

# Integrative Pain Management Centers in the Military: The Challenges

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**ABSTRACT** Objectives: Biomedicine and complementary and alternative medicine are forming new relationships, under the rubric of integrative medicine. Recently, the military has adopted integrative medicine as the model for pain management. An evaluation was conducted on an integrative model for pain management at a major Army medical center to determine the distinct challenges that were encountered during the early stages of this integrative program. Methods: The design is a case study evaluation. Qualitative data were analyzed to determine whether the outcomes in terms of processes were in harmony with the program's mission. Study participants were patients (34), referring providers (25), program staff (20), administrators (18), and related medical center leadership (6). Results: The study uncovered the following challenges: misaligned culture and mission, resources, the valuing of services (relative value units), systemic transition, patient throughput, and stigma associated with the focus and location of the program in a psychology department. Conclusions: These challenges prevented the program from fully achieving its mission and potential. Although integrative medicine might be the appropriate model for pain management in the military, the structural and process elements to bring it about are not yet in place or fully understood.

## INTRODUCTION

Integrative medicine (IM), also called integrative health care (IHC),<sup>1</sup> has definitions varying from a new form of medicine that is patient-centered and holistic to a new relationship between biomedicine (often called allopathic medicine or mainstream medicine) and complementary and alternative medicine (CAM).<sup>2</sup> Boon et al<sup>3</sup> define integrative health care as the “interdisciplinary, nonhierarchical blending of both CAM and conventional medicine that employs a collaborative team approach; guided by consensus building, mutual respect, and a shared vision of health; through a partnership of patient and practitioners to treat the whole person; by synergistically combining therapies and services in a manner that exceeds the collective effect of the individual practice.”

Many CAM professions, such as chiropractic, are forming new partnerships with biomedicine, particularly in the U.S. Military Health System,<sup>4,5</sup> where CAM professions are now integrated with biomedicine and nursing in hospital settings.<sup>6,7</sup>

Although hospital-based IM is now widespread in the United States, the Services have developed unique models of IM with different guiding principles and strategies for integration.<sup>8,9</sup>

### Study Background

We evaluated a biopsychosocial model for pain management at a regional Army Medical Center and the challenges it faced. The Center was located near a major military installa-

tion and Veterans Health Administration facility and opened in 2008, serving more than 260,000 active duty combat troops, dependents, and veterans. This article reports on two elements of the Center: the administrative structure and the process findings. The Integrative Pain Management Center (IPMC) was established to treat chronic pain patients with symptoms of the trauma spectrum, including comorbid symptoms such as post-traumatic anxiety, depression, cognitive difficulty, and substance abuse. From its inception, this IPMC was designed to provide patient-centered IM by including patients in decision making about their care. The program originated in the Behavioral Medicine Department, so all of the program providers were knowledgeable about the psychosocial factors that may be involved in perpetuation of chronic pain. The core faculty underwent an initial 40-hour intensive team training to establish a common culture regarding mind–body interactions and to build a team approach to patient management. The program integrated pain psychology; medication management; patient education on behavior, coping, and lifestyle change; and evidence-based CAM services, including acupuncture, chiropractic, and medical massage.

Our program evaluation was underway when the Army Surgeon General merged the IPMC with an existing interventional pain program to create a single portal for chronic pain management. Because our interest in the program was largely based on the original, unique, approach, our evaluation focused on the original program.

The study received Institutional Review Board (IRB) approvals from the military site and the RAND Corporation and subsequent second-level review from the Human Research Protections Office at Medical Research and Materiel Command, Fort Detrick, MD. All research projects must go through an IRB for the protection of Human Subjects. The study protocol was submitted to the Tripler Army Medical Center's IRB for Human Subjects' Research review and approval before the

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enrollment of any participants. IRB approval was granted and second-level review and approval were obtained from the U.S. Army Medical Research and Materiel Command’s Human Research Protections Office. All interviews, whether of staff members or of patients, were treated as confidential and subject to Health Insurance Portability and Accountability Act (HIPAA) protections. The digital recordings and transcripts are maintained in a HIPAA-secure environment.

**METHODS**

**Design**

The evaluation was based on the Centers for Disease Control steps and standards framework.<sup>10</sup> We also drew on the evaluation framework proposed by Donabedian, which focuses on three major elements: structure, process, and outcomes.<sup>11</sup> This article reports the structure and process findings. Structure describes the stable structures around which care is organized. Process refers to the steps involved in care delivery. Understanding care processes necessitates talking with those who are on the delivery and receiving ends of these processes—the stakeholders. In this study, stakeholders were individuals at the medical center who were either directly involved in or related to the IPMC. This study also used case study methodology.<sup>12</sup>

**Sample**

The IPMC included five distinct stakeholder groups: patients, referring providers, clinic health providers, administrators, and military leadership (Table I). With the help of internal staff and through review of organizational charts, we identified interview subjects and then used a snowball sampling approach, asking interviewees to identify others to contact. Over 2 week-long site visits, we interviewed clinic providers and staff (*N* = 20), clinic administrators (*N* = 18), referring providers (*N* = 25), related medical center leadership (*N* = 6), and a convenience sample of patients (*N* = 34).

