

Web Based Training for Pain Management Providers

SBIR Phase II Contract # N44-DA-9-2213

Final Report

4/1/09 – 3/31/11

The screenshot displays the OpioidRisk.com website. The header includes the site logo, navigation links (ACCOUNT, CONTACT, FAQs, ABOUT US, LOGOUT), and a welcome message for 'asparks' dated Wednesday, March 30, 2011. The main navigation bar contains Home, Forums, Training, Resources, and Key Info Guides, along with a search bar. The content area is divided into several sections:

- Have Questions?**: Includes a chat link 'Chat with Clinical Tool... Away' and 'Normal Hours of Availability: 9AM to 5PM EST M-F'.
- OpioidRisk Blog**: Features a post titled 'Florida Cuts All Funding for Pill Mill Database?' with a 'more' link.
- Site Development Blog**: Contains a post 'Create A New Blog OpioidRisk.com is Live!' dated 03/30/11. The text describes the website's development, based on a needs analysis and usability testing, and mentions two training programs: a core program and an advanced program.
- Training for Practice Improvement:**: A central section for the 'Core Program: Basic Skills in Safe Opioid Prescribing', which is free through April 30, 2011. It lists 4 hours of AMA PRA Category I Credit, 3 courses with case illustrations, and funding by the National Institute on Drug Abuse. A 'Resources' section lists: Treatment Locators, Guidelines, Patient Management, Evaluation, Chronic Opioid Therapy, and Substance Use Problems. A 'Key Info Guides' section lists: Opioid Prescribing Guidelines, Gov Regs: Prescribing Controlled Substances, Assessment Tools, Prescription Monitoring Programs, Informed Consent/Treatment Agreements, and Urine Drug Testing. A recent user comment states: 'This was a great review of appropriate opiate prescribing guidelines and an update on new techniques for safe prescribing.' -OpioidRisk User, Boise, ID (3/22/11).
- Pain and Addiction PubMed Abstracts**: Features an abstract on 'Serotonergic function, substance craving, and psychopathology in detoxified alcohol-addicted males undergoing tryptophan depletion.' with a 'more' link.
- New Forum Topics**: Lists a topic 'Discerning behaviors suggesting addiction from untreated pain' with a 'more' link.
- Special Resources**: Includes 'Clinical Research Resource from NIH: The NIH Pain Consortium' and 'For Clinicians' with links to learn about alcohol screening, tobacco assessment, and motivational interviewing techniques.

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March 31, 2011

FINAL REPORT: WEB BASED TRAINING FOR PAIN MANAGEMENT PROVIDERS N44DA-9-2213

EXECUTIVE SUMMARY

This report describes in detail achievements for the SBIR project, *Web Based Training for Pain Management Providers (N44DA-9-2213)*, project period April 1, 2009 through March 31, 2011.

Clinical Tools, Inc. created *OpioidRisk.com*, a web-based training program that aims to improve the opioid prescribing practices of health care providers in order to help reduce the significant public health problem of opioid addiction and abuse. The program trains health care providers in how to prescribe opioids safely and only when indicated, minimizing risk of addiction, abuse, diversion, and overdose. Specifically, the product trains clinicians to:

- Initiate pain treatment with opioids while simultaneously avoiding addiction complications for the patient.
- Triage patients to the appropriate level of care to stratify risk.
- Screen carefully and thoroughly for risks of addiction/abuse before prescribing chronic opioid therapy.
- Communicate effectively with patients regarding how to avoid risks of opioids.
- Practice sound clinical/office protocols to avoid diversion and overdose.

The target audience is any healthcare provider who prescribes opioids, but currently only *AMA PRA Category I Credit™* is provided. A comprehensive, interactive approach supports practice change while providing continuing education credit. A unique component of the program is an opportunity for the trainee to practice the clinical skills taught in the didactic portion of the training via an interactive, online simulated clinical experience.

