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Optimizing Diagnosis and Management of Psoriatic Disease in Primary Care

Submitted by:

Accredited Provider: pmiCME, (or “Pri-Med”)

Education Provider: Vindico Medical Education (“Vindico”)

Executive Summary

A recent survey from the National Psoriasis Foundation showed that 22% of patients with psoriasis are being seen by a *primary care provider* (PCP) instead of a dermatologist. Further, JAMA Dermatology reports that the average wait time(s) to see a dermatologist in the U.S. is 46 days (range of 10.6 days–146 days), creating systemic pressure on patient access and illustrating the need for improved skill within primary care for the diagnosis and management of patients with psoriatic disease.

Pri-Med proposes a multi-faceted educational program to improve PCP ability to recognize the signs and symptoms of psoriatic disease, when to refer to specialty, and how to collaboratively advance patients along the correct treatment pathway.

Program Overview:

- A 3-part *online* curriculum, delivered to 3,000+ participants. Interactive modules enable audience interaction; marketed to 275,000 PCPs.
 - National Faculty discuss challenging cases, management strategies and supporting research in an *interactive* on-line forum
 - Pri-Med’s **Real World Evidence Research Center** uses actual (Amazing Charts EHR) Provider data to measure educational impact in a controlled Study, with results projected across the 3000(+) participant universe.

Thank you for the opportunity to submit this proposal. We hope you find it to be a valuable initiative to improve patient care.

Sincerely,

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PROGRAM GOALS & OBJECTIVE(S)

The primary goal of this multi-faceted educational program is to improve the PCP's ability to recognize the signs and symptoms of psoriatic disease, when to refer to specialty, and how to collaboratively advance patients along the correct treatment pathway in order to improve patient health outcomes.

Key educational objectives intended to help achieve the goal(s):

- i) Improve PCP knowledge and competence in the recognition & diagnosis of psoriasis and psoriatic arthritis, including a strong working knowledge of the various forms/ stages of psoriasis, and the common comorbidities, so as to better affect a timely referral and treatment with specialty.
- ii) Improve PCPs clinical understanding of stage-appropriate pharmacological management of psoriasis and psoriatic arthritis so as to develop individualized treatment plans, which result in the greatest improvement in patient outcomes.
- iii) Assess the comparative risk-benefit profiles of available and emerging treatments for psoriasis, including topical, oral and biologic agents so as to better manage disease, while limiting unnecessary side effects and suboptimal outcomes.
- iv) Utilize clinician-patient communication strategies to clarify treatment expectations, emphasize the importance of adherence to therapy, and address patient concerns regarding the physical, psychological and emotional impact of psoriasis on QOL.

The above Goals & Objectives are predicated on provider treatment inconsistencies or gaps in care (relative to the diagnosis and management of psoriatic disease), as supported within the medical literature.

ASSESSMENT OF NEED(S)

Psoriasis, a condition with a significant negative impact on patient quality of life, affects nearly 7.4 million individuals in the United States; and a recent survey from the National Psoriasis Foundation showed that 22% of patients with psoriasis are being seen by a primary care physician (PCP) instead of a dermatologist. In addition to the direct physical effects of the disease, it is associated with a number of potentially serious comorbidities as well as debilitating psychological and emotional complications such as depression, anxiety, and embarrassment.¹⁻⁵ Physicians often fail to recognize psoriasis as a systemic inflammatory disease, resulting in significant under-treatment of the disease.^{6,7} Specifically, moderate and severe psoriasis are often treated with topical monotherapy, and newer biologic and oral treatments are underused.⁷ Moreover, psoriasis that presents in certain locations, including the scalp, nails, and palms, is difficult-to-treat, challenging physicians and frustrating patients⁸

pmiCME and Vindico have conducted a detailed needs assessment focusing on the current practices gaps, and educational needs of PCPs who diagnose and help manage patients with psoriatic disease. This assessment includes a review of recent medical literature, current

practice guidelines, expert opinions, agency reports and surveys, patient-level data, as well as relevant accredited medical education activities. Through this assessment, we have determined that educational intervention would greatly benefit PCPs treating patients with psoriasis and those who are unfamiliar with disease presentation characteristics, and help speed care of patients suffering from this condition.