**Data Collection**

Two researchers conducted each interview, using semistructured questionnaires tailored for each stakeholder group. One

researcher conducted the interview and the second took notes and documented observations. The analysis included interview and observation notes, audio recordings of the interviews, and debriefing notes which are analytical reflections of the interview team captured immediately after the interview.

Structural data were collected from documents supplied by the IPMC founders and leadership and through discussion with key informants involved in the creation and operation of the unit. Data on the physical environment (room layout, location, decor) were also collected through observation.

Qualitative data on process were collected through interviews with stakeholders. Information on logistical issues such as privacy, waiting room, and space resourcing, and on processes and systems not described in administrative data, was collected by observation.

**Analysis**

Drawing from rapid ethnographic methods,<sup>13</sup> we conducted interviewer debriefing sessions after each respondent interview. To ensure the rigor of the data collection and to preserve data objectivity, we employed the qualitative research method of triangulation.<sup>14</sup> Data triangulation involves using information from different sources to increase a study’s validity. In this study, these sources were organizational documents, patient files, program stakeholders, and the Program Director. We asked the same questions of all respondents to determine areas of agreement as well as areas of divergence. In the debriefing sessions, the interviewer/note taker team would review notes and discuss themes with other research team members. Further triangulation was conducted when common themes and disconfirming instances were shared and generally validated or refuted by the Program Director, organizational documents, and patient files. We collected patient data using a more structured questionnaire than for the other stakeholder groups and analyzed them using the Atlas.ti qualitative text analysis tool.<sup>15</sup> We first collectively chunked data segments based on the interview guide, then developed thematic codes that emerged from the texts in team pile-sorting meetings,<sup>16</sup> and finally applied those codes to the dataset after establishing inter-rater reliability.

The main themes and subthemes are displayed in Table II.

**RESULTS**

**Structure**

*The Program*

As described above in detail, the IPMC was designed to provide IM in a patient-centered paradigm, in which patients actively participated in their plan of care by deciding with their providers on the CAM modality that best met their needs and preferences. Periodic assessments were performed throughout their treatment to support this approach and ensure the best potential outcomes. Helping patients understand the need for these frequent assessments to measure

**TABLE I.** Qualitative Stakeholders, Sample Size, and Characteristics

Stakeholder Type	<i>N</i>	Characteristics
Patients	34	Participants in Clinical Care at IPMC
Referring Providers	25	Referring Providers to the IPMC
Clinic Health Providers	20	Providers and CAM Practitioners in IPMC
Administrators	18	Hospital and IPMC Administrators
Military Leadership	6	Leaders at Program, Hospital, and Installation

**TABLE II.** Themes and Subthemes

Themes	Subthemes
Attitudes Toward CAM	CAM Attitudes CAM Ethics Limits of CAM
Background, Credentials, Training	General Comments on Background, Credentials, Training
Care Model	Patient Provider Relationships Paradigm Features Type of Care
Challenges	Structure Process Interpersonal
Change	Process New Structure Attitudes to Merger Justification for Change Military Directed Location
Delivery of Care	Processes of the Delivery of Care
Education	Patient Providers/Staff
Evaluation Metrics	Metrics Structure Process Interpersonal
History	The Step-by-Step Historical Description of Clinic
Innovation	Innovative, New Approach, Cutting Edge
Leadership	Comments about Director Other Comment
Marketing, Outreach, Visibility	Patient Providers
Organizational Structure/Management	Structure Culture
Patient Demographics	Referring Providers Describing Their Patients
Patient Outcomes	Patient Outcomes
Philosophy, Mission, and Goals	Philosophy of Providers Philosophy of Program Knowledge of Program's Philosophy
Referral	Feedback/Follow-up Referral Process Directed Referrals Referral Type
Replication	Replication
Resources	Finance Equipment Space Location Managerial Efficiencies
Staffing	Staffing/Personnel Type of Staff Provider Staff Administrative Staff Staff Relationships Staff Workload

(continued)

**TABLE II.** Continued

Themes	Subthemes
Treatment	Conditions/Symptoms Treated Range of Modalities Treatment Protocols Medication Issues Type of Treatment Treatment Practice

their progress and reassess treatment plans initially presented a challenge: active duty service members regularly complete assessments with no perceived benefit to themselves; therefore, they resisted this process. Through education, they learned how these results were used by each provider, enabling them to begin to self-assess and identify barriers to their own progress.