The product can be seen at www.OpioidRisk.com and includes the following:

- Continuing medical education training program consisting of didactic courses illustrated with interactive cases
 - Core courses:
 1. *Chronic Pain and Opioids: What's the Plan?*
 2. *Communicating about Opioids: Assessing Risk and Creating a Shared Approach*
 3. *Minimizing Diversion and Overdose Risk: Unique Challenges of Opioids*
 4. *Clinical Cases with Common Pain Conditions (Case Vignette)*
 - Advanced courses:
 1. *Understanding Aberrant Behaviors in Patients on Opioid Therapy*
 2. *Coordinating with Colleagues to Optimize Chronic Pain Treatment*
 3. *Urine Drug Testing and Monitoring Progress in Opioid Therapy*
 4. *Treating Chronic Pain in the High Risk Patient*
- Interactive, case-based opportunities to practice clinical skills online
- Key Information Guides for quick reference to material learned in the training programs
- A unique remote, live, standardized patient course using online chat: *Clinical Cases with Substance Abuse Problems (RLSP Case)*
- Resources section containing a searchable data base of links to over 300 resources on pain and addiction

- Discussion forum
- Newsfeed for the most recent PubMed abstracts on pain and addiction research
- *AMA PRA Category I*™ credit for program completion, 4 hours for each program.

In Phase I, we conducted a needs analysis, developed a curriculum outline with expert input, and developed a course prototype. Physicians and nurses surveyed in the needs analysis on the average did not feel adequately prepared by medical or nursing school on many basic issues at the interface of treating patients with pain and addiction. Their strongest interests/needs were best practices in using opioids, co-managing patients with specialists, and information about counseling treatments and referral. The curriculum was also based on the most recent practice guidelines for chronic opioid therapy by the American Pain Society and the American Association of Pain Medicine (Chou et al, 2009).

In Year 1 of Phase II, we focused on refining the curriculum plan; developing content and the user interface, conducting usability tests with the target audience, developing the online case-based simulated clinical practice experiences, and obtaining Office of Management and Budget (OMB) clearance to conduct a summative study with greater than 9 participants.

In Year 2 of Phase II, we focused on refining the curriculum plan, finishing development of content and clinical practice experiences, further developing functionality for the user interface, conducting the final usability study, pilot testing the clinical practice experiences, and conducting a summative study of the core training program with the target audience.

A group of 40 physician members of the target audience completed the core training program. Analysis of their program assessment results showed significant improvement in knowledge, attitude, clinical skills, and most recommended practice behaviors measured. Their satisfaction with the program was high as was their rating of the educational value of the program. Other measures detailed in this report had similarly encouraging results.

Appendices include more detailed information on the curriculum, course and program assessments, usability testing, and the summative evaluation activities and results.

Official website launch is scheduled for May 2011.

Summative Study: Evaluation of Core Training Program and Revised Assessment Instrument

In the interest of obtaining the highest degree of feedback on the content during the budget period, we focused this study on the intervention arm only. During Phase III, we will be able to assess the control portion in a follow on study at Clinical Tools' expense.

SUMMATIVE STUDY: GOAL

The goal of the Summative Study was to test the revised assessment materials while evaluating the Core program content.

SUMMATIVE STUDY: METHODS

Recruitment: A convenience sampling method was used by emailing invitations to participate to groups of physicians who have either taken one of our other training programs or worked with us to evaluate these programs. The majority were physicians who had taken our training to obtain a waiver to prescribe buprenorphine. Physicians who teach about pain in medical schools were also invited. A link to the program was provided in the email and automatically logged the user in using an account they previously created. They were given 4 hours of *AMA PRA Category I Credit*™ for completion of the program, but were not compensated for taking the educational program. The program was described to them as free for use through the end of this project period. Only medical residents were compensated \$50 for completing the educational assessments. We collected data for the first 40 users to complete the program.

Case: Olivia Quiz



For multiple choice answers, you will be automatically advanced to the next question once you have made your selection. Quiz cannot be taken in IE6. Clinical Tools recommends Chrome, Firefox, and IE7 or higher.