In the first half of 2015, Vindico sponsored a CME meeting series across the Pri-Med national network titled, “Evolving Issues and New Treatment Approaches to Psoriasis: What the PCP Needs to Know”. Program evaluation data from the symposium yielded telling results:

- 96% of PCPs are somewhat/not-at-all confident using biologic agents for psoriasis.
- 25% were unsure of the safety of vaccine use in patients on biologic therapy.
- 40% wrongly thought that biologic agents were associated with teratogenicity, lifetime dose restrictions, and end-organ damage, versus the 21% who correctly knew that these characteristics are more closely associated with conventional systemic agents
- Only 33% would refer an eligible patient to a specialist for initiation of biologic therapy.
- Only 34% of participants were familiar with a contraindication of anti-TNF agents.

Pri-Med’s Interim evaluation of the pre/post- test (qualitative) data yielded the following conclusion: There was a relative **126% increase in knowledge and competence** regarding the diagnosis and management of patients with psoriasis as a result of the educational activity.

Recognition of a Systemic Disease

Psoriasis affects approximately 1% to 4% of the world’s population and is associated with significant morbidity.⁹ Once regarded as exclusively a disease of the skin, moderate-to-severe psoriasis is now recognized as a systemic chronic inflammatory disease.² However, an online CME case study activity demonstrated that clinicians lack adequate knowledge regarding appropriate use of systemic therapy for psoriasis:²⁴

- **43%** of those polled indicated a lack of knowledge of psoriasis as a systemic disease as their most significant barrier to the optimal management of patients with moderate-to-severe psoriasis
- **23%** reported that they cannot differentiate patients who should be treated with topical versus systemic therapy. Thus, physicians would benefit from an education activity that addresses the systemic nature of psoriasis and ideal candidates for systemic therapy.

Patients with psoriasis are at increased risk of numerous serious comorbidities, including psoriatic arthritis (PsA), diabetes and its micro- and macro-vascular complications, uveitis, inflammatory bowel disease, cardiovascular diseases, several types of cancer, erectile

dysfunction and psychiatric disorders, notably depression.^{3,4} Patients with psoriasis suffer from a range of physical symptoms, stigmatization and embarrassment, psychological strain and work-related disabilities.⁵ Awareness and management of psoriasis comorbidities is a complex, challenging, important topic for clinicians, which can result in meaningful improvements in patient health outcomes. Moreover, knowledge of comorbidities may guide treatment selection.

Diagnosis of psoriasis is normally accomplished by evaluation of skin lesions, which may be classified as plaque, guttate, pustular, and erythrodermic. Of these, plaque psoriasis is the most common, affecting about 80% to 90% of patients with psoriasis.⁴⁵ The severity of psoriasis is classified based on how much of the body surface area (BSA) is affected by the disease.¹² Recent estimates suggest that mild and moderate disease each account for nearly 40% of all psoriasis cases.⁹ Assessment of psoriasis is further complicated by a patient psychosocial influence in which the patient perceives disease differently than the clinician assesses it.⁸ Accordingly, assessment tools (i.e.DQLI, PASI,) were designed to evaluate both disease severity based on body surface area as well as impact of disease on quality of life (QoL).³⁸ In addition to disease severity and impact on QoL, physicians also consider location of skin lesions; lesions in areas such as the scalp, nails, and palms, may be more difficult-to-treat and will be discussed in detail in the proceeding section.²⁵⁻²⁷

In addition to aiding in clinical decision making, knowledge of disease severity is also important for predicting comorbidities. However, a recent physician survey signified that physicians were not familiar with the increased risks associated with severe psoriasis. Specifically, only 22% of those polled could not correctly identify the comorbidities associated with severe psoriasis, indicating an important need to educate physicians on how disease severity can impact patient outcomes and treatment selection.¹³ As comorbidities and disease classification and severity should guide clinical decision making, it is critical that clinicians who manage patients with psoriasis be educated on effective strategies to identify comorbidities and classify disease.