**Organization and Resources**

The IPMC Program Director and founder was a staff senior clinical psychologist under the supervision of the Department of Psychology Chief. Reporting to the Director was a non-commissioned officer in charge, who served as the Chief Administrator. The active duty Center staff included an licensed practical nurse, a pain specialist (MD) based in the Department of Surgery, an orofacial specialist (DDS), and a behavioral health specialist who was trained to do patient intakes and to provide the licensed psychologists with case presentations to identify needed services. Additional staff included a civilian pain psychologist, a registered nurse, and a dental technician. This core staff worked with a group of contract CAM providers, comprising a licensed acupuncturist, a chiropractor, and a medical massage therapist. Except for the MDs, whose offices were in their respective practice departments, the personnel were colocated on the same floor, within the same hospital wing.

A significant problem was discovered early on when some CAM providers found they could not document their clinical encounters in the electronic health record system within the Army Medical Command because it did not recognize their provider specialty codes. Although Current Procedural Terminology codes for acupuncturist and medical massage therapists were available and reimbursable, they were not initially assigned within the electronic health record system, resulting in the inability to record clinical encounters and lost revenue to the military treatment facility, until the issue was rectified at the national level 1 year later.

Another issue was the need to advocate for CAM providers to become fully credentialed, consistent with their licensure and scope of practice. The IPMC identified ambiguity in the credentialing language and a need for clear standardization of credentialing for CAM providers across the system.

IPMC leadership by a nonactive duty–nonphysician also proved to be a significant difficulty in a biomedical oriented

hospital environment. Treating trauma-spectrum pain disorders requires the simplest and least invasive pain management approaches possible, and the psychologist directing the Center considered the many contextual factors affecting patients' pain presentation and their appropriate program candidacy and referrals.

Another barrier was the prolonged contracting process for purchase of new equipment and services despite available funding. Delays directly affected provider productivity.

The IPMC received joint Department of Defense/Veterans Health Administration funding for an initial 2-year period. The business case analysis projected the number of anticipated visits and relative value units (RVUs) per year and per quarter. Each month they captured data for all IPMC providers and compared the percentage increase to the cost of a private-sector care purchase. In addition, historical data on corrective surgeries, opioid use, and costly pre-operative imaging were compared with data for an equivalent period during the IPMC's operation, to assess the savings in medical costs related to integrative management of pain. The savings were often called soft money because they represented cost avoidance, rather than revenue generation or other metrics that added funds to the medical center's operating budget. The CAM treatments not captured by RVUs did not contribute to total numbers. The business model was supposed to assign value not only to number of patients and treatments, but also to achieved outcomes; however, the business analysis model described by the key informants could not assign value to outcomes.

#### *Treatment and Care Delivery*

IPMC modalities included evidence-based mind-body approaches; cognitive, stress, and anger management; sleep hygiene education; activity pacing; acupuncture; chiropractic care; and medical massage. The IPMC prioritized empowering patients through education and treatment planning, as evidenced by treatment protocols that included patients in care decision-making and classes in healthy lifestyles and coping with pain.

As part of the IPMC's multidisciplinary care protocol, the patient received an intake consultation with a physician, psychologist, or nurse. If a specific medical question arose, a medical management nurse would see the patient before the physician assessment. For generic pain management, the intake process was often conducted by a nurse or psychologist. After the initial interview, treatment, which included medical and psychological components, was managed by a pain team.

The multidisciplinary approach was further endorsed by colocating CAM and medical providers within one department. Providers took a collaborative approach to patient care by attending weekly multi-disciplinary team meetings where referring and specialist providers outside of the IPMC were invited to discuss treatment approaches and were encouraged

to maintain ongoing communication with IPMC providers through regular telephone calls and email.

#### *Patients*

The IPMC was initially open to active duty service members and veterans with musculoskeletal pain-related conditions, whose pain was often complicated by the presence of comorbid symptoms (e.g., post-traumatic stress, cognitive difficulty, substance abuse). The patients were primarily younger, male, and of varied race and ethnicity, with a range of conditions including fibromyalgia and other rheumatic diseases, headaches of varying etiologies, and neck or back pain.

When the volume of veterans accessing the Center began to displace active duty personnel, the IPMC administration decided to limit veterans' participation.

