

American Perspectives on Scoliosis Specific Exercise (SSE)



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Goal



SOSORT began as a European society in 2004. Since then, SOSORT has had increasing influence on the changing the climate of conservative management of scoliosis in the US.



The purpose of this talk is to give the SOSORT audience perspective on Scoliosis Specific Exercise (SSE) in the US, from my perspective as a SSE physical therapist, clinic owner, and BSPTS Schroth instructor.

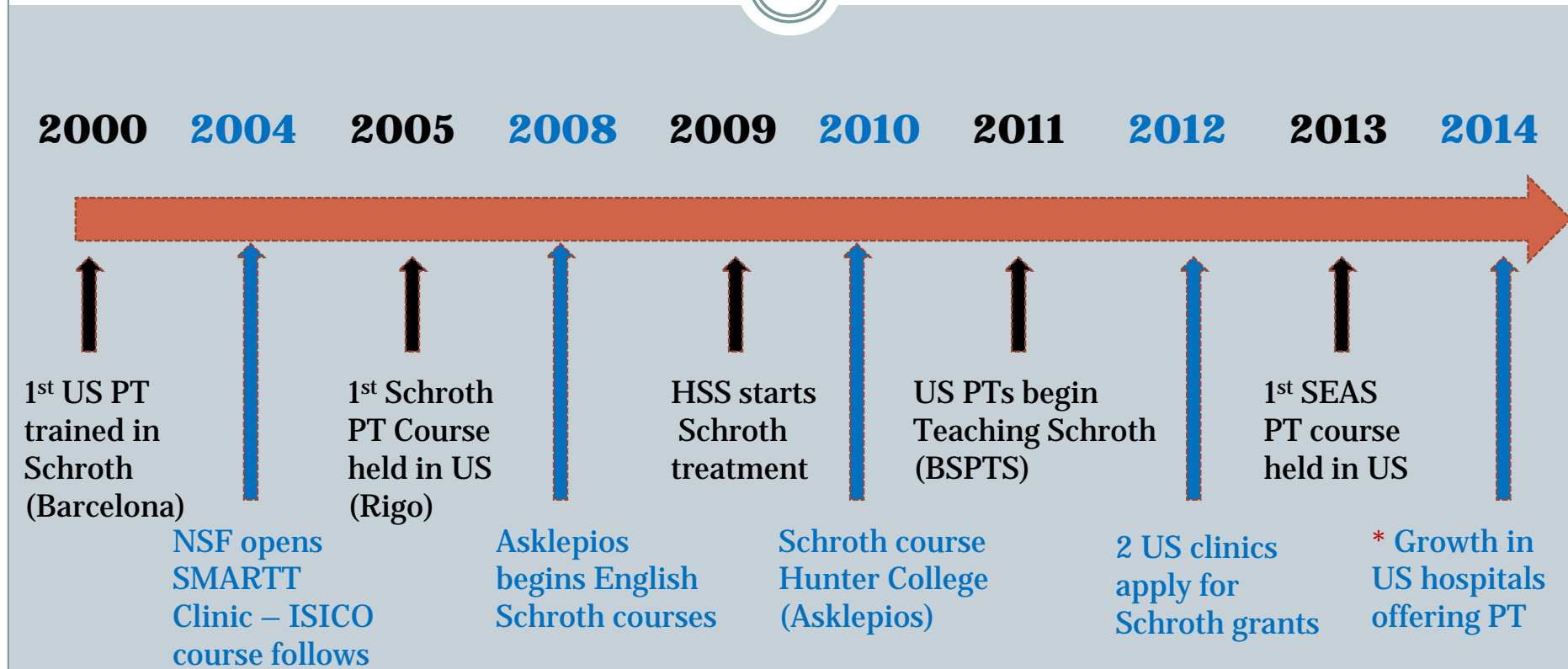
Sources



- **Historical Reflections**
 - Timeline of SSE related events in US
 - SSE availability in US
 - Trends in SSE PT education and SSE Research in US
- **Surveys**
 - US PTs trained in scoliosis specific exercises (SSE)
 - Physiatrists in American Academy of PM&R
- **Speaker's Observations**