Table 1: Identified Gap 1

Current Practice	Desired Practice
PCPs fail to recognize psoriasis as a systemic inflammatory disease and do not know how to use diagnostic and classification tools to determine disease severity, resulting in under-treatment or non-treatment of disease.	PCPs promptly recognize mild, moderate or severe psoriasis and, consider appropriate treatment options, and refer to a specialist when disease severity or complexity warrants.
Resulting Gap	
PCPs do not optimally assess patients with psoriasis, resulting in under/non-treatment of disease, delays in treatment, and suboptimal patient outcomes.	
Learning Objective	
Improve PCP knowledge and competence in the recognition & diagnosis of psoriasis and psoriatic arthritis, including a strong working knowledge of the various forms/ stages of	

psoriasis, and the common comorbidities, so as to better affect a timely referral and treatment with specialty.

Under-treatment of disease

Treatment of patients with psoriasis is necessary to improve quality of life. Furthermore, clinical evidence suggests that early treatment of psoriasis may reduce the risk of serious comorbidities such as cardiovascular disease,¹⁴ although further research is necessary to establish this.

Despite the importance of treatment, however, many patients with psoriasis are under-treated or untreated. The American Academy of Dermatology (AAD) guidelines for the treatment of psoriasis specify that topical treatment should be used for mild disease (affecting less than 5% of the body surface area and usually not involving the face, genitals, hands, or feet).¹⁵ For moderate and severe disease, although topical therapy may be used adjunctively, ultra-violet (UV) or systemic therapy is recommended. However, national survey data collected from 2003 to 2011 by the National Psoriasis Foundation (NPF) revealed that 36.6% to 49.2% of patients with mild psoriasis, 23.6% to 35.5% of patients with moderate psoriasis, and 9.4% to 29.7% of patients with severe psoriasis were not given any treatment for the condition; among those who were treated, 29.5% of patients with moderate psoriasis and 21.5% of patients with severe psoriasis were given topical agents alone,⁹ suggesting a failure to see psoriasis as a systemic disease.

Further evidence that clinicians continue to treat patients with psoriasis inappropriately comes from an analysis of the National Ambulatory Medical Care Survey (NAMCS) and National Hospital Ambulatory Medical Care Survey (NHAMCS) databases, which show that there has been no increase in the trend for total systemic treatments for psoriasis since 1993,¹⁶ although the frequency of phototherapy has decreased during this period, and that of biologic therapy has significantly increased. The researchers concluded that despite the introduction of biologics, it appears that little progress has been made in reducing under-treatment of moderate-to-severe psoriasis.¹⁶

Almost 40% of respondents to an NPF survey of patients with psoriasis indicated that they were currently not receiving treatment; likewise, for those with severe psoriasis, only 26% were receiving systemic treatment.¹⁷ A multinational, population-based survey of 3,456 patients with psoriasis and/or PsA found the prevalence of psoriasis/PsA ranged from 1.4% to 3.3%¹⁴, 79% had psoriasis alone, and 21% had PsA. Of psoriasis patients, 45% had not seen a physician in a year. Moreover, more than 80% of psoriasis patients with 4 or more palms body surface area and 59% of PsA patients were receiving no treatment or topical treatment only. Of patients who had received oral or biologic therapy, 57% and 45% respectively, discontinued therapy, most often for safety/tolerability reasons and a lack or loss of efficacy.¹⁴

Primary Care Knowledge Gaps

In the primary care setting, many physicians are not confident prescribing biologic agents to their patients with psoriasis; specifically, **an overwhelming 96% of primary care physicians** in a recent survey reported being only somewhat- or not-at-all confident in prescribing biologic agents for the treatment of psoriasis. Thus, it may be necessary that a patient in this setting be referred to

a specialist in order to initiate biologic therapy. However, in a recent physician survey at a CME event for PCPs, only **33%** of those surveyed would refer an eligible hypothetical patient to a dermatologist for consideration of initiation of biologic therapy.⁴⁰

Collectively these data suggest that physicians who treat patients with psoriasis would likely benefit from an educational program that addresses effective therapeutic strategies and referral procedures.

