

*Introduction: The Value in Musculoskeletal Care*  
*Editorial/Introduction to Summary and Recommendations*

Musculoskeletal diseases can be lifelong and affect and be affected by other health conditions. With their resulting pain and impact on loss of function and mobility, they can affect efforts to control hypertension, diabetes, obesity, and other conditions. They can impact the ability to maximize educational opportunities, earn a living, care for family, and participate in or contribute to other activities associated with a fulfilling life. Tremendous advances have been made in understanding the etiology and identifying treatment options for the vast majority of these conditions. However, understanding and defining the value of these various treatment options to patients, their families, and society are areas that have not been fully examined. Health care reform has drawn our attention to this gaping hole in our knowledge and provides us with an opportunity to look for answers and contribute to the debate that is underway to ensure that resources are allocated to best meet patient needs.

An interdisciplinary Summit ([www.usbj.org/rd/?MSKSummit](http://www.usbj.org/rd/?MSKSummit)) organized by the US Bone and Joint Initiative

and led by co-chairs Gunnar Andersson, MD, PhD, Steve Gnatz, MD, MHA, and David Pisetsky, MD, PhD, sought to define the value of musculoskeletal care. Although the value of such care would seem to be intuitive, describing and measuring that value is extremely complex. Foremost in the discussion was the recognition that any description of value should be framed in terms of outcomes prioritized by patients, rather than tolling costs of process measures. This Summit gathered representatives of more than 50 organizations and from government, payers, and industry and included 128 participants. The following Summary and Recommendations are a result of discussion during the Summit. These recommendations will now serve as a starting point for multidisciplinary action plans to improve the value of musculoskeletal conditions in the United States. These action plans will be intended to improve measurement of the treatment of musculoskeletal conditions, enhance public and professional education in this area, increase research, improve prevention and treatment measures, and to propose solutions for improving musculoskeletal health care and thus the quality of life for all Americans.

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# The Value in Musculoskeletal Care: Summary and Recommendations

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## INTRODUCTION

This document summarizes key issues and recommendations discussed at the Summit on *The Value in Musculoskeletal Care*, sponsored by the United States Bone and Joint Initiative (USBJI). This Summit, held in Washington, D.C., on October 12-13, 2011, was attended by 128 invited representatives of the musculoskeletal community, including patients, health care professionals, payers, industry and government.

This Summary and Recommendations document has been approved by the USBJI Board. USBJI members and other organizations concerned with musculoskeletal health are invited to consider this statement in light of their own value propositions related to patient care.

To advance the goal of increasing value in musculoskeletal care, the USBJI Board has formed a task force to develop plans and implement strategies for the recommendations described in this statement and to collaborate with member organizations. Moving forward, it is anticipated that the recommendations contained in this document will become a "road map" for further action by the USBJI and its member organizations.

Member organizations are therefore encouraged to consider strategic plans for collaborative implementation of these recommendations, in concert with the USBJI and other groups.

## BACKGROUND

Musculoskeletal disorders are chronic, disabling, and costly. They affect people of all ages, cultures, and ethnic groups. These disorders are the leading cause of disability and loss of function, as well as limitation and impairment of activities for people over the age of 18. These conditions affect nearly one in two adults and, among medical conditions, lead to the greatest number of lost workdays and medical bed days in the United States (1). The annual estimated direct and indirect costs of musculoskeletal disease in the USA are \$287 billion and rising (1). Furthermore, the impact of musculoskeletal disease extends broadly in medicine and health care. These conditions can increase the risk for many other diseases and compli-

cate the management and treatment for many serious chronic illnesses including cardiovascular disease, atherosclerosis, diabetes and obesity where an inability to exercise limits efforts at prevention and rehabilitation.

Children may be particularly impacted by the development of musculoskeletal disorders. Ten percent of all persons reporting musculoskeletal diseases are under the age of 18 (1). In some cases, these disorders can be caused by or exacerbated by poor or improper diet, lack of exercise, and the burgeoning problem of obesity. Musculoskeletal conditions first noted in childhood may continue into adulthood and be exacerbated by other changes related to age, sex/gender, culture, race/ethnicity, language health literacy and socioeconomic factors.

As the problem of childhood obesity has grown, musculoskeletal disorders among these children have intensified difficulties in managing their need to exercise and may pre-dispose these children to further musculoskeletal difficulties in adulthood.

As the population ages, with nearly 1 in 5 Americans over the age of 65 years by 2030 (2), the burden of musculoskeletal disease will only continue to increase. This demographic trend makes it essential to establish the value of musculoskeletal care and to ensure access to care for all patients. In this context, musculoskeletal care confers benefits to the overall health of the population. It is essential to consider more fully the impact of this care both in terms of patient-centered outcomes as well as cost-effectiveness.