Historical Reflections

Timeline of Key US Events



* See next slide

Historical Reflections

SSE Availability in US



Major US hospitals and clinics offering SSE:

Currently 10 + known (including but not limited to):

Hospital for Special Surgery (4 Schroth PTs & 380 pts seen in 2013)

Morgan Stanley Children's Hospital

Texas Scottish Rite

Columbia University Medical Center

Seattle Children's

Children's Hospital of Atlanta

Arkansas Children's

Dixie Regional Rehab

Illinois Bone and Joint Institute

Children's Hospital Boston

and ...?

Private Practice:

Estimated 40+ US Private PT Practices offering SSE

Historical Reflections

Trends PT Education for SSE in US



Certification Courses in US - Schroth

Asklepios: Certified 40 PTs in US 2010-2013

BSPTS: Certified approx 70 PTs in US 2011-2014

Currently: 5 BSPTS – US instructors teaching basic and advanced Schroth courses 4-6 x per year

Certification Courses in US – SEAS

ISICO: Certified 5 PTs in US in 2013

Currently: SEAS not currently scheduled in US

Certification Courses in US– Other

Not aware of any

Historical Reflections

Trends in PT Education for SSE in US



Curriculum development

- 10/47 PTs surveyed have lectured on SSE at PT Universities or are involved in curriculum development

State and national level conferences:

- 5 State PT Conference lectures on SSE
 - NJ, WI, PA, NY , MI
- 4 National PT Conference lectures and workshops
 - 2011: Section on Pediatric Annual Conference (SoPAC) - Schroth
 - 2012: Combined Sections Meeting (CSM) for APTA (1500 attended)
 - 2013 : Combined Sections Meeting (CSM) for APTA (40 attended)

Historical Reflections

Trends Research on SSE in US



Past Research Grant Applications:

3 known grant applications were submitted in US for SSE (Schroth) research in past 5 years.

- Columbia University Medical Center: OREF grant denied
- Texas Scottish Rite: OREF grant denied / APTA Pediatric grant denied

Pending Research Grant Applications:

Email survey of 15 professionals involved in past US grant activity yielded 5 responses.

- Texas Scottish Rite: SRS grant pending application
- No known additional research is underway in SSE in US

DPT (Doctorate of Physical Therapy) CapStone Projects

4 Surveyed PTs have reported using Schroth / SSE as topic for their doctorate capstone projects

Survey of US SSE Certified PTs



Goal: Survey PTs in US that have been certified in scoliosis specific exercises

Survey Design: Cindy Marti, PT

Source: Emails lists from:

- 106 Schroth PTs (Hunter College, Asklepios, BSPTS)
- 11 SEAS PTs (ISICO) (incl. 7 also on Schroth list)
- 2 FITS PTs (M. Bialek)

Surveys Sent: 111 surveys sent via email

Response: 47

Survey of US SSE Certified PTs



Certification Dates		
2000 -05	2006-10	2011-14
3	11	31

Practice Setting			
Private Practice	Hospital Based	Physician Owned	Other
61.5%	29.8%	6.3%	4.2%

Motivation for Getting Trained				
Clinical Interest	Physician	Hospital/Clinic	Patients	Other
68.0%	8.5%	6.3%	4.2%	19.1%

Survey of US SSE Certified PTs



Most Frequent Referral Sources (Ranked #1 or #2 out of 5 choices)

Word of Mouth	Pediatric Ortho	Pediatrician	Orthotist	Physiatrist (PM&R)	Other
66.0%	44.7%	25.5%	19.1%	4.2%	21.2%

Overall Acceptance by Physicians

	Very well	Moderately well	Poorly	Don't Know
Peds Ortho	23.4%	40.4%	34.0%	6.4%
Other MDs	27.7%	59.6%	14.9%	4.2%

