play response data. Analysis by question, category and demographic descriptor was performed. RESULTS: A majority of learners were satisfied with the training and reports no significant miscommunication within 4 weeks. Learners reported a notable increase in improving animal health and production as a result of the training. Most learners (>90%) view the program as a worthwhile investment in their career. Significantly less managers feel the same way (45%). The calculation results for the top 25% benchmark job impact is due to training is 1.7 times the top 25% benchmark. Surprisingly, those with greater than 10 years tenure find the program to be just as worthwhile or more compared to the other tenure groups and the largest group with the longest tenure also saw the greatest job impact from the training. CONCLUSIONS: The training provides much needed resources for the industry since most learners found it worthwhile investment and the ROI calculation is high. This analysis allows for data driven decisions to be made for program adjustment and learner selection.

PIH44 TRENDS IN PATIENT CENTERED RESEARCH IN THE PUBLISHED LITERATURE
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OBJECTIVES: In a previous study we found a steep increase in the use of the term “patient-centered” in the published literature from <1 articles in the 1960s to >3000 in the 2010s. We also noted an increase in the proportion of articles in each decade reporting original research (17 vs 90%). The objective of this study was to further examine the subset of articles reporting original research. METHODS: We searched EMBASE for articles written in English between 1950-2013 with ‘patient-centered’ in the title or abstract. We selected a random sample of 10 articles within each decade and recorded data from the title and abstract on the focus of the article (healthcare research, or teaching). We selected those focused on research and extracted additional data on the study design, data collection methods, number of cases, comparator group, and statistics used. We examined trends in these variables over time using tabular and graphical methods. RESULTS: Our search identified 5051 publications, of which 2222 reported original research, from 1966-2013. Articles in earlier decades tended to report qualitative research (>50%), whereas articles published in recent decades used more sophisticated study designs (>75%). The majority of studies in all decades employed descriptive statistics, however multivariate methods were used in 25% of studies in the 2010s. The use of a comparator group (16 vs 50%) and the average number of cases (38 vs 667) also increased steadily over time. CONCLUSIONS: In addition to the increase in original research publications with “patient-centered” in the title or abstract over the last 50 years, we observed an increase in scientific and methodological rigor among these original research articles. These findings are consistent with the rise in personalized-medicine in the healthcare industry today, as well as the upsurge in the use of patient-reported outcome data that characterizes clinical research today.

PIH45 CAN A WEB-BASED TOOL TO FACILITATE COMMUNICATION BETWEEN PATIENT AND HEALTHCARE PROVIDERS IMPROVE PATIENT-REPORTED OUTCOMES?
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OBJECTIVES: Patients with barriers such as normal anxiety around illness, low awareness of potential impact, or difficulty communicating with their healthcare providers (HCP) may have trouble communicating with their healthcare providers (HCP). HCPs are under increasing pressure to see more patients daily. Can a web-based training and worksheet help patients have improved outcomes, even in patients with normal anxiety around illness, low awareness of potential impact, or difficulty communicating with their healthcare providers (HCP)? Methods: We conducted a randomized controlled trial to test the impact of a web-based training and worksheet on PROs in patients with psoriasis. Patients with moderate to severe psoriasis were enrolled in two large national health systems. The training provides a detailed functional impact statement around daily activities of living and was included a functional impact statement around daily activities of living and produced an electronic, printable worksheet that contained the following: a detailed functional impact statement around daily activities of living and captured data from the title and abstract on the focus of the article (healthcare, research, or teaching). We selected those focused on research and extracted additional data on the study design, data collection methods, number of cases, comparator group, and statistics used. We examined trends in these variables over time using tabular and graphical methods. RESULTS: Our search identified 5051 publications, of which 2222 reported original research, from 1966-2013. Articles in earlier decades tended to report qualitative research (>50%), whereas articles published in recent decades used more sophisticated study designs (>75%). The majority of studies in all decades employed descriptive statistics, however multivariate methods were used in 25% of studies in the 2010s. The use of a comparator group (16 vs 50%) and the average number of cases (38 vs 667) also increased steadily over time. CONCLUSIONS: In addition to the increase in original research publications with “patient-centered” in the title or abstract over the last 50 years, we observed an increase in scientific and methodological rigor among these original research articles. These findings are consistent with the rise in personalized-medicine in the healthcare industry today, as well as the upsurge in the use of patient-reported outcome data that characterizes clinical research today.