Table 2: Identified Gap 2

Current Practice	Desired Practice
PCPs are relatively unaware of more complex forms of psoriasis, such as moderate to severe plaque psoriasis, and may treat sub optimally with topical therapy and/or delay referral to specialists.	PCPs demonstrate a good working knowledge of mild, moderate and severe psoriasis and enact stage-appropriate medication therapy or timely referral to specialist
Resulting Gap	
Patients with moderate to severe psoriasis may not receiving the individualized treatment that may best manage their disease, resulting in unnecessary side effects and suboptimal outcomes.	
Learning Objective	
Improve PCPs clinical understanding of stage-appropriate pharmacological management of psoriasis and psoriatic arthritis so as to develop individualized treatment plans which result in the greatest improvement in patient outcomes.	

Available therapy for patients with moderate-to-severe psoriasis includes phototherapy, oral retinoids, traditional systemic treatments such as cyclosporine A and methotrexate, and newer medications including the biologics TNF-alpha, T-cell, and interleukin-12/23 blockers, as well as PDE4 inhibitors.²¹ The traditional agents, however, are often inadequately effective, temporary in benefit and associated with significant safety concerns.²² Biologic anti-tumor necrosis factor alpha (TNF α) agents, such as etanercept, infliximab and adalimumab, are effective for treating patients who have both psoriasis and PsA. However, a substantial number of patients may lose efficacy, have adverse effects or find intravenous or subcutaneous administration inconvenient.²² Moreover, **TNF inhibitors should be used with caution** in patients with congestive heart failure, a fact that **34% of PCPs** polled in a recent CME activity were unfamiliar with, indicating the important need to educate physicians on this safety of these agents.^{38,40}

Advances in the understanding of the immunopathogenesis of psoriasis have led to the development of new biologics, targeting specific interleukins (IL) and other inflammatory cytokines upregulated in psoriasis. These include the IL-17 antagonists, secukinumab, brodalumab and ixekizumab; the IL-23 antagonists, guselkumab and tildrakizumab; and the oral small molecules tofacitinib and apremilast.²³ Secukinumab and apremilast have recently been approved by the FDA for use in psoriasis; and apremilast is also approved for PsA.¹⁸⁻²⁰

Like many approved systemic agents for psoriasis, they are recommended for use in individuals who are candidates for phototherapy or systemic therapy, **though only 8% of physicians polled** were aware of this recommendation, indicating an important need to educate physicians on the recommended usage of available systemic agents for the management of psoriasis.¹²

A recent study found that psoriasis providers demonstrate wide variation in their perception of the effectiveness and safety of systemic treatments. These findings represent a general lack of knowledge regarding available therapies for psoriasis management, illustrating the important need to educate physicians on the clinical utility of these agents.

A lack of knowledge regarding the risks of available therapies to manage psoriasis was demonstrated in a recent CME activity in which 40% of PCPs polled wrongfully thought that biologic agents were associated with teratogenicity, lifetime dose restrictions, and end-organ damage; conversely, only 20% of participants correctly associated these characteristics with conventional systemic agents.⁴⁰ Moreover, in an independent activity, nearly 20% of survey participants reported that they do not know the comparative risk/benefit profiles of current therapeutic options. This lack of knowledge may be compounded as newer agents become available, and physicians will require education on their comparative safety, efficacy, and recommended usage to established agents. **Collectively, these findings illustrate the need to educate physicians on the appropriate use of therapeutic agents for patients with psoriasis.**

Clinicians are also challenged by how to treat psoriasis in certain difficult-to-treat areas such as the scalp, nails, and palms. However, a large number of patients with psoriasis experience this type of disease; nearly 80% of patients have scalp psoriasis and 50% of patients have psoriasis of the nails.²⁵⁻²⁷ Recent evidence suggests that available agents may be beneficial in treating these historically difficult-to-treat areas.²⁷ For example apremilast improved nail psoriasis by 29% according to the Nail Psoriasis Severity Index (NAPSI) after 16 weeks of treatment versus 7% of patients who received placebo. Clear-or-minimal scalp psoriasis, assessed by the Scalp Physician Global Assessment (ScPGA), was observed in 40.9% and 17.2% of patients who received apremilast and placebo, respectively. Likewise, 65.4% of patients receiving apremilast and 31.3% of those receiving placebo scored better on the Palmoplantar Psoriasis Physician Global Assessment (PPPGA). Importantly, a majority of the patients who experienced improvements at 16 weeks maintain improvements at 52-week assessment. **Given the potential benefit, clinicians need to be made aware of the agents that may benefit these historically difficult-to-treat areas.**