#### *Process*

In this section, we focus on the difference between structural intent and the actual implementation. The elements described in the following sections identify those things that impose themselves between intent and implementation. Some of these are common in military organizations, some common in hospitals, and some more unique to this actual program.

#### *Culture*

IHC is a cultural perspective in health care delivery characterized by interdisciplinary, nonhierarchical blending of CAM and biomedical care, with collaboration and consensus building through patient/practitioner partnerships).<sup>3</sup> IPMC health care providers were expected to effectively honor the IHC paradigm in their interactions with military patients, family members, and community, requiring IPMC health care providers to be culturally competent in IHC in addition to the Veterans Administration and military cultures, regardless of their prior notions of pain management or their personal philosophies of care. Integrative team training consisting of education on mind-body interactions and team approaches to patient management was implemented at the initiation of the program, followed by annual refresher sessions. The merger of the two pain departments (Surgery and Psychology) resulted in significant communication challenges, given the inherent differences in provider perspectives between hierarchical interventional approaches and the integrative culture. In contrast to the interventional MDs, who often focused on analgesia, CAM providers sought to promote natural healing by correcting underlying pathophysiologic processes and modulating associated symptoms. The operationalization and measurement of the crystallization of these disparate views into a unified approach, despite cultural differences among biomedical providers and CAM providers at IPMC, was not apparent in any documentation or in the day-to-day processes of the IPMC.



### *Mission and Role*

Opinions regarding the mission and role of the Center varied by stakeholder group. IPMC CAM providers, biomedical providers, and referring providers each viewed the program's focus differently. Although considerable consensus existed among Center staff about the mission and philosophy of the clinic, the focus differed between biomedical providers and CAM providers. CAM providers' mission was more often expressed as educating and providing tools to the patient to achieve his/her optimal health, whereas the biomedical providers' mission was focused on restoring the patient to her/his optimal health to return to active duty. The use of analgesics to optimize physical rehabilitation treatments was frequently in conflict with long-term management. One biomedical provider stated that the mission was to, "give the patients the understanding that this was a therapeutic round, not a maintenance program." In contrast, a CAM provider stated that,

"Part of our mission is sort of a change in the culture of pain and so helping [the biomedical providers] know how to help their patients is a big part of it; primary care docs who may have thought they were punting the patient to us . . . to kind of get them out their door, but that's not our philosophy."

CAM providers emphasized empowering the patient to self-manage and transforming the health care system.

### *Resources and Resource Value*

One of the constant challenges the IPMC faced was resourcing. Although the Center had external startup funding, stakeholders believed it insufficient to sustain program growth. Lack of resources was among the more common themes that arose during stakeholder interviews. Stakeholders from outside of the IPMC provider group reported that the IPMC leadership tried to work within the system to get administrative and other needs covered.

The IPMC enlisted Department of Psychology staff to help with scheduling and other administrative needs but found access to supplies was an ongoing difficulty. As the program continued to grow, the need for more resources, including providers and administrative staff, grew as well. The lack of resources resulted in two bottlenecks in access to care—the wait for initial assessment appointments grew longer, and scheduling follow-up appointments encountered increasing delays—one of the program's biggest challenges.

"Lack of equipment . . . not enough providers to book, enough openings in the schedule to book, that's a challenge. Some patients have been waiting two-three months to get into the program and then may have to wait 2-3 months for acupuncture services."

Space was also cited as a key resource issue. The IPMC was consolidating providers from both departments (the previously existing pain management program and interventional pain program) into a smaller space. Following the

merger, equipment needed by the biomedical providers consumed space not previously allocated, which negatively affected the therapeutic environment. For example, the patient waiting area shrunk to less than half the original size, and some CAM provider space became more constricted. Staff became concerned about the well-being and privacy of patients and the ability to provide optimal care.

Adding to the pressure to restrict IPMC space were the RVUs assigned to the treatments the Center provided: a surgical procedure such as a steroid injection generates significantly higher RVUs than cognitive-behavioral therapy or CAM procedures. According to the business case analysis, the IPMC generated savings in the form of fewer presurgical magnetic resonance images, fewer hospitalizations, and surgeries avoided. But in an economic model where medical and surgical care services, as represented by RVUs, are seen as income-generating, such cost avoidance does not make a compelling case. Many providers discussed the need for alternative outcome measures to demonstrate the Center's positive effects. In fact, because the military is a self-insured employer, the focus on RVUs in the economic model, rather than workforce preservation, seemed paradoxical. One IPMC staff member made this point:

"You are going to have to look at different metrics than what it costs to produce . . . if we have an infantry guy who had worked 90% instead of 80% there's no tie to that one way or another. The report card of success needs to be based on outcomes."

