

Why Outcomes, Why FOTO?



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Disclosures: none

Outcome Measures Defined



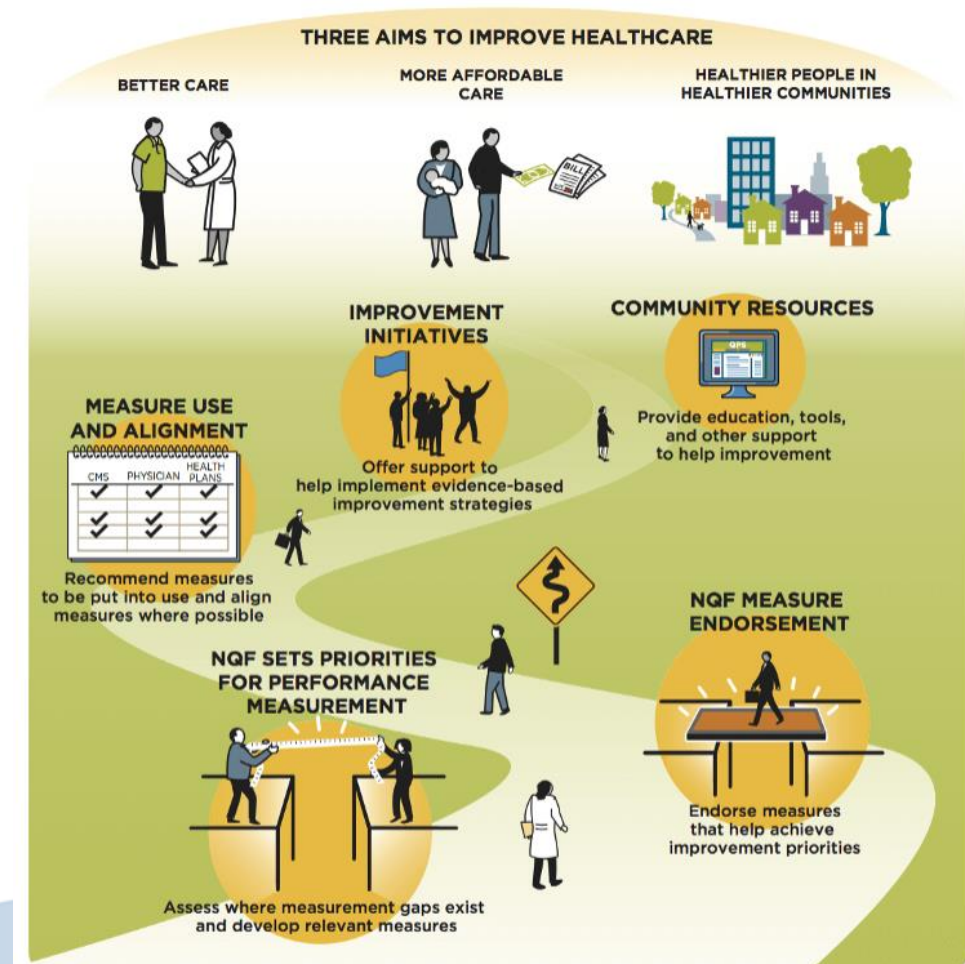
**World Health
Organization**



- “Change in the health of an individual, group of people, or population that is attributable to an intervention or series of interventions.”

Why Measure Outcomes?

- The quadruple aim of healthcare:
 - Improve the patient experience of care
 - Improve the health of populations
 - Reduce the per capita cost of healthcare
 - Reduce clinician and staff burnout



Why Measure Outcomes?



- uses outcomes to calculate overall hospital quality:
 1. Mortality 22%
 2. Safety of care 22%
 3. Readmissions 22%
 4. Patient experience 22%
 5. Effectiveness of care 4%
 6. Timeliness of care 4%
 7. Efficient use of medical imaging 4%

Why Measure Outcomes?

