

Standards of Care in SMA and Implications for Clinical Trials

**EMA SMA Workshop
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**Richard S. Finkel, MD
Nemours Children's Hospital
University of Central Florida College of Medicine
Pediatric Neuromuscular Clinical Research Network for SMA**

SOC - Whose Standards?

- Published Practice Parameters
- Consensus Reports
- Editorials
- Clinical Trials: Good Clinical Practice

SOC - Who Cares?

- Patient/Parents Optimal care, QOL
- Physicians, Health Care Providers Uniform, optimal care
- Advocacy Groups Access to best care
- Pharmaceutical Industry Standardized Care
- Regulatory Authorities “Best available supportive care”
- Health Care Insurers Low cost, accountability

One size fits all?

- Guidelines, not a mandate
- Evolving – updated February, 2016
- Local, Regional and National health care constraints
- Cultural Biases

Why SOC matters

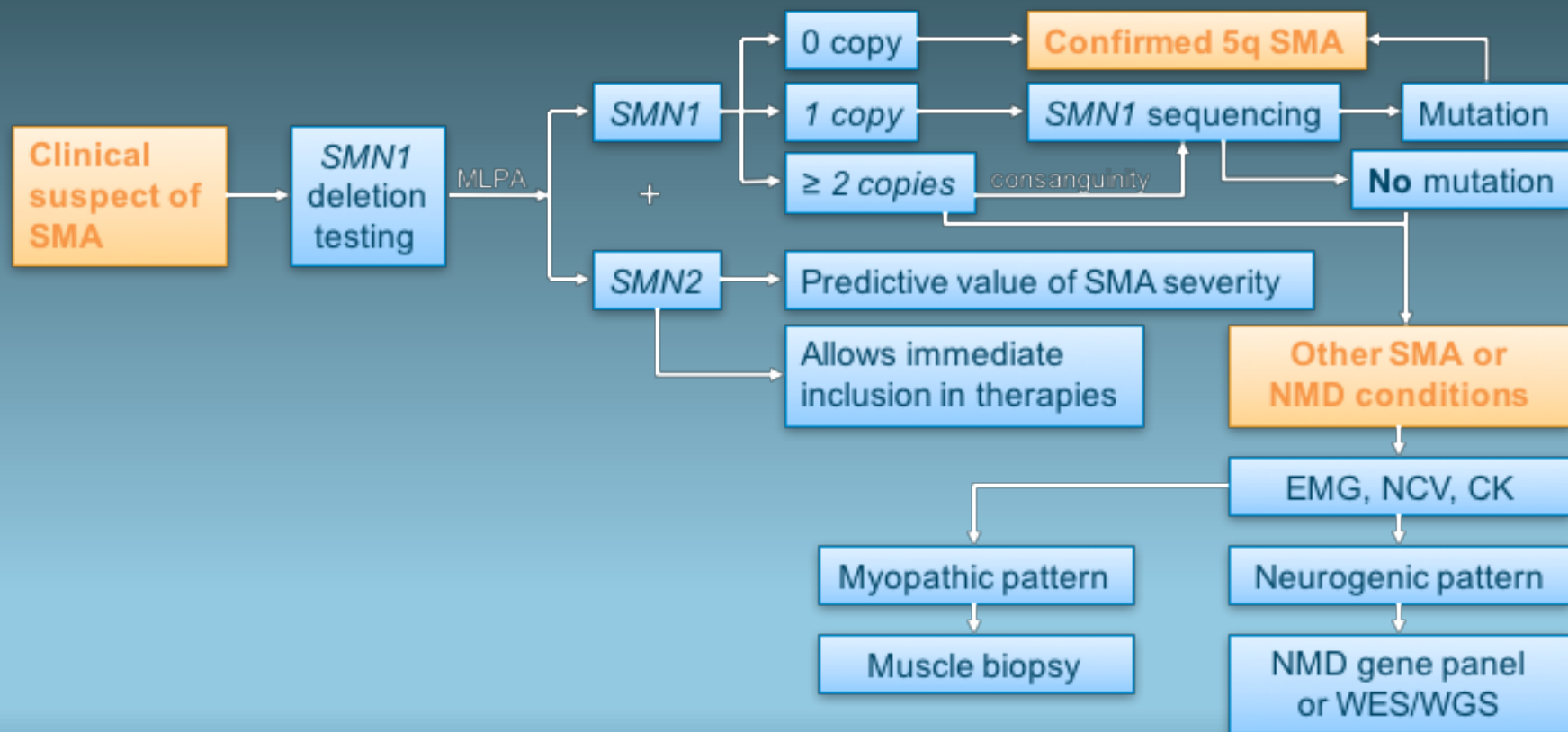
- Supportive Care
 - Anticipate
 - Coordinate
 - Manage
 - Genetic counseling
 - Palliative care
- Clinical trials
 - Well-characterized patients
 - Optimize efficiency of the CT