Many patients with psoriatic disease consider their disease to be severe but view available treatment options as burdensome.^{14,28} As a result, long-term outcomes for patients with PsA are often poor, with disease progression, poor health-related QOL, increasing disability, comorbidities, and high associated costs.²⁸ Functional, psychological and social morbidity can be associated with psoriasis, and the extent of the disability is frequently underestimated.²⁹ Patients with psoriatic disease can experience a significant emotional toll.³⁰ Patients often experience embarrassment and difficulty with social interactions attributable to the disease.³¹ In addition,

depression and anxiety are extremely common among patients.³⁰ The physical signs and symptoms do not necessarily correlate with the impact on quality of life, and even patients with limited disease may be adversely affected. Therefore, health care providers must consider psychological impacts, not just clinical criteria when assessing an individual patient's disease severity.²⁹

In a large, multinational survey of patients with psoriasis (MAPP), 45% had not seen a physician in a year.¹⁴ More than 80% of psoriasis patients with disease over 4 or more palms body surface area and 59% of PsA patients were receiving no treatment or topical treatment only. Of patients who had received oral or biologic therapy, 57% or 45%, respectively, discontinued therapy, most often for safety/tolerability reasons and a lack/loss of efficacy.¹⁴

A recent study involving interviews with patients with psoriasis and including questions about experiences during consultations with health care professionals found that patients felt that their physical, psychological and social challenges were largely unacknowledged during consultations.³² Patients perceived clinicians as lacking knowledge of psoriasis and its management, lacking empathy with the effects of psoriasis, and failing to manage psoriasis as a long-term condition, all of which contribute to poor treatment adherence. Similarly, an international survey of 3,822 adults with psoriasis or PsA found that:³¹

Table 3: Summary Survey Data

- 29% of respondents reported that no one helped them with their psoriatic disease
- 25% thought that their physicians did not take their disease very seriously
- 18% thought it was difficult to talk to their physician about psoriasis
- 26% felt that their physician did not tell them what to expect from treatment

A clinician's ability to show empathy, answer questions, and provide explanations have been shown to promote trust and positively affect treatment outcomes, so it is imperative for health care providers to implement techniques for improving communication with patients with psoriasis.³¹

A survey of US academic dermatologists and dermatology residents was conducted to assess beliefs and screening/counseling practices for alcohol, tobacco, and obesity—all factors for exacerbation of psoriatic disease—among patients with psoriasis.³³ More than 60% of respondents were more likely to screen and counsel patients with psoriasis for obesity compared with other dermatologic patients, but fewer than half were more likely to do so for alcohol or tobacco. This counseling practice gap was believed by the researchers to be related to disparities in knowledge and confidence in counseling. Furthermore, while nearly all respondents believed primary care providers to be responsible for both screening (94.2%) and counseling (98.2%), only 55.6% believed that dermatologists had a responsibility for counseling.³³ Systematic training and effective counseling instruments would empower practitioners to translate this knowledge into clinical practice.

One of the ways in which clinicians can help to ensure treatment adherence is by scheduling early follow-up visits. A study of time to first follow-up in dermatology practice found that the mean length of time to the first follow-up visit was 153 days for adults and 142 days for children with psoriasis.³⁴ Physicians are missing the opportunity to maximize patient adherence by scheduling early follow-up visits.

National initiatives are in place to ensure that clinicians strive to administer high-quality care for patients. Specifically for psoriasis, the Center for Medicare and Medicaid Services recommends that providers ensure the active prevention of tuberculosis via annual screening and proper documentation.³⁶ Additional measures are being drafted by the AAD that will promote the screening for comorbidities and reaching realistic treatment goals.³⁷

CME activities provide an opportunity to improve physician practice patterns. The AAD developed and implemented a Performance Improvement CME activity on psoriasis for dermatologists.³⁵ In the activity, participants self-audited patient charts, reviewed educational materials and developed an improvement plan, then self-audited another set of charts. The activity resulted in statistically significant improvements in history-taking per AAD guidelines, in the advisement of patients with psoriasis regarding their increased risk for cardiovascular disease, to contact their primary care provider for cardiovascular risk assessment, and in shared decision-making regarding the treatment plan. Thus, to increase knowledge, competence, and performance among clinicians who manage patients with psoriasis, a CME activity that blends instructional material with engaging case-based initiatives is warranted.