Question 5 of 6

View Olivia's [completed ORT questionnaire](#)

[Prescription Drug Monitoring Program Report](#)

Report Date:[today's date]

Rx#1100, oxycontin 20mg controlled release, Qty: #30, Pharmacy #1506, Olivia Smith, fill date: [8 weeks ago], Prescriber: John Jones

Rx#1177, oxycontin 20mg controlled release, Qty: #30, Pharmacy #1506, Olivia Smith, fill date: [4 weeks ago], Prescriber: John Jones

[close](#)

Additional dialogue from the patient interview:

Doctor: Have you ever felt that you ought to cut down on your drinking or drug use?

Olivia: No I don't see why I should. I don't drink that much and I certainly don't use drugs.

Doctor: OK. Has anyone criticized your drinking or drug use?

Olivia: No, there is no reason for that!

Doctor: Have you ever felt bad or guilty about your drinking or drug use?

Olivia: No

Doctor: Have you ever had a drink or used drugs first thing in the morning to steady your nerves or to get rid of a hangover?

Olivia: No, (laughing)

Doctor: How much do you drink per day or week?

Olivia: No more than a drink or two per week.

Doctor: Did you or anyone in your family ever have a problem with alcohol or drug abuse?

Olivia: My brother had some trouble with alcoholism a while back.

Doctor: Do you have any problems with depression? Anxiety or other mental health problems or history of sexual abuse as a child?

Olivia: No, fortunately. Can I get that prescription for oxycodone now?

Question: (After reviewing the above, additional interview dialogue and information) What is Olivia's risk level for opioid abuse or addiction, according to all available information?

Choose one:

<input type="radio"/>	Low
<input type="radio"/>	Medium
<input type="radio"/>	High

Example Page from the Case Vignette - Clinical Skills Assessment

Assessments: The assessments were described in detail and illustrated in the section on content, Objective 1.

The assessment instrument consisted of the following main sections:

- Pre- and Post- Knowledge and Competency Measure – 11 questions

- Pre- and Post- Clinical Assessment – Case Vignette quiz – 6 questions
- Medical Record Patient Encounter Note – SOAP Note (Post only)
- Pre- and Post- Self Assessments (21 questions; 28 questions)
- Satisfaction and Educational value (Post only; 6 questions; 16 questions)

Educational Value

In the practice areas covered, completing this program has/will improve my (Check all that apply): *

Knowledge
 Competence
 Performance
 Patient outcomes
 None of the above

Please rate the following statements: *

	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
This program promoted evidence-based care/practice.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This program promoted work in interdisciplinary teams (e.g., consult with specialists, follow-up on referrals to specialists).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This program promoted patient-centered care (e.g., shared and informed decision making with patients versus physician-only decision-making).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

This program supported achievement of each of the learning objectives: *

	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
Initiate pain treatment with opioids while simultaneously avoiding addiction complications for the patient	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Triage patients to the appropriate level of care to stratify risk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Screen carefully and thoroughly for risks of addiction/abuse before prescribing chronic opioid therapy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communicate effectively with patients regarding how to avoid risks of opioids	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Practice sound clinical/office protocols to avoid diversion and overdose	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Example of Program Evaluation Questions: Educational Value

We responded to critical feedback and a high initial drop out rate by shortening the assessment, correcting grammar, and decreasing ambiguity in the case after the first few users. The assessments in Appendix D represent the final versions used for most of the study.

User Experience: The participants proceeded through pre-program assessments, the three core program courses, and the post-program assessment at their convenience.

Data Analysis: Quantitative data for the Pre- and Post-program assessments was analyzed as follows: For Likert-type questions, the average score was taken for each measure. The percentages of respondents who

answered corresponding to ratings of 4 or 5 on a 1-5 scale (i.e. "agreed" or "strongly agreed", "most" or "almost all," "considerable change" or "significant change") with each statement was recorded. For questions where users were asked their opinion, which changes or other skill they planned to implement, or other aspect of their experience, percents were taken for each of the answers. For assessments with pre and post test scores (knowledge, clinical skills), the average, and standard deviations were taken. A two-sample matched paired t-test was performed on the pre and post test data.

Qualitative data analysis. For the medical record patient note in the clinical assessment, we tallied the number and percent of respondents who supplied an expected answer as well as unexpected answers. Qualitative data was simply collated and reviewed for themes and their frequency.