Consensus Statement for Standard of Care in Spinal Muscular Atrophy

Journal of Child Neurology / Vol. 22, No. 8, August 2007

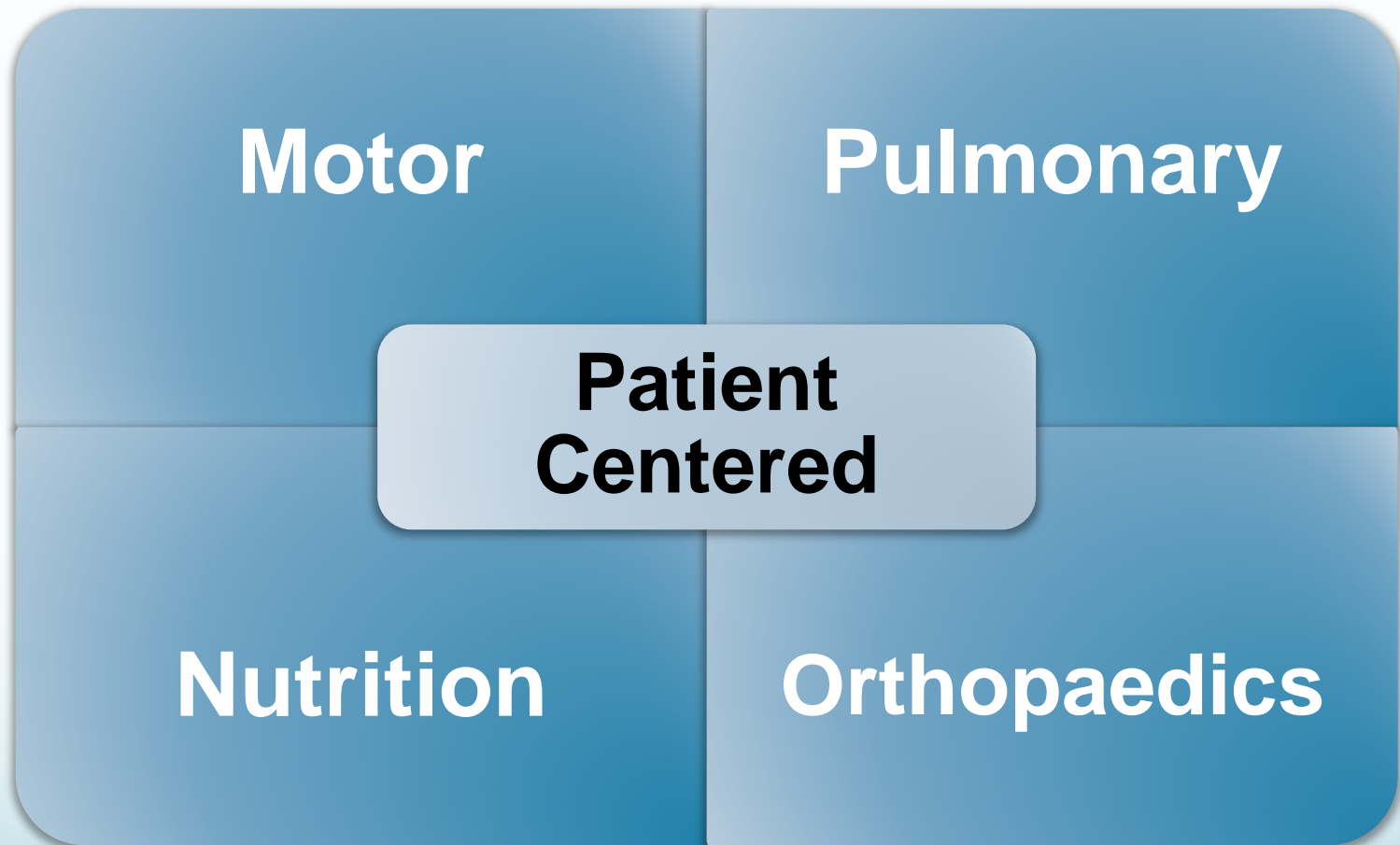
Ching H. Wang, MD, PhD, Richard S. Finkel, MD, Enrico S. Bertini, MD, Mary Schroth, MD, Anita Simonds, MD, Brenda Wong, MD, Annie Aloysius, MRCSLT, HPC, Leslie Morrison, MD, Marion Main, MCSP, MA, Thomas O. Crawford, MD, Anthony Trela, BS, and Participants of the International Conference on SMA Standard of Care

