The Global Spine Care Initiative: model of care and implementation

Online Supllemental file

Figure 1 Examples of actions to transform to the GSCI Model of Care
Examples of key actions to transition from current (now) to the new model of care (goal). These are only examples, not an all-inclusive list. Reproduced with permission from World Spine Care.

Who is the focus of spine care?
Transition from Provider-centered to **Person-centered**
Educate providers: • to be culturally competent and communicate in the patient's specific socio-cultural context. • to perform patient education, informed consent, encourage patient engagement in care, de-emphasize focus on the provider in the role of health. • to understand the essentials of person-centered and people-centered care to encourage empowerment and engage people and communities in participation and decision-making. Educate individuals: • to engage in health care decisions and self-care
Transition from System-centered to **Community and People-centered**
Educate community leaders: • to engage in community health improvements and intervention programs Health care system decision-makers • to implement and/or refocus success indicators on people and community • to use key performance indicators that are relevant to the health needs of the local community • to improve patient access (affordability, ability to seek care, transportation, etc) • to refocus present financial model and outcomes to self-sufficient program • to engage stakeholders and community leaders in the process • to include cultural sensitivity in the implementation and ongoing maintenance of the model Educate policymakers • to develop policies that incorporate community health components • to include community stakeholders in policy making decisions

What type of spine care is delivered by health care workers and providers?
Transition from Biomedical to **Biopsychosocial**
Educate providers: • to apply biopsychosocial principles. • to use the care pathway, which includes biopsychosocial principles. • to match health outcomes with health care needs of patient and community. • to use functional outcomes and properly use pain outcomes. • to refocus care and outcome measures to focus on function and ability. Educate individuals and community • to understand that health and disease are multifactorial and has biopsychosocial principles • to understand determinants of health and how they can influence them in their choices and actions • to focus on functional out comes
Transition from Eminence-based practice to **Evidence-Based Practices**
Educate providers: • to use evidence-based practice skills in daily practice. • to use best practices contained in the care pathway. • to stop using ineffective procedures (e.g., passive-only approaches, unnecessary surgery, ineffective medications).

Transition from Reactive to **Proactive**
Educate providers and health care workers: • to perform prevention activities found in the care pathway. • to include prevention practices into each level of spine care. • to deliver education tools for self-care and recognize when to seek care, engage patient to be an active participant in their health. Educate community leaders: • to include prevention practices into community activities and policies. Educate policymakers and administration • to improve spine health care services • to include prevention measures in policies improve prevention of spine injuries and disorders

How is spine care delivered?
Transition from Silos to **Collaboration**
Educate providers: • to participate with other health care providers. • to communicate with community leaders. Educate health care system decision-makers • to establish policies that will facilitate collaboration between providers and levels of care. • to establish policies that will facilitate collaboration between health care system and community.
Transition from Isolation to **Integration**
Educate providers: • to participate in an integrated and coordinated care infrastructure through community and inter-provider communications. Educate health care system decision-makers • to establish communications infrastructure among stakeholders within available resources (e.g., EHR, telemedicine). • to establish an integrated health care approach (within and across health teams and systems) to consistently apply the care pathway. • to establish comprehensive health care practices.
Transition from Fragile to **Self-sustaining**
Educate health care system decision-makers • to establish self-sustaining practices within local resources • to identify long-range strategies

Figure 2. Example Pathway of Change (Logic Model). Reproduced with permission from the World Spine Care.

Sample diagram of pathway of change (a "logic model") to implement the model of care. This should be customized to the needs of the local community.

Purpose: to implement the GSCI Model of Care for community _____________ (location/region).
Strategic principles: Person-centered, People-centered, Evidence-based, Biopsychosocial, Proactive, Integrative, Collaborative, Self-sustaining.
Clarify issues and problems with stakeholders and local community: _____________________________(What is the current state of spine care? What are the goals we envision? What is the gap we need to fill?) EXAMPLE: A high proportion of citizens in community X do not have access to spine care, thus end up either having an acute condition become chronic, or present to urgent care or specialty services instead of primary care or using self-care. This increases financial burden on an already strained health care system and causes many people with spine-related concerns to become chronic or not have access to evidence-based spine care.

