The Bone and Joint Decade (BJD) Initiative: How Did Kuwait Perform?

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Abstract

Background: The World Health Organization proclaimed the period between 2000 and 2010 as the Bone and Joint Decade (BJD). The BJD initiative set out to raise awareness regarding increasing incidence of musculoskeletal (MSK) conditions. The objective of this study was to assess the degree to which the BJD goals were met in Kuwait.

Methods: A gap analysis methodology was used to identify differences between the ideal state, defined as achieving the BJD goals, and the current state, defined as the extent to which BJD goals were achieved.

Results: Our gap analysis indicated that the majority of the BJD targets were not met in Kuwait; however, given the rising assumed incidence and prevalence of MSK disorders in Kuwait, it is critical to outline mechanisms for moving forward.

Conclusions: The BJD goals are reachable in Kuwait. Attaining them requires a strong and sustainable commitment at many levels of government, provider organizations and the research community.

Introduction

The World Health Organization (WHO) proclaimed the period between the years 2000 and 2010 as the Bone and Joint Decade (BJD) (BJDonline 2011). When the WHO launched this 10-year global initiative, the prevailing policy purpose was to urge governments around the world to more fully address the mounting concerns regarding musculoskeletal (MSK) conditions among populations and to seek ways to reduce the social, financial and societal burden associated with chronic and disabling conditions. Musculoskeletal disorders primarily affect bone and joints and include (but are not limited to) conditions such as arthritis, chronic back pain and traumatic injuries. These types of conditions are a leading cause of pain and disability, have tremendous impact on individuals, their families and society in general (WHO 2003), and are one of the leading variables that contribute to the global burden of disease (Brooks 2006).

The overarching public health objective of the BJD initiative, which was signed by 37 countries, was to improve the lives of people living with MSK conditions and to advance the understanding and treatment of MSK disorders through prevention, education and research. During the BJD, annual global conferences generally concluded that progress was being made toward the BJD goals. According to Choong and Brooks (2012), this decade was marked with significant advances in healthcare delivery, ranging from improved surgical techniques and advances in bioengineering to rapid introduction of biologics for rheumatoid arthritis. While assertions have been made that progress toward the BJD goals has been achieved, it is not clear that all signatory countries have achieved these desired outcomes, or even if they were in the process of identifying, collecting and analyzing relevant data. Now that the BJD has ended, it may be instructive to assess the extent to which BJD goals have, or have not, been met at the country-level across the constellation of signatory nations.

The country of Kuwait represents an interesting policy case study because while rapid social and economic development occurred during the decade between 2000 and 2010, there were also growing research-based and widespread assumptions that MSK conditions were having an increasing effect on the health and well-being of the population. For instance, Al-Awadhi et al. (2004) reported functional disabilities in almost 40% of adults living in Kuwait, with females experiencing more disability than males. Several other studies have reported that MSK disorders are common occupational health problems across Kuwait, ultimately leading to work disabilities that decrease productivity and consume excessive healthcare resources. Alrowayeh et al. (2010) demonstrated that approximately 48% of a sample of physical therapists working in Kuwait had reported a work-related MSK injury during a 12-month period. Akrouf et al. (2010) conducted a cross-sectional study of 750 bank officers in Kuwait that revealed 80% of the participants had suffered from at least one incident of work-related MSK disorders in the previous year. Al-Rayes et al. (2012) investigated 397 dentists working in Kuwait and found that almost 90% of the sample had complained of work-related MSK disorders during the past year. These studies emphasize the scope of MSK disorders in Kuwait and suggest an increase in the incidence and prevalence of MSK disorders within the country.

The effect of growing rates of MSK disorders has also produced negative socio-economic impacts (Akrouf et al. 2010; Al-Rayes et al. 2012; Alrowayeh et al. 2010). However, surveillance and/or epidemiological data about MSK conditions are mostly unavailable, and there is little publicly accessible regional information regarding the impact of the impairments, activity limitations and participation restrictions associated with MSK conditions. The primary objective of this study was to conduct a gap analysis to assess the extent to which Kuwait achieved the BJD by identifying the difference between the current status and desired outcomes. Ethics approval for this study was obtained through Kuwait University.

Methods

The gap analysis methodological framework has been used successfully by other researchers (Al-Enezi 2012; Carollo et al. 2012; Conklin and Liotta 2005; Fryer et al. 2010; Rootman and Ronson 2005). The four phases of a gap analysis methodology are described below.