Becoming standard practice, the new norm



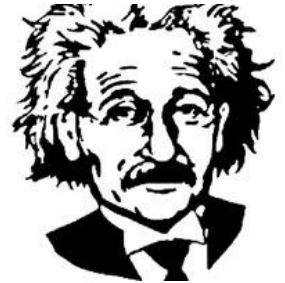
Aligns with VH Driving Strategies



- practitioners who want to measure and compare their outcomes to others
- policy makers such as CMS as we shift from volume based to value based payment
- payers

Why Measure Outcomes?

- *“Learn from yesterday, live for today, hope for tomorrow. The important thing is not to stop questioning.”*
- *No quantifying way to know if patients are actually improving*
- *Research shows therapists overestimate their rates of improvement and underestimate their rates of decline*
- *Research shows effectiveness plateaus and may even diminish unless you measure outcomes*
- *The therapist accounts for 5-9x the influence on outcomes than the treatment approach (psychotherapy research)*
- *Routine measurement and feedback results in better outcomes (psychotherapy and PT research)*
- <https://youtu.be/5MW5Gmg2iMI>



What Are PROs and PROMs

- Patient-Reported Outcome (PRO)
 - A broad term for anything patient reported
 - A result or end state (measuring an intermediate state is not an outcome)
- Patient-Reported Outcomes Measure (PROM)
 - Any instrument, scale, or single-item measure used to assess the PRO concept as perceived by the patient, obtained by directly asking the patient to self-report



PROs and PROMS

- <https://youtu.be/IKkmp4viLD4>

What are the limitation of outcomes?

- Lack of standardization
- Need to measure the right thing, not just process compliance



Why Choose FOTO?

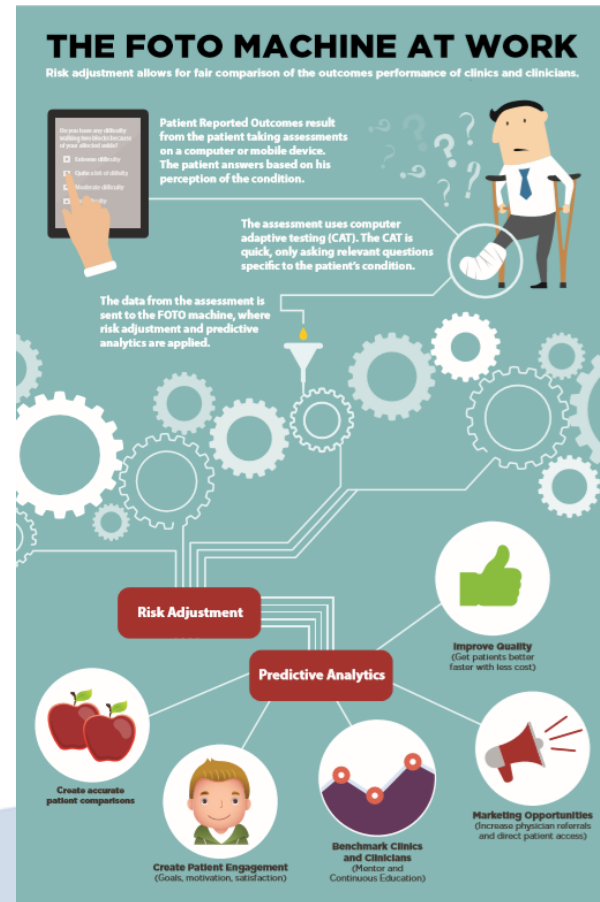


- Focus On Therapeutic Outcomes is a company that developed a function based outcomes measure for therapy in 1992
 - Measures the “right thing”, patient reported function
 - Valid and reliable standardized PROM
 - Takes patients 7 minutes on average to complete
 - Results immediately available for clinician and patient



What Is FOTO?

- FOTO is a PROM that precisely measures patient function using Computer Adaptive Testing (CAT)
- FOTO allows you to easily engage and motivate patients.
- FOTO utilizes strong risk adjustment algorithms to predict outcomes.
- FOTO provides risk adjusted benchmarked rankings for fair comparison.