Survey of US SSE Certified PTs



Therapist Scoliosis Caseload

	< 5	5-10	10-20	20+
New scoliosis patients/ mo	53.3%	38.3%	6.4%	0%
Hrs /wk in scoliosis PT	25.5%	25.5%	27.7%	17.0%

Speaking and Lecturing Done (check all that apply)

Orthos	CPOs	Public	PTs	Pediatricians	PT Univ	Other
36%	23.4%	21.3%	21.3%	21.3%	21.3%	23.4%

Survey of US SSE Certified PTs



Impression of Clinical Impact

Great	Moderate	Low
68%	32%	0%

Most Significant Barrier to Success (Ranked #1 or #2 of 5 choices)

General Awareness	Physician Support	Overall Access	Insurance Coverage	Patient /Family Compliance
76%	51%	26%	23%	15%

Survey of US SSE Certified PTs



Conclusions:

There is an upward trend in PT SSE training in US in the last 3 years, since courses are now offered in US

PTs trained in SSE in the US are primarily in *private practice*, were driven to training by their *own clinical interest*, and are finding *great clinical impact* from SSE

Most PTs treating with SSE are doing so “part time” - less than 20 hours per week treating scoliosis

PTs using SSE report that the US physicians in their area are overall *moderately accepting* of SSE.

Survey of US SSE Certified PTs



Conclusions:

Generally, patients are finding SSE PTs in the US by *word of mouth* more so than by physician referral. When physicians do refer, it is most often *pediatric orthopedic surgeons*

NOTE: “Direct Access” is in practice in most of US – meaning patients can see PTs without MD referral.

The biggest barriers to success in using SSE are perceived to be *lack of general awareness*, followed by *lack of MD support* – more so than insurance coverage or compliance

Less than half of the trained PTs surveyed have done speaking / lecturing on SSE. When they have done so, it has primarily been to *orthopedists*.

Survey of US SSE Certified PTs



Additional Comments

Momentum for SSE in the US is coming primarily from PTs and patients vs. MDs. and institutions.

Lack of high-level research continues to be a barrier to physician referral for SSE in the US.

Complexity of Schroth exercises can be a challenge with respect to US culture and model of health care

Survey of PM&R Physicians



Goal:

To survey PM&R doctors in the US, given the strong role of PM&R in scoliosis care in Europe

Survey Design:

Dr. Elizabeth Moberg-Wolff, MD – board certified in adult and pediatric PM&R; Chair of the Pediatric Council of the American Academy of PM&R (AAPMR)

Source:

Survey Monkey to listserv from the AAPMR (Pediatric Council and Musculoskeletal Council)

Surveys Sent: total unknown

Survey Responses: 58

Survey of PM&R Physicians



Do you treat and manage AIS? 58 / 58 responded

No - not seen at our practice	No – we refer to ortho	Yes – we manage	Other (i.e. co-manage)
34%	29%	26%	10%

Do you treat and manage neuromuscular scoliosis? 58 / 58 responded

No – not seen at our practice	No – we refer to ortho	Yes – we manage	Other (i.e. co-manage)
10%	27%	55%	13%

Note: percentages are % of total that responded to the specific question

Survey of PM&R Physicians



If you manage AIS, do you... (check all that apply) (35/58 responded)

Refer for scoliosis specific PT	Prescribe brace and refer to ortho if curve progresses	Monitor until bracing is needed then refer to ortho	Other
8.5%	20.0%	42.9%	28.6%

If you manage neuromuscular scoliosis, do you...(check all that apply) (55 / 58 responded)

Refer for scoliosis specific PT	Prescribe brace and refer to ortho if curve progresses	Monitor until bracing is needed then refer to ortho	Other
22.2%	40.0%	42.2%	24.4%