Phase 1: Articulate a Desired Future State

The first step in a gap analysis is to identify the desired status, or the best case scenario. In this study, the desired state was Kuwait achieving the BJD goals. For example, as summarized in Table 1, the first goal of the BJD was to facilitate national and international consensus on strategies for prevention of the major musculoskeletal disorders. As such, this goal served as the definition of the desired future status. This process was used to identify the desired state across all five BJD goals.

Table 1. Overall goals of the bone and joint decade (BJD)

Goal #1	Promote prevention of MSK disorders and empower patients through education campaigns.
Goal #2	Advance research in prevention, diagnosis and treatment of MSK disorders.
Goal #3	Improve diagnosis and treatment of MSK disorders.
Goal #4	Influence the medical schools' training programs to include at least six months of training on MSK disorders, with the aim to improve the general practitioner diagnostic skills and institute similar programs for other medical groups.
Goal #5	Reduce the burden of MSK disorders.

MSK = musculoskeletal disorders.

Phase 2: Describe the Current State

The process in the second phase of this gap analysis was to more fully describe the current status according to each of the specific BJD goals. In this phase, we assessed the extent to which the five BJD goals were met by triangulating outcomes from a review of the literature and through a series of key informant interviews.

A review of the peer-reviewed literature was conducted in this phase, using the following search terms, with limits set of English language and year of publication (1998 to 2012): *Kuwait, musculoskeletal, musculoskeletal disorders, diagnosis, treatment, bone and joint decade, chronic disease, disability, dysfunction, impairment, activity limitation, participation restriction, arthritis, muscle and bone disease, patient education, prevention, medical training*, and *burden of disease*. A broad search was conducted to include all research published within that time period. The resources our search identified were categorized according to the five BJD goals.

Also within this phase, a series of qualitative key informant interviews were conducted to assess perceptions and opinions regarding the extent to which the BJD objectives had been met. These interviews were conducted with individuals in four broad categories: (1) health professionals, (2) health administrators, (3) government officials, and (4) patient advocacy groups. In the first category, health professionals ranging from physicians to physical therapists and nurses were included in the interview process to gain a perspective of MSK conditions from those who work directly in the field. In the second category, health administrators from hospitals and community sectors were included, to access their knowledge and experience from an administrative and operations perspective. In the third category, government officials who occupied senior-level management or consulting positions in the healthcare field at the time of the study were interviewed to gain a global perspective from those working outside the healthcare field. In the final category, the study explored the perspectives of patient advocacy groups in Kuwait. We used a convenience sample strategy in the study, which began by creating a list of 10 potential informants in all categories. Then, a member of the research team telephoned each informant to gauge his or her interest in participating in the study. If the individual expressed an interest, a mutually convenient time for a face-to-face interview was arranged. At the time of the interview, the study purpose was again described and reviewed by the interviewer, written consent was obtained, and participants were asked for permission to audio-record the session. A snowball sampling technique was also employed in order to identify other key informants.

Using this procedure, key informants were interviewed until saturation was reached. For the purposes of this study, the Strauss and Corbin (1990) definition of saturation point was applied. It included two conditions: (1) when no new individuals or groups are identified through the snowball technique, or (2) when no new information obtained from the interviewees alters the data collected to that point. An interview guide was created a priori and included a series of 20 questions to explore each of the five BJD goals (Appendix A available online at http://www.longwoods.com/content/23493*). Interviews were conducted face-to-face in Arabic and then transcribed and translated into English; each interview lasted approximately 30 minutes.

The transcribed interview data were entered into a qualitative data analysis software package (NVivo 2.0®) for systematic coding and content analysis. Content analysis, or qualitative description, has been reported as useful when the description of phenomena is desired (Pope et al. 2000). Identified themes were based on informants' collective perceptions and experiences relevant to the issues being explored in the study. Once the transcripts had been coded, reports were generated so that the research team could analyze the data according to the research objectives.

Phase 3: Examine the Internal and External Issues That Must Be Addressed to Progress from the Current to the Desired Future State

Once the data analysis from the first two phases of the study was complete, the research team was in a position to assess the difference between desired (Phase 1) and actual status (Phase 2). The extent of the difference between the desired and actual state defined the gap. Assessing the difference was accomplished though discussions and debate among the research team and through triangulation of the literature review.