SUMMATIVE STUDY: RESULTS

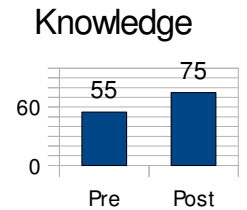
Program Results

Forty participants completed the core training program and the corresponding complete set of pre- and post-program assessments.

Demographics. They were fairly well distributed in terms of gender, race, and ethnicity. (See enrollment tables in Appendix E). All but 2 participants were physicians; there was also one medical student and one nurse practitioner. Participants had a broad range of clinical experience. 75% were specialists in Family or Internal Medicine and 62% practice either in private practice or at a community center.

Pre-/Post- Knowledge

The mean score on the knowledge test was at the passing level of 75%. There was significant improvement in the knowledge from pre- to post-core training program, with the mean percentage score correct going from 55 to 75 ($p \leq 0.0001$). An item analysis was run at the midpoint and the case was changed to be less ambiguous to improve scores on the last two questions. It had little effect.

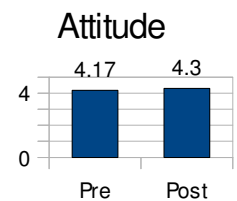


$n=40$

Pre-/Post- Self Assessment

Pre/Post-Attitude

On the average, more participants rated their agreement or strong agreement with statements reflecting their attitude toward following practice guidelines for chronic opioid therapy after taking the training program than before taking it ($p \leq 0.05$). The largest improvement in attitude as a group was in believing that "It is possible to prescribe opioids for chronic pain without addiction developing" going from 68% of participants agreeing or strongly agreeing pre-training to 93% of participants post-training. The next largest improvement was in attitudes related to urine drug testing (10% increase) and use of treatment agreements (13% increase). A large majority of participants ($\geq 90\%$) already agreed or strongly agreed that it is their role to screen for risk of addiction, monitor patients who are on chronic opioid therapy, and communicate with specialists and there was little change in those attitudes. (See Appendix E)



$n=40$

Pre-Self-Reported Practice Behavior vs Post Intended Practice Behavior

Participants self evaluated their practices regarding statements of ideal practice based on guidelines for chronic opioid therapy and then evaluated their intended practice behaviors having completed the training program. There was an increase from pre- to post for the number of participants planning to do each of the eight practice behaviors with all or most patients. A large majority of participants ($\geq 90\%$) planned to do five of the eight practice behaviors for most or all of their patients. The increase pre- to post-training was significant for 6 behaviors as noted in the table below.

Self-described practice behavior/intended behavior	Significance of change pre- to post-training Wilcoxon p-value (2-tail)
Conduct baseline urine drug testing with patients being considered for chronic opioid therapy and periodic testing throughout treatment	*0.0058
Use the least addictive opioid drug, formulation, and dosage possible when prescribing chronic opioid therapy	*0.0088
Use a written treatment agreement with patients on chronic opioid therapy	*0.011
Screen for risk of opioid abuse/addiction in all patients being considered for chronic opioid therapy	*0.020
Take precautions to avoid opioid diversion in my practice	*0.03
Stay involved with patients I refer [high risk patients]	*0.032
Monitor patients who are on chronic opioid therapy at least every 6 months for adherence to the treatment plan and continued need	0.11
Use first line therapies before prescribing chronic opioid therapy	0.45

The two behaviors with the lowest number of participants planning to do them were urine drug testing (72%) and use of treatment agreements (82%). However, there was also the greatest increase in doing these two behaviors, a 80% and 74% increase respectively which represented a significant change. There was also nearly a 20 percentage point increase in intention to stay involved with patients who are referred. (See Appendix E)

Other Data Related to Practice Behavior:

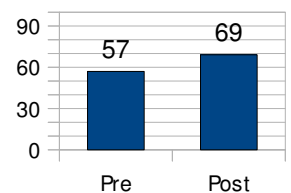
Post- Barriers to Behavior Change. The most frequently selected barriers faced in implementing the above practice change was “Patient adherence/compliance” with 68% of participants selecting it ; “Adverse events” were selected with the lowest frequency (8%). Reimbursement/financial issues was selected by 33% of participants and organizational/institutional barriers were selected by 38%. When asked about their level of commitment to making the above practice changes, 75% had a high commitment and all but one had at least a medium commitment.