Table 4: Gap Analysis 3

Current Practice	Desired Practice
PCPs have sub optimal understanding of the emotional costs(s) of psoriasis, as well as the risk-benefit profiles of available and emerging therapeutic agents, including oral and biologic agents for those areas that may be difficult-to-treat.	PCPs possess good knowledge of the emotional burden of psoriasis and the value of empathy, and perform (evidence-based) risk-benefit assessment in context of available medication therapies
Resulting Gap	
Patients with psoriasis are not receiving the individualized treatment that may best manage their disease, resulting in unnecessary side effects and suboptimal outcomes.	
Learning Objective	
Assess the comparative risk-benefit profiles of available and emerging treatments for psoriasis, including topical, oral and biologic agents so as to better manage disease, while limiting unnecessary side effects and suboptimal outcomes.	

TARGET AUDIENCE

A recent survey from the National Psoriasis Foundation showed that 22% of patients with psoriasis are being seen by a primary care physician (PCP) instead of a dermatologist, suggesting that **63,000 PCPs could directly benefit from this Program** (assuming there are about 290,000 primary care clinicians). Pri-Med’s national learning community, including more than 275,000 registered PCPs, consistently delivers more than 50,000 unique clinician visits to Pri-Med.com each month, making it an ideal platform to reach PCPs who would benefit from practical psoriasis education.

Based upon a 20 year track record of delivering highly relevant, evidence based education, and an extremely loyal clinician alumni network, Pri-Med can deliver a total of 3,000(+) Program U.S. participants across all modules.

The audience for this Program will be primary care clinicians (MD/DO, NP, PA) involved or interested in the diagnosis and treatment of patients with psoriasis (nail, skin) and/or psoriatic arthritis. The opportunity to participate will be communicated to Pri-Med’s national alumni network and Amazing Charts EHR user base. Importantly, unlike most on-line education platforms, Pri-Med has a long and successful record of delivering highly impactful CME programs *across an integrated curriculum*. One example of this can be found in Table 5 which presents a summary of Pri-Med’s Safe Opioid Prescribing series, delivering curriculum based education to more than 34,000 thousand prescribing clinicians.

Table 5: Integrated Curriculum

CURRICULUM CASE STUDY
SAFE OPIOID PRESCRIBING (2015)
<ul style="list-style-type: none">○ Unique PCPs (live & online): 34,624○ Number of online modules: 6○ Unique online participants: 17,091○ Unique online completions:<ul style="list-style-type: none">○ Module 1: 12,631○ Module 2: 10,186○ Module 3: 8,785○ Module 4: 8,125○ Module 5: 7,964○ Module 6: 7,425
AUTOMATED MARKETING TACTICS:
<ul style="list-style-type: none">○ Upon completion of module 1, recommended module 2, etc.○ Reminders to complete module in progress○ “Just one module left” messaging

A key part to achieving an integrated curriculum is the ability to effectively market the educational activity. Pri-Med’s unique data assets enable audience targeting, resulting in curriculum pull-through and *higher completion rates*. Importantly, many online CME providers market their audience *acquisition rates* but do not state how many of those participants

actually complete each session. Table 6 presents Pri-Med’s 2015 interim (Q3) on-line Learner performance statistics:

Table 6: OnLine Platform, Interim Statistics

# Unique PCP Learners (September, 2015)	Total CME Credits Awarded	Course Completion Rate	Learner Satisfaction Score
165,639	115,642	82%	88%

PROGRAM DESIGN & SCHEDULE

The proposed Program is comprised of three online CME activities, available at www.pri-med.com. The CME activities will be marketed in such a way as to encourage (and drive) providers who complete one activity to sequentially continue on to complete the 3-module series.

The program has the following components:

- Activity 1: Virtual Expert Roundtable
- Activity 2: Patient Case Study
- Activity 3: Expert Perspective: Your Questions Answered

The first activity (Virtual Expert Roundtable) provides an in-depth review by experts in the field that will equip learners to meet the Program objectives. Each subsequent activity provides complementary, reinforcing information designed to improve competence, confidence, overcome barriers to change, and uses *case examples* to provide additional detail in all three Learning Objectives.