Phase 4: Delineate Strategies and Tactics That Will Ensure the Gap between the Current and Future State Is Narrowed

During this final phase, the research team used the gaps identified from the previous phase as a baseline, and used data sources collected in this study to developed strategies or mechanisms that might minimize the gap. This was accomplished through discussion and debates among the research team.

Results

A total of 1,057 articles were found. For the purpose of this study, articles that were included focused on musculoskeletal disorders, including obesity, diabetes, joint pains, and general health research concerned with musculoskeletal injuries. After reading through article titles and abstracts, we selected 77 articles as relevant to the BJD goals. The full results of the literature review and the key informant interviews will not be fully outlined here; however, the full study report can be accessed online at http://www.fsrikuwait.org.

A total of 14 study participants (seven health professionals, four health administrators, two government officials and one member of a patient advocacy group) participated in Phase 2 of this study. All informants who agreed to participate also agreed to have the interview audio-recorded. Participants' years of work experience in their field ranged from two months to over 30 years. Initial findings indicated that 79% (11 out of 14) of participants were not aware of the BJD initiative, while the others had found out about it through the Internet, their current workplace or by participation on a sports team.

Overall, given the goals of BJD (Phase 1: The desired future state) and the current status of the goals in Kuwait (Phase 2: The current state), we have assessed that there are important gaps (Table 2). There were three areas, or gaps, in particular that the research team identify as noteworthy: (1) advocacy for prevention of MSK disorders, (2) consistent clinical practice guidelines to address MSK disorders, and (3) epidemiological and clinical research to drive practice. Moreover, from a structural perspective, there appears to be little or no infrastructure designed to address BJD goals, either during the years 2000 to 2010 or at the time this research was conducted.

* Appendix A is also included at the end of this document

Table 2. Outline of gap between the ideal and current state

Ideal state	Current state in Kuwait
Goal #1: Promote Prevention of MSK disorders and empower patients through education campaigns.	1. Campaigns to increase public awareness were created but were short-lived and did not have appear to have an impact on public health. 2. There is no evidence of a National Action Network (NAN) that would empower the work of patient or patient advocacy groups. There is limited support for MSK educational campaigns and limited resources for printed materials. 3. There is no national consensus on strategies for prevention of the major MSK disorders. 4. There are few if any guidelines for patients with an MSK condition to enable them to participate actively in their own care and to manage their MSK disorders more effectively.
Goal #2: Advance research in prevention, diagnosis and treatment of MSK disorders.	Little funding is available for research (especially for MSK conditions), and there are barriers to application to the funding process. There appears to be minimal depth and breadth of clinical and epidemiological researchers within the country who are interested in and/or have dedicated time for conducting research.
Goal #3: Improve diagnosis and treatment of MSK disorders.	There has been an overall improvement in approaches to diagnosis and treatment of MSK disorders. However, the extent to which multidisciplinary heath teams exist in clinical practice is unclear, and the level of access to effective diagnostics and treatment approaches in unclear too.
Goal #4: Influence the medical schools' training programs to include at least six months of training on MSK disorders with the aim to improve the general practitioner diagnostic skills and accurate referrals and institute similar programs for other medical groups.	There is no clear evidence that this goal has been achieved. However, patient safety is a growing area of research and practice in Kuwait.
Goal #5: Reduce the burden of MSK disorders.	The BJD target within the goals was to reduce by 25% expected osteoporosis fractures, joint destruction in joint disease, severe injuries and indirect costs for spinal disorders. There are no available data to substantiate these targets, and key informants suggested that it is not clear at all if Kuwait has achieved these targets, based on lack of data and research.

MSK = musculoskeletal disorders

Our results showed that a number of issues are preventing Kuwait from progressing toward the BJD targets. However, a critical overarching issue was a lack of national strategy, or a national representative task force, to assume responsibility for the BJD initiative. Many factors contributed to this absence of representation, ranging from lack of interest among the community to lack of a champion within government who was willing to assume the lead on the initiative. Our results indicate that some attempts were made to address increasing advocacy for MSK disorders, but it is not clear that they were directly related to the BJD initiative, and ultimate outcomes were judged to be minimal. Since many more Kuwaitis have trained abroad and returned to practice in Kuwait in the last decade, there have been important advances related to local medical and health systems. However, the treatment approaches related to MSK disorders are inconsistent. This may be related to many variables, including different training experiences, hesitation to change the status quo, and lack of a national approach, including incentives, or repercussions for lack of adherence to protocols.