Amount of Intended Practice Behavior Change Pre-Training. The amount of practice behavior change participants were hoping to attain prior to taking the program was “considerable” or “significant” for all 5 program objectives and expectations regarding change were rather evenly distributed among the objectives. The objective for which they expected the most change on the average was “Communicate effectively with patients regarding how to avoid risks of opioids.”

Pre/Post-Clinical Assessment Quiz

Participants answered 6 questions requiring them to make clinical decisions based on a case scenario both before and after taking the training program. There was a small improvement in their scores pre- to post of 12% on the average ($p \leq 0.005$). Scores post-training still did not quite reach a passing level, however (69%). They did the best on a question about determining the severity and level of functioning appropriate for chronic opioid therapy, but had the most difficulty with questions related to recognizing and responding appropriately to aberrant behavior.

Clinical Assessment



Medical Record Patient Note (Post-Training Only)

History

Significant findings from history of present illness, past medical history, review of system(s), social and family history, patient interview:

-77 year old, white female with 17 year history of osteoarthritis that has been treated with various NSAIDs, most recently celecoxib 100 mg, bid, on schedule for 2 years with acetaminophen as needed, and 10 year history of mild hypertension, controlled with hydrochlorothiazide.

Laboratory: Rheumatoid arthritis and other autoimmune disease have been ruled out.

Radiology: October 2008 radiographs confirmed osteoarthritis with osteophytes visible at the joint margins of several finger joints, moderate joint space narrowing and subchondral bone sclerosis in right knee, both hips, and several joints of the fingers

Otherwise in good health.

Include any other significant findings:
HPI: Pt has had ongoing intermittent stomach discomfort with NSAIDs, including Celebrex which has limited her use. Pts daily activities are limited due to her pain requiring her to use a wheelchair for instance when needing to ambulate distances. Pt has trialed Oxy, borrowing from her husbands Rx which was reported to work "marvelously".
PMH: Pain is reported to be 6/10 on tylenol, 4/10 on Celebrex when it is tolerated. No hx of substance abuse, depression or anxiety, nor childhood abuse.
FH: Pt has a brother with hx of alcoholism.
Labs: LFTs wnl

Physical Examination

Significant Findings

- Joint swelling: fingers, knees
- Joint tenderness: fingers, knees
- no warmth to the touch or redness
- Slightly decreased motion (stiffness) in fingers, elbows. Internal hip rotation ~20 degrees
- Hard tissue enlargement of distal interphalangeal and several proximal interphalangeal joints, knees
- Crepitus: knees, shoulders, hips

Include other significant physical exam findings:
Mood, affect, insight and judgment. Checking for hepatomegally. Pulmonary exam. Evaluating for signs of opiate intoxication or withdrawal.

Differential Diagnosis

1. Osteoarthritis

Other (if any):
Depression, Pain syndrome, Medication seeking

Example of a Participant's Filled Out Medical Record Patient Note - Excerpt

Above is a sample from one of the better responses from a user. Patient notes for the participants were compared to "Expected Results." Notes by participants included key elements less than half of the time, in general. For instance, fewer than a third noted the patients risk for substance abuse or recorded the patient's aberrant drug-related behaviors, and severity of pain was not mentioned by anyone. Only 22% of participants ordered urine drug testing despite several "red flags" in the patient's behavior, but approximately half would add urine drug testing as a requirement in the treatment agreement. A multiple choice question regarding treatment was answered correctly by 78% of the participants. Finally, there was a low rate of consultation or referral, the highest referral being 10% ordering physical therapy and 5% suggesting counseling, despite the message in the courses of the importance of multidisciplinary care for chronic pain. A detailed description of the results for the patient note is found in Appendix E.

