SCI survivors which describe their real life experiences. The author writes about parenting issues with SCI and issues related to children and adolescents with SCI. Threaded in the book are issues in real life related to bowel and bladder management, housing, sexuality, and attendant care issues.
This well-known textbook is the gold standard for all medical aspects of physical rehabilitation. Many of the chapters provide evidence-based treatment algorithms. Its scope includes SCI evaluation and management in all age groups.

Sections deal with:
- Principles of evaluation and diagnosis
- Management methods
- Major rehabilitation problems
- Specific disorders

Especially useful for the Nurse Life Care Planner are:
- Potential complications / anticipated sequelae
- Functional outcomes based on complete SCI level
- Restorative training and compensatory techniques
- Assistive technology and devices to maximize independence
- Environmental modifications
- Psychological aspects of rehabilitation
- Diagnostic testing and imaging techniques
- Physical agents and modalities
- Reconstructive surgical options
- Biofeedback
- Functional neuromuscular stimulation
- Orthotics for the cervical, thoracic, lumbar spine
- Orthotics for upper and lower extremities
- Pharmacotherapy for pain and spasticity
- Recreation and sports
- Complementary and alternative medicine

Physical Medicine & Rehabilitation: Principles and Practice
Fourth edition
Joel A. DeLisa M.D., M.S., Editor in Chief

continued next page
This book was written to meet the needs of nurses with varying years of experience in a variety of roles and practice settings. The organization framework for the Core Curriculum addresses nursing practice in spinal cord injury impairment, foundation for nursing practice, and functional alterations. Section 2 provides a foundation in anatomy and physiology of the spine and spinal cord, with an overview of consequences of SCI. This is particularly helpful in understanding variability in functional outcomes.

Section 3 covers changes in physical function, recognizing that the primary goals of rehabilitation are improving function and promoting independence. This section takes a systems approach in the areas of alterations in respiratory, cardiovascular, thermoregulation, bladder and bowel elimination and continence, nutrition, skin, musculoskeletal, sensation and spasticity.

Section 4 emphasizes psychological and psychosocial issues after SCI, including sexuality, reproduction, body image, family, stress and coping, activity, and exercise.

Section 5 deals with the care continuum through aging. Most interesting and useful to the nurse life care planner are preventing and managing secondary disabilities and aging with a disability.

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**Spinal Cord Injury Desk Reference:**
**Guidelines for Life Care Planning and Case Management**
Terry L. Blackwell Ed.D.,
ISBN number 1-888799-49-8

Blackwell’s book is a classic for quick reference, very helpful for a busy Life Care Planner. Chapter 1 deals with neurologic classification of spinal cord injury, spinal cord injury sequelae, rehabilitation, and functional outcomes for SCI. Chapter 3 discusses the Model Spinal Cord Injury

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*Nursing Practice Related to Spinal Cord Injury and Disorders: A Core Curriculum*
Audrey Nelson Ph.D., R.N. Editor
Eastern Paralyzed Veterans Association
Jackson Heights NY 2001
ISBN 0-9708873-1-0.
programs, rehabilitation research and training centers, and rehabilitation engineering research centers.

Of interest to the Nurse Life Care Planner are SCI associations and organizations.

Chapter 4 provides a sample Life Care Plan for SCI. In Chapter 5 there are sample forms for interviews of healthcare professions.

The extensive appendices includes:

- FIM instrument
- aging with SCI
- sexuality issues
- mortality
- complications
- health issues for women with SCI
- common mobility equipment
- personal care needs
- sports and recreation

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**Outcomes Following Traumatic Spinal Cord Injury: Clinical Practice Guidelines for Health-Care Professionals.**

Consortium for Spinal Cord Medicine
Clinical Practice Guidelines.
Paralyzed Veterans of America, 1999

This is one of many published guidelines from the Consortium for Spinal Cord Medicine. This guide was prepared based on scientific and professional information on outcomes following traumatic spinal cord injury and its treatment.

The guide contains tables of expected functional outcomes based on level of injury, with equipment needs and associated FIM score by systems. Tables list the expected functional outcome or care requirements for the following: respiratory, bowel, bladder, bed mobility, transfers, pressure relief/positioning, eating, dressing, grooming, bathing, propulsion, standing/ambulation, communication, transportation, homemaking and assistance required. For example, consulting the tables will give the Nurse Life Care Planner the following guidance for a level C-4: the FIM score would be a 1 (total assist) in bowel, bladder, bed mobility, transfers, eating, dressing, grooming, and bathing. The FIM score for propulsion would be from 1 (total assist with a manual wheelchair) to 6 (independent with power wheelchair). Communication is given as from total...
assist to independent depending or workstation setup and equipment availability. Transportation would be attendant operated van or accessible public transportation. Homemaking would be total assist; care needs range from 16-24 hours per day.

The Consortium for Spinal Cord Medicine, Clinical Outcome Guidelines has published other guidelines, which can be searched at http://www.pva.org. These include:

- Preservation of Upper Limb Function Following SCI: What You Should Know
- Bladder Management for Adults with SCI
- Respiratory Management Following SCI
- Neurogenic Bowel Management in Adults with SCI
- Acute Management of Autonomic Dysreflexia
- Prevention of Thromboembolism
- Early Acute management in Adults with SCI
- Depression Following SCI
- Pressure Ulcer Prevention and Treatment Following SCI

The Paralyzed Veterans of America also publish Consumer Guides on Spinal Cord Injury. These include:

- Autonomic dysreflexia: What You Should Know
- Expected Outcomes: What You Should Know
- Pressure Ulcers: What You Should Know
- Depression: What You Should Know
- Neurogenic Bowel: What You Should Know
- Preservation of Upper Limb Function Following SCI: What You Should Know
- One the Move: A Financial Guide for Persons with Spinal Cord Injury
- Accessible Home Design: Architectural Solutions for the User

Conclusion
This is a list of the author's personal favorites and not intended to be an exhaustive list of SCI-related resources. However, I hope they will be valuable in broadening your own scope in spinal cord injury and rehabilitation.