PIH46 PATIENT REPORTED OUTCOMES: ARE THEY RELEVANT TO U.S. PAYERS?
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OBJECTIVES: To identify the current and future relevance of Patient Reported Outcomes (PROs) among U.S. payers making patient access decisions for pharmaceuticals. METHODS: Double blind, semi-structured telephone interviews with 12 U.S. payers, including: National and regional commercial payers, Accountable Care Organizations, Pharmacy Benefit Managers, Self-insured employers, Actuaries; Veterans Affairs; and Department of Defense. Interviews included open-ended questioning and structured rating scales where 10=highest and 1=lowest possible score per concept. RESULTS: Payers perceive PROs as the, “Consequences of the disease and drug as assessed by the patient.” Average rating scale responses were

How relevant are PROs today? 3.7 in 5 years? 6.4 Would you like to see more PROs today? 6.4 in 5 years? 6.6 Should pharmaceutical companies invest more in PROs today? 5.6 in 5 years? 6.3 The sum of the 6 scales (min= 6, max = 60) ranged from 12 to 58, highlighting diversity across payers. PRO relevance was associated with the duration of enrollment and thus total amount of risk. DoD and ACOS reported the highest relevance in the Office of Commercial Health plans the lowest. Education was consistently identified as a need to aid interpretation of PRO data to support patient access decisions. CONCLUSIONS: Payers’ reliance on PRO data will increase in the next five years, especially in symptomatic conditions with objective measures of success. PRO evidence is valued as a unique predictor of clinical and economic outcomes and as a key element of performance and quality ratings.

PIH47 FOR TWO COMPANIES THE FDA PRO GUIDANCE LEADS TO SIMILAR BUT DIFFERENT MEASURES: A CASE STUDY IN PSORIASIS
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OBJECTIVES: The objective of this research is to evaluate whether the 2009 FDA PRO Guidance leads to development of similar measures when followed by different researchers in the same disease. Psoriasis was selected as a case study, because two companies recently published patient-reported outcome measures to assess the severity of psoriasis-related symptoms: the Psoriasis Symptom Inventory (PSI) and the Psoriasis Symptom Diary (PSD). METHODS: Full-length publications related to the development of the PSI and PSD were reviewed. The objectives of the study were regarding the development process and key aspects pertinent to the PRO Guidance were extracted and compared: patient population, development steps (literature review, item generation, item reduction, expert review), content of final measure, recall period, response options, and scoring. The authors conducted a qualitative evaluation of the differences between the measures. RESULTS: Both measures focus on symptoms of moderate to severe psoriasis. Both measures were based on literature reviews, patient input, and expert opinion and had similar psychometric properties. Both measures have a 24-hour recall period. However, the measures consist of different numbers of disease-specific symptoms (PSI = 8, PSD = 6). The PSI consists of 16 items (bother of symptoms = 8, severity of symptoms = 8). The PSD consists of 6 items (bother of symptoms = 6, severity of symptoms = 6). Additionally, the measures assess symptoms differently: The PSI uses a 5-point Likert scale, while the PSD uses an 11-point numeric rating scale; both measures equate higher scores with greater severity. CONCLUSIONS: This example demonstrates that when different expert developers/patient-reported outcomes assessors as to align with the FDA PRO Guidance, the result is similar but not identical.

PIH48 SWITCHING IN PART D PRESCRIPTION PLAN: PLAN SWITCHING VS BRAND NAME DRUG SWITCHING
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OBJECTIVES: There is a dearth of evidence on factors influencing prescription plan switching versus switching from brand name drug to generic one. However, either of this kind of decision can impact costs and patient access decisions. We hypothesize that physicians produce an electronic, printable worksheet that contained the following: a detailed description of their primary complaint, including location, duration, and intensity according to Likert scale, correlation to activity, quality, and history. The workflow also includes a structured literature review to identify influencers in the translation of PROs, issues regarding the development process and key aspects pertinent to the PRO Guidance were reviewed. The authors conducted a qualitative evaluation of the differences between the measures. RESULTS: Both measures focus on symptoms of moderate to severe psoriasis. Both measures were based on literature reviews, patient input, and expert opinion and had similar psychometric properties. Both measures have a 24-hour recall period. However, the measures consist of different numbers of disease-specific symptoms (PSI = 8, PSD = 6). The PSI consists of 16 items (bother of symptoms = 8, severity of symptoms = 8). The PSD consists of 6 items (bother of symptoms = 6, severity of symptoms = 6). Additionally, the measures assess symptoms differently: The PSI uses a 5-point Likert scale, while the PSD uses an 11-point numeric rating scale; both measures equate higher scores with greater severity. CONCLUSIONS: This example demonstrates that when different expert developers/patient-reported outcomes assessors as to align with the FDA PRO Guidance, the result is similar but not identical.

PIH49 A CONCEPTUAL FRAMEWORK FOR TRANSLATING PATIENT-REPORTED OUTCOMES FOR IMPLEMENTATION IN CLINICAL PRACTICE AND QUALITY IMPROVEMENT EFFORTS
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OBJECTIVES: As healthcare becomes more patient-centered, patient-reported outcomes become an increasingly important aspect of each patient encounter. The objective of this study was to define a conceptual framework on the criteria for defining, implementing, and translating PROs into valid, reliable measures of performance. METHODS: Conducted a structured literature review to identify influencers in the translation of PROs, issues that impact translation, and relationships between key variables. RESULTS: Various