What Is Risk Adjustment?

New - 13 FOTO risk adjustment factors:

1. Care Type
2. Impairment/Body Part
3. Intake Score (Continuous Variable)
4. Gender (2 Variables)
5. Age (Continuous Variable)
6. Acuity (7 Variables)
7. Surgical History (4 Variables)
8. Exercise History (3 Variables)
9. Medication Use for Condition (2 Variables)
10. Number of Comorbidities (30 Variables)
11. Payer Type (16 Variables)
12. Previous Treatment for Condition (2 Variables)
13. Post Surgical Type (70 - 80 Variables)

- How does it work?

Risk Adjustment & Predictive Analysis

What is Benchmarking?

Benchmark Comparison

What is Functional Staging?

Clinical Interpretation: What Does My Patient's Score Mean?

Shoulder Functional Staging				
Stage 1 Exceedingly Limited	Stage 2 Poor	Stage 3 Fair	Stage 4 Good	Stage 5 Excellent
Unable to perform or limited a lot performing light routine activities using the affected arm like taking off glasses, flushing the toilet, turning a faucet or washing the face.	Regained limited functioning and can perform light daily activities with some difficulty but still has much difficulty performing moderate upper extremity activities such as picking up and drink out of a full water glass, pulling a chair out from a table,	Can perform light daily activities with little difficulty and moderate daily activities with some difficulty but still has much difficulty with heavy activities such as reaching an overhead shelf.	Routine daily activities with no difficulty but still has a little difficulty with heavy activities that require a combination of good range of motion, strength, and endurance such as working overhead for more than 2 min, or touching an object on the back seat while sitting in the front seat of a car.	No difficulty using the affected arm to perform almost any rigorous activity..
0-24	25-43	44-59	60-80	81-100

Wang YC, Hart DL, Cook KF, Mioduski JE. Translating Shoulder Computerized Adaptive Testing Generated Outcome Measures into Clinical Practice. *J Hand Ther.* 2010;23:372

-83.

Functional Staging

Functional Staging Articles

- **Foot Ankle** (Wang YC, Hart DL, Stratford PW, Mioduski JE. Clinical interpretation of computerized adaptive test outcomes measures in patients with foot/ankle impairments. JOSPT. 2009;39(10):753-764.)
- **Knee** (Wang YC, Hart DL, Stratford PW, Mioduski JE. Clinical interpretation of computerized adaptive test-generated outcome measures in patients with knee impairments. Arch Phys Med Rehabil. 2009;90(8):1340-8.)
- **Lower Extremity** (Wang YC, Hart DL, Stratford PW, Mioduski JE. Clinical interpretation of a lower-extremity functional scale-derived computerized adaptive test. Phys Ther. 2009;89(9):957-968.)
- **Lumbar** (Wang YC, Hart DL, Werneke MW, Stratford PW, Mioduski JE. Clinical interpretation of outcomes measures generated from a lumbar computerized adaptive test. Phys Ther. 2010;90(9):1323-1335)
- **Shoulder** (Wang YC, Hart DL, Cook KF, Mioduski JE. Translating shoulder computerized adaptive testing generated outcome measures into clinical practice. J Hand Therapy. 2010;23(4):372-83.)