Note: percentages are % of total that responded to the specific question

Survey of PM&R Physicians



Are you familiar with scoliosis specific PT ex? (Check all that apply) (56 / 58 responded)

Yes - Schroth / SEAS/ Barcelona	I thought PTs just use regular interventions	No, never heard of PT doing any intervention	Other
28.6%	12.5%	35.7%	23.21%

If you heard of scoliosis specific ex, but don't prescribe, why not? (check all that apply) (36 / 58 responded)

Not available in our area	Don't believe they are effective	Don't believe patients could do them	Other *	NO RESPONSE
11.1%	30.6%	5.6%	55.5% *	20.6%
* Other = most stated "don't know enough about them"				

Note: percentages are % of total that responded to the specific question

Survey of PM&R Physicians



What would you deem a benefit of PT that would lead you to prescribe? (check all that apply)
(53 / 58 responded)

Patient compliance	Prevent or postpone surgery	Improve post op outcome	Other
64.2%	67.9%	60.4%	13.2%

How knowledgeable are you about orthosis options and effectiveness for AIS or neuromuscular scoliosis?
(58 / 58 responded)

Very knowledgeable about both	Very knowledgeable about neuromuscular scoliosis only	Limited knowledge – let orthotist guide me	other
20.7%	31.0%	32.8%	15.5%

Note: percentages are % of total that responded to the specific question

Survey of PM&R Physicians



**Please check all the resources you are familiar with
(24 / 58 responded)**

SOSORT	Scoliosis Journal	SRS	NO RESPONSE
41.7%	37.5%	91.6%	58.6%

**Scoliosis Management by pediatric PM&R physicians is...
(58 / 58 responded)**

Not really necessary	Needed to be knowledgeable team member but not to be primary	Essential to manage primarily until point of surgery	Other
0%	44.8%	46.5%	8.6%

Note: percentages are % of total that responded to the specific question

Survey of PM&R Physicians



Conclusions

Although most PM&R doctors in US do not see or manage AIS, they do see and manage neuromuscular (NM) scoliosis in their practices, AND they believe PM&R should be knowledgeable and involved in the management of scoliosis

When PM&R doctors do see AIS, they only monitor until referring to Ortho for bracing and RX; however, when seeing NM scoliosis, they are more likely to prescribe and manage bracing and PT

Although roughly 1/3 of surveyed PM&R doctors have heard of Schroth or SEAS, most are not aware of PT intervention for scoliosis

Survey of PM&R Physicians



Conclusions:

PM&R doctors are generally more knowledgeable about orthosis options than they are about SSE / PT

Lack of awareness and lack of belief in effectiveness of PT are the primary reasons PM&R doctors do not refer to PT for SSE.

Most PM&R doctors would be inclined to refer to PT for SSE if it helped patient compliance, prevented surgery, or improved surgical outcomes

Survey of PM&R Physicians



Additional Discussion:

It would be helpful to understand more about how PM&R scoliosis care varies around the world. It appears PM&R may be less involved in non-operative management of scoliosis in the US in comparison to other countries.

There seems to be a strong belief amongst US PM&R doctors that they should be involved in managing scoliosis, but an overall low percentage of doctors that actually do manage it – mostly due to lack of education / training

With the advent of major US healthcare reform and a growing interest in SSE in the US, there may be motivation for lower-cost providers (non-surgeons) to manage non-operative scoliosis treatment.

Additional Speaker Observations



- A formal survey of SRS physicians in US would be helpful to better understand their perspectives on SSE.
- Pediatricians and PCPs in US are conditioned to refer directly to Ortho vs. PT despite non-surgical range curves
- Informal discussions with MDs by speaker have indicated:
 - Regional trends in MD referral for SSE – highest in Eastern US
 - PT is most often referred when patient / family inquires
 - MDs acknowledge potential benefit of PT but still sight lack of research as barrier to referring
 - There are some perceived “threats” from MDs regarding PT involvement in scoliosis care – loss of control by MD



THANK YOU!