RESOURCES (INPUTS)	OUTPUTS	OUTCOMES			IMPACT
What resources are needed to implement the model of care based upon local needs? (Use the tool to help identify resources.)	**What activities are needed to implement the model of care to meet the local community spine needs?**	**Short term outcomes (first 1 to 2 years) Changes in learning knowledge, attitudes, skills**	**Intermediate outcomes (3 to 5 years) Changes in actions, behavior, policy, practices**	**Long-term outcomes (ongoing) changes in condition, environment, quality of life**	**What are Vision and Goals?**
PERSONNEL AND SKILLS Health care providers and workers with skills to implement the model of care EQUIPMENT AND SUPPLIES FACILITIES AND INFRASTRUCTURE COMMUNITY AND SOCIETAL RESOURCES People/consumers Local and national government leaders FUNDING RESOURCES Payers Funding infrastructure	• Establish Steering and Implementation teams • Assess local needs, available resources, and system readiness for change • Develop implementation plan with key performance indicators that matches local needs • Engage stakeholders in implementation • Implement comprehensive spine care clinic or program • Incorporate GSCI Classification and Care Pathway into health system • Establish community education, self-care, and prevention programs • Implement policies to support spine care and health • Assess and evaluate program	Health care personnel have knowledge and skills to apply classification and care pathway Stakeholders are engaged in the process Individuals in the community know what to do for self-care and know how to prevent common spinal conditions	Increased number of individuals accessing primary care for spine care Decreased number of people accessing secondary care for common spinal disorders. Increased number of health care providers following the care pathway Reduced number of days off from work due to spine pain Reduced spine injuries for workers	Reduced incidence/prevalence of spinal conditions, acute transition to chronic, etc. Increased productivity and decreased work loss due to decreased spinal disorders and injuries Reduced utilization of inefficient spine care services, increased number of people receiving the right care at the right time, etc.	Improved spinal health of the population Reduced burden of disease for local spine-related disorders Sustainable, integrated spine care programs are implemented Improved access and quality of spinal care Ongoing outcomes data monitoring system Model of care implemented at all levels of care

Appendix 1 **Check list of primary spine care provider/team competencies. Use to evaluate current or recruit new health care providers when preparing to implement primary spine care. The provider or team of providers demonstrate competency in the following items.** . Reproduced with permission from World Spine Care.

Competency	None	Limited	Basic	Proficient	Advanced	Expert
Knowledge of anatomy, physiology, pathology (including course of disease and prognosis), and biomechanics of the spine.						
Knowledge of the complex interaction of biomedical, psychological, and social factors that impact spine symptoms and function.						
Knowledge of how intrinsic capacity and environmental supports influence functional ability.						
Able to take a detailed history (including history of chief complaint, family, systems review, etc.)						
Able to screen for psychological and social and severe pathological factors (flags) that may be contributing to spine-related symptoms and disability.						
Able to screen for risk factors and comorbidities.						
Able to complete a general physical and a detailed clinical spine examination (including orthopedic, neurological, vascular and systems exams).						
Able to differentially diagnose and reach a clinical impression and diagnosis for spinal disorders.						
Able to recognize and triage severe pathology that may be associated with spine-related symptoms.						
Able to triage and make appropriate referrals to other providers and levels of care (such as other primary care providers, community prevention, secondary, and tertiary spine care interventions.)						
Able to order spine-related diagnostic tests (radiology, other diagnostic imaging (MRI/CT), and laboratory) that are consistent with evidence-based spine care.						
Able to refer for and interpret diagnostic tests and/or reports including x-ray, MRI, CT scans, laboratory testing, bone densitometry, electrodiagnostic and other tests for spinal disorders that are consistent with evidence-based spine care.						
Able to apply person-centered (e.g., shared decision-making), people-centered, and integrated care concepts into care delivery.						
Able to work effectively within an interdisciplinary health care setting.						
Able to work effectively interprofessional, inter/multidisciplinary, and collaborative practice setting.						
Able to accomplish tasks with patients, other health care providers, and other stakeholders, in a culturally competent and respectful manner (i.e., take history, language, cultural awareness.)						
Able to provide and receive referrals from other levels of care (such as receive patients from screening programs, primary care providers, from secondary or tertiary levels to manage post-surgical care and rehabilitation.)						

Able to perform evidence-based, non-invasive interventions within his/her training and scope of practice, including prevention, reassurance/education, provider-delivered treatments, recommendations for self-care, and basic psychological-based therapies. The provider may collaborate with other providers who can perform specific modalities (e.g., dry needling/acupuncture, manual therapies, exercise) or other primary care therapies (e.g., cognitive-behavioral therapies).						
Able to incorporate prevention into patient education and treatment plan, including self-care, prevention measures based on patient risk factors, and current spinal condition.						
Able to monitor patient progress with evidence-based, biopsychosocial outcome measures, knowing when to continue care, refer, or release from care.						
Able to communicate with the patient during treatment and with the patient and other providers after care is complete to assure continuity of care.						
Able to assist in the education of other health care clinicians who have limited training and understanding of evidence-based spine care so that they can better provide care to those patients who present to a general health care setting with spinal symptoms or concerns.						
Demonstrates familiarity with common surgical procedures and indications for surgery or specialist referral.						
Demonstrates familiarity with the indications and contraindications for medications commonly prescribed for spinal conditions and the ability to prescribe a subset of medications.						
Other ____						
Other ____						
Other ____						
Other ____						
Other ____						

Appendix 2 Implementation Checklist Samples. Reproduced with permission from World Spine Care.