Treatments for MSK disorders are most likely to be effective when a multidisciplinary team approach is used, and growing evidence suggests that the combined effort of physical therapists and orthopedic surgeons can reduce the physician burden of care and improve outcomes as therapists educate patients about effective management strategies. However, multidisciplinary approaches are not common in Kuwait, and therefore advances in integrating these teams will be a critical step forward. Although there is an increasing body of research conducted in Kuwait, the pace of epidemiological or clinical research may not be sufficient to direct service provision. Injuries of the spine, joint diseases due to obesity, and foot and arm injuries were among the

most common clinical priorities mentioned by key informants. However, the extent to which the goal of reducing the burden of MSK disorders has been addressed is not clear, owing to a lack of national data.

Discussion

The achievements made in the BJD in MSK healthcare during the period 2000–2010 have been reported extensively in the BJD 10-year report, which highlighted country-specific goals and activities from 26 participating National Action Networks (BJDonline 2011). These countries have centred their activities on creating awareness campaigns and on public education across all age groups, adding arthritis and other MSK issues to national health policies, hosting related BJD conferences, and increasing funding and awareness for projects related to the BJD goals. At the 13-year mark of the BJD, there is still a scarcity of statistical data for Kuwait's progress published in the literature. This made it difficult to assess the BJD's impact. For example, information on Kuwait briefly describes the orthopedic meeting in February 2000, followed by a 20-minute presentation on the Kuwait TV news, with the BJD highlighted during the scientific meeting. The link lists one organization as part of the BDJ: the Kuwait League against Rheumatism and Autoimmune Disease.

Given the unique nature of this gap analysis, it is difficult to compare our findings with those of other nations, as no such data exist in Kuwait. Although the majority of participants in this study were health professionals and health administrators, most were not aware of the BJD initiative or its goals. Study participants believed that MSK campaigns were short-lived in Kuwait and felt there was a lack of funding for research projects geared toward MSK and chronic pain. This funding is substantiated by the limited amount of research found in Kuwait. Public education strategies were judged as ineffective, and participants spoke of the challenges they faced while trying to reach out to the Kuwaiti population. Based on our data and previous literature, the increase of MSK disorders across age groups and the lack of adequate training in graduate programs will significantly increase the demand for health services.

Based on our gap analysis, Kuwait did not meet the BJD targets. However, Kuwait has undergone massive infrastructure and cultural development in the last quarter century, and it may be that if the BJD were to begin now, the infrastructure would be much more accepting of gathering momentum to meet the targets. As an example, Al-Razi hospital has the largest orthopedic facility in the country and now has an orthopedic surgeon whose full-time responsibility is to provide and orchestrate clinical education for the hospital. Moreover, a decade ago, the focus of the Ministry of Health was heavily weighted toward acute medical interventions, but as with many countries around the world, there has been a migration of ideology to be more accepting of the continuum of care, which includes the prevention of MSK disorders.

In discussions and debates related to the identified gap, three possible strategies and tactics were discussed that could help reduce the gap in the following priority areas. First, advocacy for MSK disorders is pivotal. In our opinion, and based on our research, the two specific ways to increase this advocacy are the creation of patient coalitions and partnerships between government and private sectors to seek consistent media attention. Second, the development of clinical practice guidelines that are feasible and implementable in Kuwait represents an opportunity to streamline the delivery of care and to manage the expectations of the population. These guidelines need to be evidence-based, and adherence would need to be monitored. The most effective way to create guidelines would be to begin with the clinical conditions that are most frequent. Third, more epidemiological and clinical research is needed in Kuwait to assess the prevalence of MSK disorders and track the progress of the delivery of care. Improving access to research funding, increasing the standard of research training at the student level, introducing community-based participatory research, opening access to available data sources, and creation of national research steering committees will be critical steps forward to advancing research on MSK disorders in Kuwait.

Conclusion

Overall, we assessed that Kuwait has not met the BJD goals. However, there was some support for the notion that Kuwait would be in a much better position to address these goals and objectives if the BJD were to begin now. In particular, external support should be sought to implement programs such as virtual train-the-trainer programs with mentors in Kuwait, since such global programs are rare in this country. Despite the fact that the BJD goals were not met, there is large scope to continue the quest to reduce the burden of MSK disorders, irrespective of the termination of the BJD. Working collaboratively to achieve these goals among multiple stakeholders is a challenge that Kuwait must face if the country it is to address the epidemic of MSK disorders.

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