A diagnostic algorithm for SMA and other NMD disorders



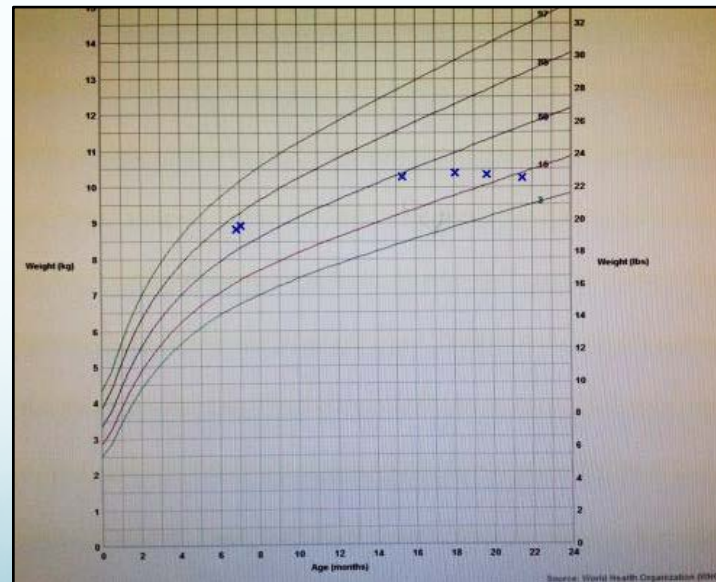
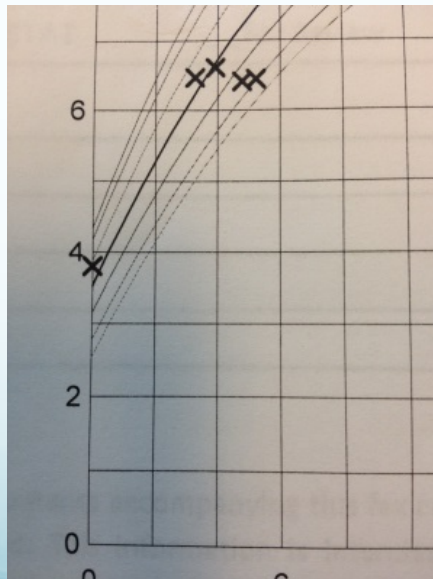
Courtesy of Drs. Brunhilde Wirth and Francesco Muntoni.