What type of spine care is available to the target population?

	Have	Needs little improvement	Needs much improvement	Not present and need
Health promotion and prevention programs				
Self-care spine programs (public health education for self-care directed by an evidence-based care pathway)				
Community care programs (Community prevention, public health education directed by an evidence-based care pathway)				
Primary care (primary spine program, health coaching)				
Secondary care (coordinated, specialist spine care)				
Tertiary care (advanced, multi-disciplinary, team-based spine care)				

What portion of the population has these needs? And what access to care do they have?

	Estimated % of target population have this need	What portion has access to care for this need?
Preventive health education for spinal conditions	%	%
Non-specific spine pain, functional limitations	%	%
Neurological spinal conditions	%	%
Structural spinal deformity	%	%
Severe or systemic spine pathology	%	%

Case for change

- Location (county or region)
- Target population (all? Special group? (aged/elders, workers, sports, youth, women, disabled, etc)
- Type of health care delivery system?
- What are current resources available?
- What are the perceived spine care goals?

Examples of Goals

- Reduce morbidity: Reduce incidence of acute osteoporotic fractures within the population. Reduce incidence of acute spine injury from falls or accidents.
- Reducing health inequality: Narrow the gap in spine-related disability indifferent groups within the population.
- Improving outcomes: Reduce work-related disability or absenteeism due to back pain.
- Making health care safer: Reduce the number of patients addicted to opioids related to spine pain treatment.

Steering Committee: A list of stakeholders to consider including

	Decision maker, or can contribute to program success?	Affected by program?	If 'yes' to either question, consider including. Name of person or contact
Local leaders			
National leaders			
Local thought leaders			
Patient representatives/advocates			
Government agents			
Staff from public health program			
Local religious leaders			
Health-care organization representatives			
Regulatory body representatives			
Health workers			
Ministry of health leaders			
Funding/payer representatives			
Other ___________________			
Other ___________________			
Other ___________________			

Intervention strategies and tools to consider

Educational strategies aimed at health professions programs (educational materials, courses, meetings)
Educational strategies aimed at practicing health professionals
Audit and feedback aimed at specific practice behaviors
Use of technology (e.g., reminders to providers, reminders to patients, include pathway in electronic medical records)
Modify tasks of health care workers (e.g., expand or modify)
Mass media campaigns
Implement total quality management
Financial interventions

Barriers to Model of Care Implementation

Type	
Financial	Patient and family unable to afford care Financial disincentives, lack of reimbursement to providers
Transportation	Lack of transportation to health care facility Heavy urban traffic
Health system	Lack of emergency services Inadequate patient records system
Resources	Inadequate time and resources to implement High staff and leadership turn over Organizational constraints, lack of time
Relationships	Lack of interest and commitment from leadership Patient expectations do not match Providers use of routine care is out of date, not evidence-based Opposition from opinion leaders or advocacy groups
Education	Patient language barriers Patient low health literacy Providers not skilled in evidence-based practice skills Health care curriculum teaching out of date practices

Facilitators to Model of Care Implementation

Type	
Financial	Improve/reform funding systems
Transportation	Strengthen local, low cost transportation system to access care
Health system	Strengthen accountability Develop strong primary care system Strategies to improve continuity of care Integrate programs and providers into national health systems
Policy	Health education to the public Knowledge about how to navigate health system Outreach programs to underserved people National policies to improve systems to support spine care Strengthen promotion, prevention, and public health Policies to support new model
Communication	Empower communities to engage in health care decisions and development Improve coordination between providers and levels of care Perception that model was developed within organization Evidence showing model has advantages over alternatives
Relationships	Stakeholder involvement with planning Strong networks help increase collaboration One or more champions to support the model Leadership (in health care or community
Education	Improved training for health care workers and health care professionals
Resources	Incentives to transition to new model Low costs to implement Resources for implementation Realistic timeline and time allowed to implement
Technology	Improved information systems Electronic medical records
Shared values	Organizational cultures that share values Providers value model of care principles