This sentiment was felt very strongly:

"Sometimes you have to absorb some of the costs if the outcomes for the patients are better. Right now the [good] outcomes are outweighing the costs."

### *Staff Issues*

Pain program staff reported great work satisfaction. However, the issue of working in a military environment and its unique challenges were often discussed. Because the staff included permanent civilian employees, contractors, and deployable active duty personnel, the employee pool was in flux. This instability posed issues for training and efficiencies within the program, team cohesion and common vision, and disruptions in the continuity of care, and was cited as an ongoing problem.

"We have contractors who come through temporarily. We have people who get deployed. Just part of working for the military. [It would be better] if we had an ongoing [training] program, [to provide] vital information we need to know about functioning in the hospital."

### *Patient Challenges*

The most prevalent patient challenge was access to the Center, attributable to both long wait lists and parking problems.

“What comes to mind first is the access as far as number of patients on the wait list.”

“Patients love the clinic. Most of the ICE [Interactive Customer Evaluation] complaints from that clinic are ‘not able to get in.’”

Physical barriers to access appeared to be the most frustrating patient issue. For patients dealing with chronic pain, the long walks from the parking lot to the hospital often exacerbated their pain; difficulty finding parking increased their stress and sometimes led to agitation.

Another burden for patients was the multiple concurrent treatments, which at times had opposing effects. For example, a medical interventional procedure might numb an area that the acupuncturist was systemically attempting to innervate.

### *Stigma*

The location of the program in the Psychology department, where it was initially developed, posed an issue for some patients for whom treatment in the psychology department conferred the stigma of mental illness.

“[Patients] will ask ‘where are you located?’ ‘Department of psych.’ They [say] ‘what?’ They hang up the phone. I hear patients and they say they’ve come up to the psychology department and they are taken aback a little bit.”

Although the military has worked aggressively to decrease this impression, the location of the program reinforces some of the cultural stigma associated with chronic pain. The idea of seeking treatment for pain rather than just “sucking it up” is contrary to the belief systems and identity of some military service members.

“Especially in the Army we have this thing—you get hurt, you drive on, regardless—you know, suck it up. The whole coping classes and what they are trying to bring to the table is something great because all you do is make yourself much worse when you have a hurt ankle, a hurt back, and you’re not acknowledging that.”

## **DISCUSSION**

The program we described was an innovative attempt to take a biopsychosocial approach to chronic pain management in the military. It assembled a diverse group of CAM providers and attempted to integrate them with military medical practitioners. The Center can point to considerable success and high patient satisfaction. That the IPMC fell somewhat short of its mission is understandable when one looks at the institutional, cultural, and financial challenges. The mission refers to the mission of the IPMC, which was to provide integrative, holistic, patient-centered and largely nonmedication-based care for chronic pain patients, to improve their pain and quality of life. The strongest conclusion is that creating a truly integrative chronic pain program is much more difficult than

it might first appear, and that what seems simple in hindsight is often overlooked in the moment. The lessons learned through this case study may provide guidance for future such efforts. The effort to unite a diverse group of practitioners with disparate philosophies about health and health care should be undertaken only after some key decisions are made and committed to, related to the mission of the team and its unique role within the system. Even then, the effort requires high-level support that is visible and unwavering; ongoing team building and reinforcement of the vision and operational plan; a multi-year commitment to weather the difficulties and correct them over time; reliance on a broader measurement of success than RUVs and that places a premium on patient outcomes, cost avoidance, and return to duty/function; and efficiency of treatment plans and of execution.

## **CONCLUSIONS**

The challenges identified in this study prevented the program from fully achieving its mission and potential. Although integrative medicine might be the appropriate model for pain management in the military, the structural and process elements to bring it about are not yet in place or fully understood. As a newly emerging field Integrative Medicine has not so far established a strong research base. A comprehensive review of the literature by Coulter et al<sup>17</sup> showed that there was some confusion in the literature about whether the studies were truly about IM or about using CAM as adjunct therapy. Khorsan et al<sup>18</sup> in a further study found only 3 randomized controlled trials had been conducted on IM. The most comprehensive study of a hospital-based IM program was conducted by Coulter et al.<sup>19</sup> Again this study demonstrated how difficult it was to create and sustain such a program and this particular program did not survive. This study also adds to the understanding that IM as a hospital-based delivery model is not easy to establish but is unique in that this study is within a military setting where one might expect it would be easier to establish since it was stood up as the model to be implemented for pain management. It is also unique in being the only study of a model established by, and built around, a department of psychology. What will be needed to advance the research in this field is future evaluations of the various ways in which IM is being created and measuring the health outcomes of the patients in the programs.

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