It's Easy for Patients

YOUR INPUT IS AS EASY AS

1

Initial assessment
at intake

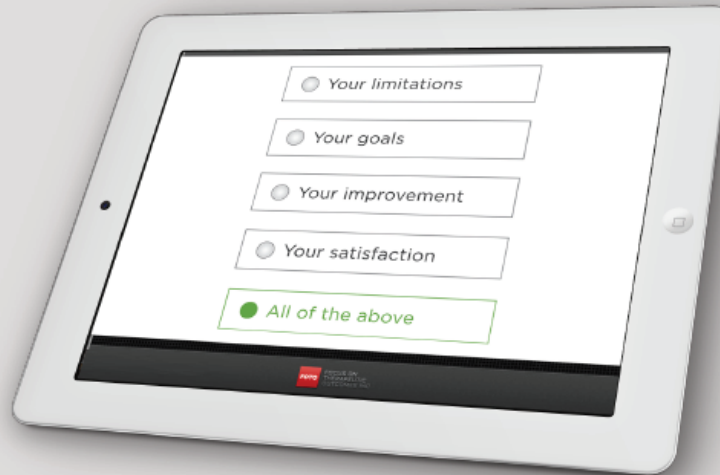
2

Progress assessment
during treatment

3

Final assessment
at discharge

Completing your assessment
will help us better understand:



Example: Patient Intake Report

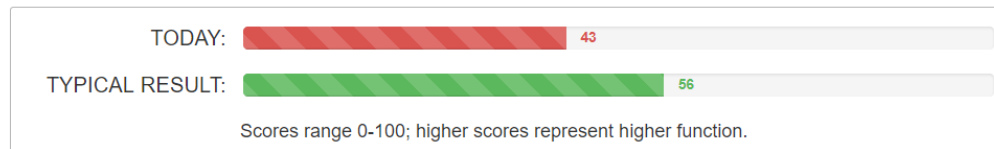


English

DHayesTest

Your Neck Function Report

Thank you for your responses! Here is your functional score **TODAY** and the **RESULT** that people similar to you **TYPICALLY** experience by the end of therapy.



[+](#) Here are the questions we asked and how you responded today:

[Email Me](#)

[Continue](#)

Talk to your clinician about these results!

What can you do to get the best results?

- Do your home exercises as prescribed by your clinician
- Attend all scheduled appointments

Example: Patient Status Report

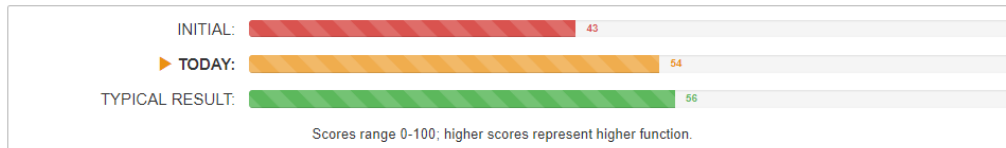


English

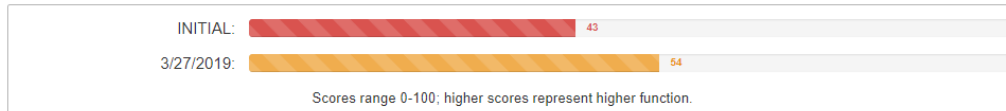
DHayesTest

Your Neck Function Report

Thank you for your responses! Here is your functional score TODAY, your INITIAL score, and the RESULT that people similar to you TYPICALLY experience by the end of therapy.



Previous Scores



+ Here are the questions we asked and how you responded today:

Email Me

Continue

Talk to your clinician about these results!

What can you do to get the best results?

- Do your home exercises as prescribed by your clinician
- Attend all scheduled appointments

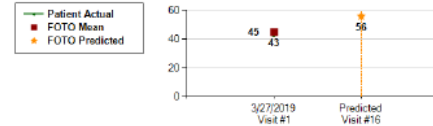
Example: Clinician Intake Report

DHayesTest - DHayesTest

INTAKE FUNCTIONAL STATUS SUMMARY (3/27/2019)

Patient:		Risk-Adjustment Criteria	
ID#	SAMPLE, SOPHIE test 9459	Care Type:	Orthopedic
Date of Birth:	9/9/1990	Severity:	Severe (Intake FS: 43)
Initial DOS:	3/27/2019	Payer:	Workers' Comp
Body Part:	Neck	Acuity:	91 days - 6 months
Impairment:	Post-surgical procedures: Muscul...	Surgeries:	1
Surgery Type:	Anterior Cervical Fusion single level	Medication:	Yes
Surgery Date:	01/19/2019	Specific Comorbidities	
		Body Part:	Neck
		Gender:	Female
		Age:	28
		Specific Surgical Code	
		Prev Exercise:	Once or twice a week
		Prev Treatment:	No