ACTIVITY #1: Virtual Expert Roundtable with Enduring Video Webcast (1500 credit earners)

This dynamic 90-minute program features two expert faculty and a moderator in a studio setting, who take a deep dive into a single topic area – providing a foundational educational overview for psoriasis curriculum. The moderator will field questions from the online audience and use polling features to challenge participants throughout the program. Each activity will be posted on Pri-Med.com for 12 mos. The live and online activities are each certified for up to 1.5 *AMA PRA Category 1*™ credits or AANP contact hours.

Table 7: Agenda - Virtual Expert Roundtable

Time	Topic
5 min	Introduction & Pre-test
25 min	Psoriasis: A Systemic Disease with Physical and Psychosocial Impact on Quality of Life

	Case Presentation: Didactic talk will conclude with a clinical case focused on the differential diagnosis of psoriasis, and audience will be polled on their approach to diagnosis and classification of disease severity.
30 min	Toward an Individualized Approach to Psoriasis Care: Assessing the Benefits and Risks of Current and Emerging Therapies Case Presentation: The didactic talk will conclude with a clinical case focused on the individualized treatment of psoriasis, and audience will be polled on their management approach.
5 min	Post-test
10 min	Question and Answer

ACTIVITY #2: Patient Case Study (500 credit earners)

This activity provides a practical, hands-on application of psoriasis educational through case-based learning in a concise, quick-hitting format. Interaction with key information using a patient case reinforces learning and specific competencies as the second activity in the psoriasis curriculum. The online interactive case activity is certified for up to .50 *AMA PRA Category 1™* credits or AANP contact hours.

ACTIVITY #3: Expert Perspective: Your Questions Answered (1,000 credit earners)

This activity features Q&A with expert faculty using the 200+ questions that are posed before & during the Virtual Expert Roundtable. Faculty will consolidate psoriasis questions into distinct categories and prepare a follow-up expert response to “Frequently Asked Questions” about psoriasis in Primary Care. The online activity is certified for up to .05 *AMA PRA Category 1™* credits or AANP contact hours.

Reference pages at the end of each activity will link Pri-Med clinicians to Professional and Patient Ed resources on the National Psoriasis Foundation website:

<https://www.psoriasis.org/health-care-providers/for-your-patients>

Program Schedule:

Learners will be introduced to the curriculum in March 2016 with the live broadcast of the Virtual Expert Roundtable . Program registration opens and marketing campaign begins 6 weeks prior to the live broadcast. At the same time as the live broadcast both the Patient Case Study and Expert Perspective will launch in the same curriculum page that houses the enduring Virtual Expert Roundtable. The curriculum page will be marketed to all registrants of the VER, and a link will be provided at the conclusion of the broadcast to encourage learners to complete all activities in the curriculum page. Content development for the Virtual Expert Roundtable will begin in January 2016, and two faculty will be asked to extend the content development into the Expert Perspective and Patient Case Study activities beginning in February 2016.

Table 8: Workplan Schedule (subject to change)

Activity	Target Launch Date	End Date	Quarterly Outcome Reports
Virtual Expert Roundtable	Live Broadcast 3/24/2016	March 24, 2017	6/2016, 9/2016, 12/2016, 3/2017
Patient Case Study	March 24, 2016	March 24, 2017	6/2016, 9/2016, 12/2016, 3/2017
Expert Perspective	March 24, 2016	March 24, 2017	6/2016, 9/2016, 12/2016, 3/2017

PRI-MED'S REAL WORLD EVIDENCE OUTCOMES PLATFORM

Pri-Med is the only medical education company in the United States offering a **closed-loop primary care learning platform**, formed by the seamless integration of its' leading electronic health record company (Amazing Charts), its' proprietary Precision CME data-analytics engine, and a national education network with more than 275,000 registered primary care practitioners (Pri-Med Live and Digital). This integrated platform enables deep research into the practice patterns of front-line Providers, geographically dispersed throughout the U.S., and offers Pfizer and the NPF an opportunity to support immediately actionable, (impact) quantifiable education.