At present, the per-capita health care costs in the U.S. far exceed those of most developed countries and are rising at a rate that cannot be sustained in view of the overall economic state of the country(3). Despite the costs of U.S. health care, it ranked last across a range of measures of health care in a comparison of 19 industrialized countries (4). Concerns over the value of care in face of its high costs are thus an important driving force for health care reform, with proposed changes in care delivery intended to reduce costs significantly while maintaining or even increasing value. The musculoskeletal community recognizes the large economic impact of musculoskeletal disease on health care in this country and the need to opti-

mize patient-centered outcomes. To meet the goal of increasing value in health care, this community is committed to an active role in all efforts for system reform.

Since the financing and delivery of health care in the U.S. will undoubtedly change, USBJI organized and designed the 2011 Musculoskeletal Summit to address the issue of "The Value in Musculoskeletal Care", focus on defining value, identify ways to measure the value of the care provided, and develop strategies to optimize future musculoskeletal care.

To meet the challenges of increasing value in health care, the participants focused on ways to strengthen the musculoskeletal health care community's ability to develop and to implement sound methodologies to establish optimal delivery of care and improve value to all stakeholders, most importantly patients.

## DEFINITION

Value in musculoskeletal care is a measure of the outcome of all health care services that are delivered to maximize a person's function and participation in society while minimizing impairments, pain and other symptoms. The determination of value therefore must consider the balance of desirable and accurately measurable patient-centered outcomes against the risk/benefit ratio and cost of care over the patient's entire life span.

## MEASUREMENT

Value in health care can be evaluated in terms of quality patient outcomes achieved per dollar expended over the full cycle of care, including interventions from all providers. In this assessment, self-reported, quality patient-centered outcomes are an important element in determining value to address directly the needs and goals of patients. These considerations suggest that, to promote better outcomes for patients, cost-effectiveness models should incorporate measures of quality and patient-centered outcomes and not simply focus on process measures and reducing the cost of providing health care. While innovation may be a key approach to improve value, current valuation models are based on process costs; focus on process costs may limit innovation, constrain improvement in patient outcomes and contribute to spiraling health care costs.

To assess quality and value of musculoskeletal care, patient-centered measurement instruments of both musculoskeletal and overall health status are required. These measures must include well-defined indices of musculoskeletal function as well as overall health status. Furthermore, these measures must be well validated and readily performed in the clinical setting. While these instruments can be used by themselves, they can also be used in conjunction with other more disease-specific measures to facilitate comparisons among conditions and interventions and develop a more comprehensive assessment of the

value of musculoskeletal care among the full range of conditions treated.

To provide the most incisive information for determining health status, chosen instruments should have features to allow sharing and standardized communication across all providers and disciplines within musculoskeletal care, as well as providers in other health care specialties. Importantly, utilization of these instruments in routine care settings should be efficient, fast, and non-disruptive to the patient, health care interaction and provider. Specialty-specific measurements can be added upon the core measures to capture additional information.

Determination of quality patient outcome, which is critical to the assessment of value, requires continued longitudinal monitoring through the utilization of measurement instruments in routine clinical encounters as well as in registries and prospective research studies.

At present, the ability to determine the true total cost associated with disease prevention and management is limited, but there is a need for the development of accurate and reliable measurements of real-world costs for both traditional and alternative care options. Despite limitations in this process, accurate assessment of costs and quality patient outcomes achieved during a full cycle of care for individual patients and entire populations will contribute to the determination of best practices. This information in turn will allow development of strategies to increase quality and maximize the balance of patient outcomes with resource utilization. Such studies must include direct expenses and resource utilization as well as indirect costs, e.g., lost wages, decreased productivity, lost educational opportunities, and caregiver burden.

Programs must be developed that demonstrate the value of quality patient care across the spectrum of musculoskeletal conditions, across the continuum of care and over the life span. Such programs must specify the expected outcomes and costs for treatment of musculoskeletal conditions. However, these programs must also recognize potential differences in outcome based on age, sex/gender, race/ethnicity, socioeconomic status, education and other factors.