Functional Status Measures:	Intake Score	Interpretation of FS Scores
Patient's Physical FS Primary Measure	43	Patient's intake functional measure is 43 out of 100 (higher number = greater function).
Risk Adjusted Statistical FOTO*	45	Given the patient's risk-adjustment variables, like-patients nationally had a FS score of 45 at intake.



Rehabilitation Resource Predictor*	Predicted Value	Interpretation of Predicted Value
Points of Physical FS Change	13	
Discharge FS Score	56	Given this patient's risk-adjustment variables, and the actual Intake FS score, FOTO predicts this patient will experience at least an increase in function of 13 points (to 56 or higher).
Visits per Episode	16	
Duration of Episodes in Days	65	
Average Satisfaction Score**	97.0 %	

* The above predictions are calculated based on
 1) patients who have previously utilized rehabilitation services from FOTO's national aggregate database and
 2) using sophisticated analyses to risk adjust for the impact of multiple variables across several distinct constructs as shown in the Risk Adjustment Criteria section of this report.
 ** Average discharge satisfaction for patients with same care type and body part or impairment

What Does This Mean For Improving Function

This chart displays the patient responses to the functional activities contained in the intake survey that generated the intake FS score. The activities are presented in the descending order of difficulty. Responses listed in the Intake column are the survey item levels of ability at intake.

Patient responses to functional health questions that indicate dysfunction were as follows:

Activity (Question)	Amount of Limitation (Response) at Intake
Looking up to see a bird	Quite a bit of difficulty
Using a vacuum cleaner	Quite a bit of difficulty
Reaching a shelf that is shoulder height	A little bit of difficulty
Combing or brushing your hair	Moderate difficulty
Looking down to see your shoes	A little bit of difficulty

Additional Intake Information Gathered for the Clinician

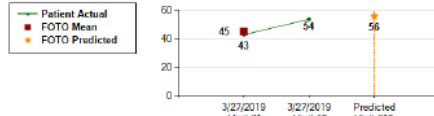
- Patient reports other health problems as: Asthma, Headaches, Sleep dysfunction
- BMI: 22.1 (Height: 63 inches, Weight: 125 lbs)
- Exercise prior to onset: Patient completed 20 minutes of exercise once or twice a week
- Prescription medicine: Patient is taking prescription medicine for this condition

Example: Clinician Status Report

DHayesTest - DHayesTest
FUNCTIONAL STATUS SUMMARY (3/27/2019)

Patient: SAMPLE, SOPHIE	Risk-Adjustment Criteria	
ID# : test 9459	Care Type: Orthopedic	Body Part: Neck
Date of Birth: 9/9/1990	Severity: Severe (Intake FS: 43)	Gender: Female
Initial DOS: 3/27/2019	Payer: Workers' Comp	Age: 28
Body Part: Neck	Acuity: 91 days - 8 months	Specific Surgical Code
Impairment: Post-surgical procedures: Muscul...	Surgeries: 1	Prev Exercise: Once or twice a week
Surgery Type: Anterior Cervical Fusion single level	Medication: Yes	Prev Treatment: No
Surgery Date: 01/19/2019	Specific Comorbidities	

Function Status Measures:	Intake Score	03/27/2019 Score	Interpretation of FS Scores
Patient's Physical FS Primary Measure	43	54	Patient's Intake FS Score was 43
Risk Adjusted Statistical FOTO*	45		Given the patient's risk-adjustment variables, like-patients nationally had a FS score of 45 at intake.