Outcomes Analysis

Central to Pri-Med's unique ability to develop and measure Program education, is its' Real World Evidence research platform consisting of 5,000,000(+) active patients and more than 6000 providers. These de-identified (but uniquely coded) patient records reside in a cloud-based clinical data warehouse (CDW) that is *refreshed nightly* with data from Amazing Charts electronic health record system. Importantly, Provider data is identified, enabling re-creation of patient panels within a HIPAA compliant, de-identified environment. This 1:1 attribution makes longitudinal patient mapping, and Moore's Level 5 & 6 Outcome assessments, achievable for the cohort of Amazing Charts providers who also complete Pri-Med educational courses.

Patient & Provider Segmentation:

Table 9: Amazing Charts Segmentation

	Practices	Providers	Patients	Amazing Charts Prevalence	National Prevalence
Psoriatic Arthritis*	1,411	2,218	7,705	0.2%	0.4%
Psoriasis (including Skin)	2,323	3,994	42,387	1%	2%

Disease and Nail Disease)*					
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*From Q2, 2015, 4.5M patients ICD 9/10 696 L40

Longitudinal Analysis within the CDS: Learning Analytics™

Table 9 illustrates a provider segmentation based upon (specific) patient panel characteristics making longitudinal analysis including diagnosis, prescription, and referral data possible (note: availability varies by data element, but a sizable sample is available and used to establish Provider practice patterns). Pri-Med’s *Clinical Research Team* combines these key data elements in specific sequences (and within specific timeframes) to assess Provider treatment methods relative to Evidence-Based Treatment Guidelines and Recommendations (e.g., a diagnosis *followed by* a medication therapy, *followed by* a referral to a specialist, suggesting medication failure to control disease progression or complication). This string of data variables combine to form computer-based rules called **Learning Analytics™** that are applied to patient data within the CDW (see Table 10), assessing risk-benefit profiles of available and emerging treatments for psoriasis, including topical, oral and biologic agents (consistent with stated Learning Objectives).

Table 10: Learning Analytics example

PCP "A"	Level 1	Patients with Psoriasis Dx	
	Level 2	(+) topical mono medication therapy	
	Level 3	(+) referral to (defined) Specialist	0

Learning Analytics use data within the electronic medical record to re-create Provider practice pattern(s). The same Learning Analytic establishes pre-education base-line measurement for Moore’s Level 5 or 6 Outcome assessment, and post-education outcomes measurement (i.e. measuring patient volume in each Level suggests changes to treatment pattern). Learning Analytic(s) presented in this Proposal will be deployed once *before* Program launch and once *after* total Program completion.

Outcome Study Design

A retrospective observational study will measure educational impact relative to Program participant practice pattern(s), suggesting Provider alignment with Evidence Based Treatment Guidelines and Learning Objectives.

- The Analysis Period will be 12/24/15* – 6/24/17
*a 90 day pre/post-evaluation period, relative to Program start/finish, enables practice pattern comparison
- A two Arm Study including an **Intervention Group** (Amazing Charts EHR Providers who completed ≥1 educational session) and a matched **Control Group** (Amazing Charts EHR Providers who did not participate in any part of the Program).

- ❑ Control criteria: Size of patient panel, self-reported specialty (PCP), patient comorbidity profile, and provider zip code.
 - Final (matched) Control from available universe is then selected by *randomizing software*.
- ❑ Primary Endpoints (also see Learning Analytics section):
 - Provider Diagnosis rates of patients with moderate to severe plaque psoriasis
 - Provider use of or changes to existing topical mono prescription therapy
 - Provider referral rates to Dermatologist / Rheumatologist
 - Provider engagement with PASI screening tool (scores also measured, if available)

Learning Analytics

The below Learning Analytics are included in this Program (in narrative form, subject to Study design methodology):

1. Provider Diagnosis rates for atopic dermatitis and chronic plaque psoriasis (moderate-severe classification, as available).
2. Provider referral rate.
 - 2a. Provider referral rate after use of topical monotherapy therapy (including discontinuation, switching or titration) over a defined time period.
3. Provider download metrics for PASI tool.

FACULTY

Faculty will be considered from the following standpoints: review of publications, presentations at professional education forums, adherence to fair balance, ability to effectively present information in accordance with adult learning principles, and availability.

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