## ADVOCACY

Garnering support to accomplish the above goals will require significant advocacy activity and the public dissemination of accurate and reliable information to facilitate decision-making on resource allocation. Musculoskeletal community stakeholders, including patients, health care professionals, academia, industry and payers must therefore take a very active role in educating the public, health policy makers, research institutions and regulatory bodies at the local, state and national levels. In addition, stakeholders must be able to interact with the wide variety of individuals and organizations that will play a critical role as health care reform proceeds. Key messages on value must therefore be clear and decisive. They must be solidly based on quality patient outcomes data, as well as accurate

estimates of costs and quality. Among areas for advocacy are the following issues:

Organizations that comprise the musculoskeletal community should establish an integrated information system and research networks to provide up-to-date data on outcomes to improve patient care and educate providers. This effort should incorporate a common set of outcome measures suitable for use in registries that may address concurrent disease-specific issues.

The academic and research community, along with other stakeholders, should work to correct the current imbalance between the extent of funding for research directed to the musculoskeletal diseases and the large societal burden of these conditions.

The USBJI should encourage the Centers for Disease Control (CDC) to increase its focus on monitoring the burden of musculoskeletal disease and developing evidence-based prevention programs, working with the musculoskeletal community.

Research should address programs of integrated care focused on patient outcomes that maximize patient function, longevity and societal role, address health care disparities, assess the impact of musculoskeletal conditions on other chronic health conditions, and involve the prospective study of outcome and value measurements.

Training programs for all health care providers should improve the knowledge, skills and attitudes of all professionals in the diagnosis and management of musculoskeletal conditions. At present, many graduates report a deficit of knowledge of musculoskeletal conditions and competence in patient evaluation and treatment, including performance of the musculoskeletal physical examination.

Academic institutions and other health care organizations should develop a vertically-oriented model that encourages a collaborative and interdisciplinary approach to patient care, providing more integration and better outcomes than current models.

New models for health care should be flexible and adaptable as demographics shift, especially for under-served populations and groups susceptible to certain musculoskeletal conditions and their attendant co-morbidities.

The workforce for musculoskeletal care should expand across all health care disciplines to meet the demands of the population. Shortages in the pediatric workforce are even more severe than those for the adult population in the area of musculoskeletal care.

## THE ROLE OF PROFESSIONAL ORGANIZATIONS

Musculoskeletal specialty professional organizations and patient-centered voluntary health organizations play critical roles in efforts to increase the value of musculoskeletal care. These groups should be encouraged to incorporate the value discussion in their advocacy efforts to government leaders at all levels. The following recommendations reflect the discussions at the Summit:

Organizations should work collaboratively to increase knowledge about musculoskeletal conditions among health care providers, patients and families in order to provide the highest value of care to individuals with – or at risk for – musculoskeletal conditions.

Organizations in conjunction with USBJI should identify existing patient-centered instruments and develop novel ones to measure quality and value and encourage their routine use. Furthermore, these organizations should encourage prospective research to monitor, analyze and propose enhancements to those instruments.

Organizations through the USBJI or independently should develop multi-disciplinary, longitudinal care continuum models for musculoskeletal diseases and conditions. These organizations should engage “medical home” and other providers in the development and dissemination of optimal musculoskeletal care models, taking into consideration the impact of musculoskeletal disease on other chronic health conditions; inform their members of evolving care models and prepare them to be leaders of innovation in their communities; promote prevention and value strategies across disciplines; and foster a culture of professional collaboration across providers focused on patient-centered functional outcomes.

Organizations should develop and disseminate a common message in advocating for musculoskeletal health and the value of care.

The USBJI and its network of more than 100 patient and health care professional organizations should provide visibility for patients with musculoskeletal conditions without a patient advocacy group. Such conditions often suffer from a lack of knowledge about diagnosis and management within the medical community, impeding timely diagnosis and implementation of care.

## CONCLUSIONS

The USBJI strongly believes that significant improvements in the health care system will result from increasing the awareness of the personal and societal burden of musculoskeletal diseases in the population by establishing the value and cost-effectiveness of high quality, interdisciplinary musculoskeletal care through well-validated instruments. These proposed changes should meet several important goals:

- Redirect resources to control costs in the short and long-term;
- Fund innovative clinical, basic science, and translational research to an extent commensurate with the health care burden of musculoskeletal disease;
- Develop and implement more effective multidisciplinary programs for prevention, treatment and rehabilitation to decrease current and future costs;
- Improve outcomes and reduce costs through integrated systems of care;
- Improve quality of life by enhancing the general health of all people.

It is anticipated that, by following the recommendations contained in this document, the USBJI (and its member

organizations) will be at the forefront of effective and efficient musculoskeletal care.

2/2/12 – Approved by the USBJI Board.

#### **APPENDIX. SUPPLEMENTARY DATA**

Supplementary data associated with this article can be found, in the online version, at [10.1016/j.semarthrit.2012.02.007](https://doi.org/10.1016/j.semarthrit.2012.02.007).

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