Program Educational Value and Satisfaction

Educational Value. Educational value was rated fairly highly. When given the choice of *few*, *some*, or *most*, the majority of participants (70%) said that *some* of the content was new to them. Participant agreement was fairly strong (mean 4.3/5) that the program promoted evidence-based practice and working in interdisciplinary teams and that the program was patient-centered. The majority of participants agreed that the program improved knowledge (90%), competence (85%), and performance (70%). A minority felt that it improved patient outcomes (40%). On the average there was agreement (4.3-4.4/5) that the program supported achievement of all five core program learning objectives. There was also agreement on the average by participants that the program would impact their practice (4.2/5) and change their practice behavior (3.9/5) and also that the program promotes improvement in healthcare (3.8/5). The average evaluation of the program compared to other CME was slightly less than agreement (3.8/5) for being more

valuable, more efficient, or more effective at improving skills than other CME. The assessments, which had been shortened a great deal from what was originally planned for the summative evaluation, were still considered too long by 20% of participants and 32% still thought the total time to complete them was longer than expected.

Satisfaction. Participant satisfaction ratings were high overall, using a satisfaction survey that we have validated previously and used extensively in rating our programs that has a passing rate of 70%. Ratings ranged from an average of 4.3 to 4.5 on a scale of 1 to 5 for agreement with six satisfaction statements.

Amount of Agreement	Satisfaction Statement	Rate of Agreement/Strong Agreement
Statement having the highest agreement	“This program was presented objectively and was free of commercial bias”	100%
Statement having the lowest agreement	“The material was organized clearly for learning to occur.”	88%

Qualitative Program Satisfaction Data. In response to the qualitative satisfaction questions, seven users made recommendations for program or assessment improvement, most of which related to usability issues and have been addressed. For example, several users identified a problem with the course timer that has since been fixed. Five participants described topics that either are covered on the website or are covered well on other websites, including our own. A complete description of the issues and how they were addressed is found in Appendix E. Six of the forty participants elected to provide favorable comments about the program that we could publish on the website home page. For example:

“This was a great review of appropriate opiate prescribing guidelines and an update on new techniques for safe prescribing.”

Post-Course Evaluation Results

Self-Efficacy Regarding Course Objectives

Participants exhibited a high rate of self-efficacy after taking each course. For this data analysis, we included data from all users of the course, whether or not they completed the program. They rated their self-efficacy on a 5 point Likert scale for their clinical skills related to course objectives. A large majority agreed or strongly agreed with self efficacy statements related to course objectives (average=87% to 97%, n=50 to 72). Only a small minority (2% to 4%, n=1 to 3) disagreed or strongly disagreed.

Self Assessment Regarding Skills Taught in Core Courses

Participants assessed their usual behavior with respect to key clinical skills that had been taught in the course in preparation for developing personal goals. The purpose of this survey was to support self-reflection prior to goal setting and was therefore assessed with simple yes-no questions.

Course 1: Chronic Pain and Opioids: What's the Plan? The majority of participants, 61% or more ($\geq 44/72$), answered “yes” to already doing most of the desired clinical behaviors. Behaviors occurring the least frequently were *developing an exit plan before starting chronic opioid therapy* (61%) and *requiring a baseline urine drug test* (47%).

Course 2: Communicating with Patients. The majority of participants, 58% ($\geq 33/57$), answered “yes” to already doing each desired behavior. Most participants (95%, n=54/57) *used patient-centered approaches to communicate openly and honestly about opioid abuse/addiction* and *assessed for current substance abuse*; however only 68% (39/57) *included information about abuse/addiction potential of opioids in informed consent*. The rate of screening for depression and other mental health problems before prescribing chronic opioid

therapy was moderately low in this group.

Course 3: Minimizing Diversion/Overdose. The majority of participants, 58% (n=29/50), answered “yes” to already doing each desired behavior. For the highest rated item, 92% (n=45) of participants said they generally *taper opioid treatment and offer to provide alternative pain treatment or make a referral when discharging a patient on chronic opioid therapy*, while for the lowest rated item, only 58% (n=29) said they generally *check the local prescription monitoring program before prescribing chronic opioid therapy*.