4 Clinical Domains of SMA

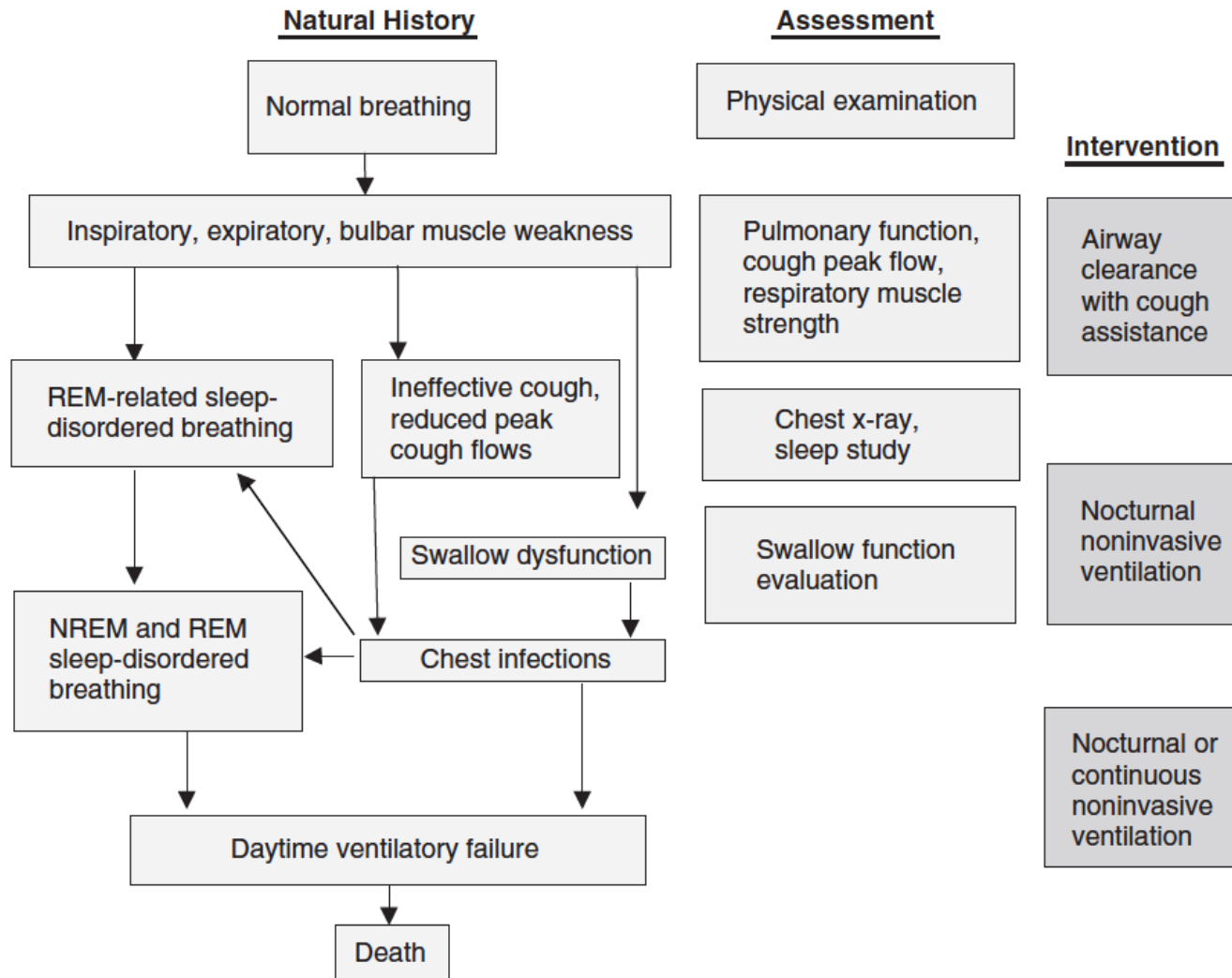


GI/Nutrition Issues

- Feeding/Swallowing: supplemental feeding
- GI Dysmotility, GERD
- Nutrition and Growth needs, diet, supplements