User Goals by Course

After each course, users set goals for their practices based on what they learned in that course. Nearly half of the 40 participants who completed the whole program wrote three goals for each course and the remainder wrote one or two goals; space was provided for three goals. The main themes for the goals were as follows:

Course	Main Themes of User's Goals
1. Chronic Pain and Opioids	<ul style="list-style-type: none"> • Using universal precautions • Urine drug testing • Exit strategy
2. Communicating with Patients	<ul style="list-style-type: none"> • Improving treatment agreements
3. Minimizing Diversion and Overdose	<ul style="list-style-type: none"> • Consulting with past doctors • Communicate openly and honestly with patients • Check Prescription Monitoring Program • Improve documentation

The following are examples of goals set by providers after taking a course:

- *“I will maintain more contact with chronic pain patients to assess their adherence to the treatment, and will recommend more non pharmaceutical modalities.”*
- *“I intend to use a treatment agreement more often and tighten up the agreement in patients suspected of diverting or abusing the opiates “*
- *“I have learned more about looking for co-morbid conditions when assessing risks for prescribing chronic narcotic medication and will incorporate them into our treatment protocols.”*

Complete data on the post-course evaluations is found in Appendix E.

SUMMATIVE STUDY: DISCUSSION

Results suggest that the Opioid Risk core training program resulted in improvement in clinical skills for this group of pain managers. A significant improvement pre- post-training program was seen for knowledge, attitude, and clinical skills assessment scores. The number of participants who reported they were likely to do recommended behaviors with most or all patients with chronic pain also increased over the number who said they who did the same prior to the training.

Patient note and Clinical Skills Quiz. There are several possible reasons why performance was poor on these two measures after the training. The poor participant performance on the Patient Note note could represent a lack of clinical skill after taking the training, but also could represent a lack of time or interest in completing a long assessment. We think that it may be the latter, at least in part, because most participants got a multiple choice question on treatment correct, suggesting that most of the participants were aware of the key elements they had left out of the patient note. We reviewed the two questions missed most often in

the clinical quiz and noted that the same “wrong answer” was being chosen. We then reviewed the case and found that it may have been too ambiguous regarding the severity of the patient's risk. We revised the case to make it more clear-cut that the patient does have a moderate level of risk. We also considered that, while the post-training clinical scores were low, they still represented a significant increase over the pre-training clinical assessment scores.

The low rate of recording in the patient note certain key elements that are at the heart of what is being taught on OpioidRisk.com is of concern. In response, in the final product, we have further reduced the length of the assessments and turned the clinical vignette into a course so that users are likely to be motivated by receiving continuing education credit for completing it. We also revised the courses, better highlighting key pieces of information and reducing the amount of less important information, so that the most critical skills stand out better. We also added space for recording physical exam findings in the patient note so that pain severity can be recorded there, in case that is where users are used to recording it.

The low scores on the clinical assessment quiz and medical record patient note assessment underscores the need for a refresher on key clinical skills to be included with the follow-up assessment.

CONCLUSIONS

We have developed a comprehensive website called OpioidRisk.com on the interface of pain and addiction for health care providers who prescribe opioids. The curriculum plan was developed based on a needs analysis of the practice gaps found in the literature and noted in our needs analysis with target audience members as well as with input from experts in the field. The final content for each course was reviewed by expert consultants. The website has been extensively tested in usability testing with target audience members and is fully functional. It consists of two training programs: a core program, which is activated, and an advanced program which will be activated by mid-April, 2011. The core program consists of three courses that are illustrated with interactive cases and a case-based course with an interactive case vignette for practicing clinical skills. The advanced program consists of a four additional courses with the same format. An interactive case-based course utilizing a remote, live, standardized patient via online chat is also available. The website also includes a searchable data base of several hundred external resources, Key Information Guides that summarize information in the training program, a discussion forum, and a news feed from Pub Med on related research. As we complete the contract period, the website has been used by at least 78 individuals, 40 of whom completed the entire core training program and its pre-/post-training assessments. Assessment results indicated that the group that completed the core training program showed significant pre- to post-training improvement in knowledge, attitude, intended behavior, and clinical skills. They rated educational value and satisfaction with the program highly. With this encouraging start, we believe that we have developed a health professional development program that will improve clinical practice and thus, patient outcomes, at the interface of pain and addiction treatment.