Pulmonary Issues

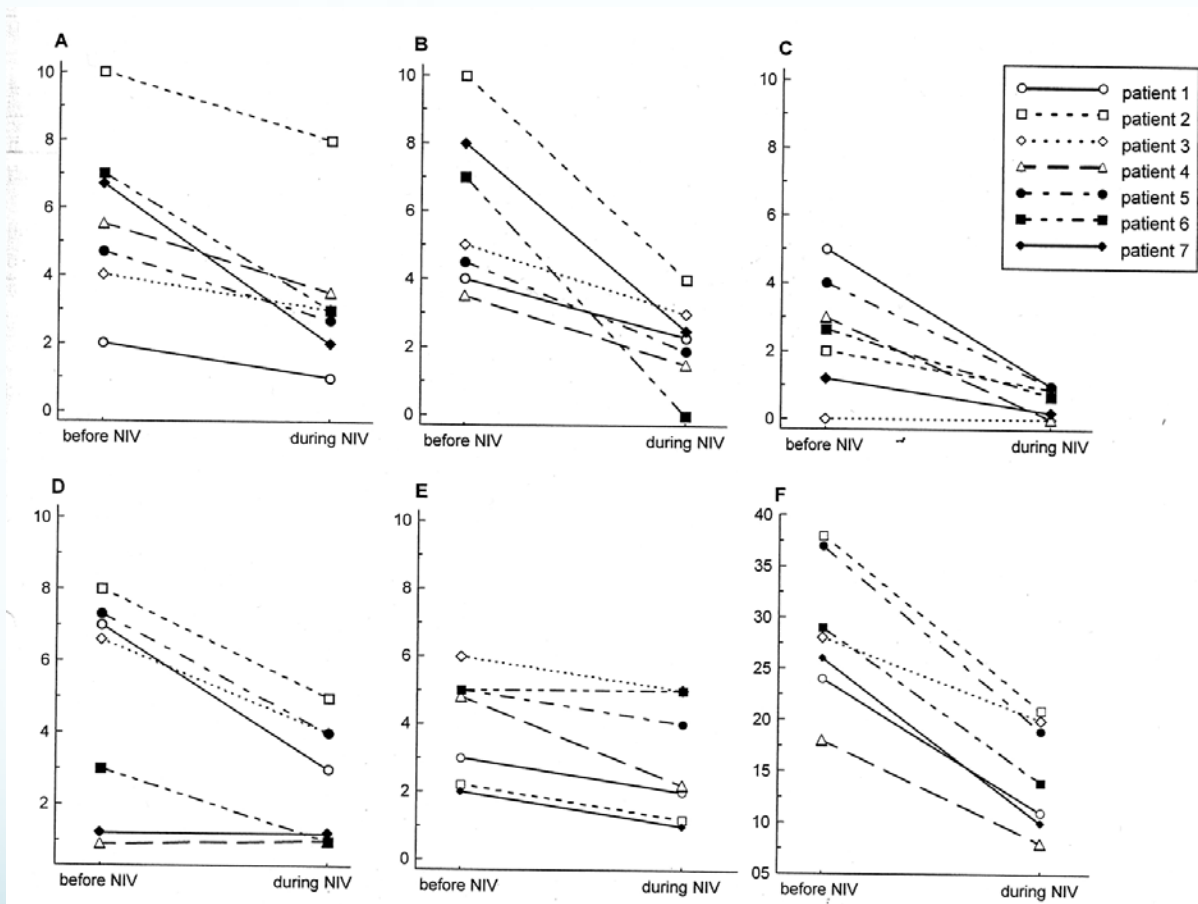


Respiratory Support

- Control of oral secretions
 - Medication
 - Suction devices
 - Percussion vest
 - Cough-Assist devices
- Hypoventilation support
 - Non-invasive ventilation (Bi-Pap)
 - Tracheostomy and ventilator



Better care makes a difference

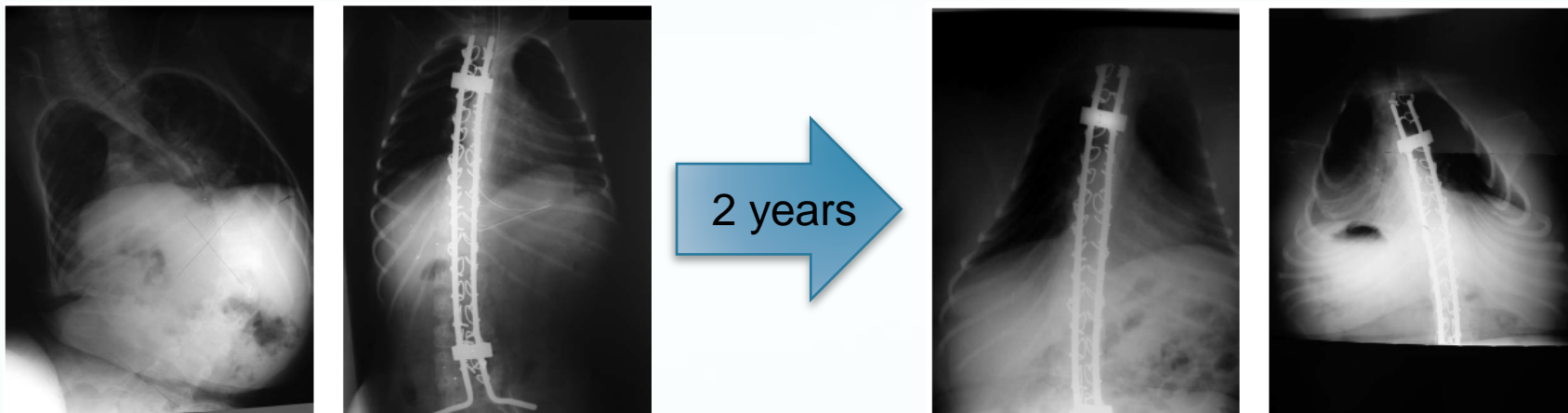


(Mellies et al 2004)

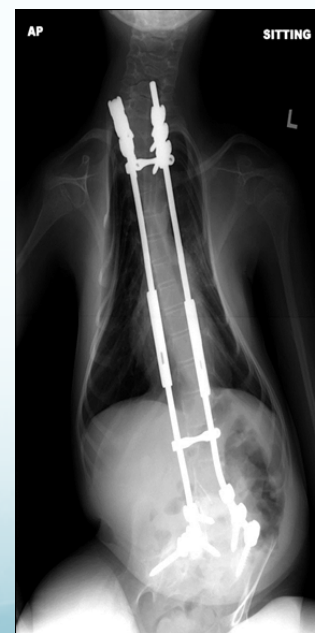
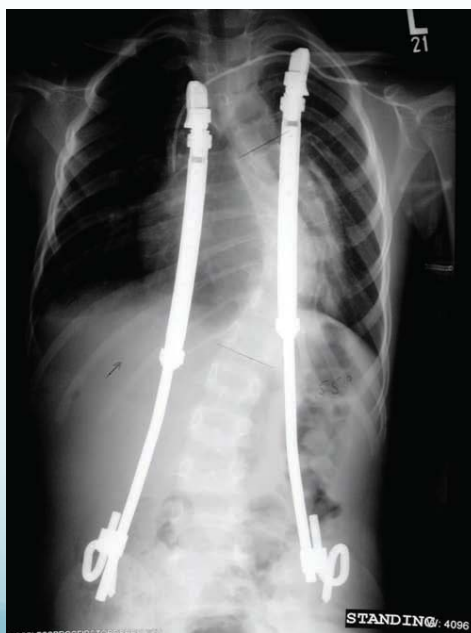
Effect of non-invasive night-time ventilation on the symptoms disturbed sleep (A), night-time sweating (B), early morning headache (C), disturbed appetite (D), disturbed concentration (E) and total score (F) in 7 children with SMA I-II.

Orthopaedic

- Scoliosis management
 - Orthoses
 - Surgical correction
 - Standard spinal fixation
 - Growing and magnetic rods
 - Rib expandable rods (VEPTR)
- Can now consider in type 1 SMA



Campbell RM and Smith MD, JBJS, 2007:86:108-22



White KK et al Clin Ortho Rel Res (2011) 469:1336

Orthopaedic and Physiotherapy/Rehabilitation Topics

Issue	Clinical Assessment	Intervention
Joint Contractures	Range of motion assessment	Stretching Orthotics Surgery
Scoliosis	Spine X-Rays	Thoracolumbosacral orthotic Surgery
Hip subluxation	Hip X-Rays	Positioning support
Fractures	X-ray, DEXA, Vitamin D	
Motor Function	PT, OT, strength evaluation Functional scales	
Mobility	Seating and power mobility evaluation	Manual and power wheelchair
Pain	PT and OT assessments	Orthotics, exercise, positioning, medication

Anticipatory and Preventive Care

- Routine immunizations
- RSV prophylaxis for type 1 SMA
- Influenza immunization
- Dietitian
- Bone health
- Acute care – hypoglycemia
- Post-operative management

Updating the SOC Guidelines for SMA

- ENMC workshop February 2016
- Literature review, Delphi technique
- 8 working groups, each includes patients and pharma
 - 1 Diagnostics
 - 2 Pulmonary
 - 3 Acute care management
 - 4 Orthopaedics
 - 5 Therapy/Rehab
 - 6 GI/Nutrition
 - 7 Other organ systems
 - 8 Palliative care and ethics

SOC: Clinical Trial Considerations

- When to Implement SOC in a CT?
 - Upon Diagnosis
 - Establish *PRIOR* to Enrollment into a clinical trial
- Why Important in a clinical trial
 - Minimize patient variability and optimize efficiency
 - Discern between change attributable to SOC and Intervention
 - Obligated to provide best care when exposed to risk
 - Equipoise: maximal benefit, minimal risk

Summary

- SOC are important in the care of patients with SMA
- Guidelines, not mandates
- Improves patient care – it makes a difference
- More efficient and cost-effective care
- Reduce variability among participants in CTs

Thank You

SOC and Clinical Trials

Ethical quandary



- Allow parental decisions about palliative care
- Yet support the participant for sufficient time to respond to drug

Original Article

Spinal Muscular Atrophy Type I: Is It Ethical to Standardize Supportive Care Intervention in Clinical Trials?

Richard S. Finkel, MD¹, Kathie M. Bishop, PhD², and Robert M. Nelson, MD, PhD³

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