Additional Items	FOTO Mean at Discharge	03/27/2019 Value	Interpretation of Predicted Value
Points of Physical Change	13	11	Given this patient's risk-adjustment variables, and the actual Intake FS score, FOTO predicts this patient will experience at least an increase in function of 13 points (to 56 or higher).
Visits	16	6	
Duration in Days	65	0	
Average Satisfaction Score	97.0%	87.5%	

What Does This Mean For Improving Function

This chart displays the patient responses to the functional activities contained in the intake survey that generated the intake FS score. The activities are presented in the descending order of difficulty. Responses listed in the Intake column are the survey item levels of ability at intake.

Patient responses to functional health questions that indicate dysfunction were as follows:

Activity (Question)	Amount of Limitation (Response) at:	
	Intake	Status
Placing a 25 lb. box on a shelf overhead	--	Extreme difficulty or unable to perform
Sitting performing light desk work for 8 hours	--	Moderate difficulty
Moving your head quickly, such as following a loud noise	--	A little bit of difficulty
Turning to look behind you to drive a car	--	Moderate difficulty
+ Looking up to see a bird	Quite a bit of difficulty	A little bit of difficulty
Using a vacuum cleaner	Quite a bit of difficulty	--
Reaching a shelf that is shoulder height	A little bit of difficulty	--
Combing or brushing your hair	Moderate difficulty	--
Looking down to see your shoes	A little bit of difficulty	--

Additional Intake Information Gathered for the Clinician

DHayesTest - DHayesTest
FUNCTIONAL STATUS SUMMARY (3/27/2019)

Patient: Sample, Sophie (test 9459) Primary Body Part: Neck Initial DOS: 3/27/2019

- Prescription medicine for this condition: Yes, less than before

Patient Satisfaction Summary for 3/27/2019:

I am somewhat satisfied with the information given about my condition.

I am very satisfied with my input in setting treatment goals.

I am somewhat satisfied with the availability of convenient appointments.

I am very satisfied with the access to the facility location.

I am very satisfied with the level of courtesy and respect shown to me by my treatment team.

I am somewhat satisfied with the treatments for my condition.

I am somewhat satisfied with the overall results of my treatment.

I would tell a friend that I was very satisfied with my experience at this facility.

Example: Report Portal

Welcome: judyholder@fotoinc.com, [Account](#), [Log off](#)

Filters:

Clinic: Email: clinic_contact_email@yourdomain.com

Clinician:

CareType/Impairment:

Outcomes Period: Ending:

Easy to sort data by clinic or clinician

- News
- Scorecard
- Profile
- Satisfaction
- Group Management
- Activity
- Payer
- PQRS
- Help

Scorecard: ABC Hospital

Risk adjusted functional status change as compared with national benchmark

Overall satisfaction (60578): 97.83%, # patients: 4376, FOTO average: 97.72%, for last 12 months

Color Key => **Green**: Better than Predicted, **Yellow**: Within 95% Confidence Interval, **Red**: Outside 95% Confidence Interval, **Blue**: < 5 episodes
 * - estimated ranking (minimum criteria 40 complete episodes)

Scorecard, 12 Month Period Ending: 03/2013		Care Type: Impairment	Number of Episodes			Utilization (Info)				Effectiveness			Efficiency	
Group	Clinician		In FS	w/ Intake & Dischge	Comp Rate (%)	High %	Expect %	Low %	Rank %	FS Change	Predicted	Rank %	# Visits	Predicted
60578	ALL	Ortho: All	4664	5597	82	43	30	27	73	18.71	15.44	72	11.28	12.30
60578	ALL	Ortho: Shoulder	808	987	82	39	31	30	60	20.27	19.01	58	14.05	14.03
60578	ALL	Ortho: Wrist/Hand	263	327	80	50	24	26	82	15.48	11.66	87	10.50	12.10
60578	ALL	Ortho: Elbow	142	169	89	38	36	27	63	11.89	11.18	47	11.26	12.39
60578	ALL	Ortho: Cervical	434	558	78	43	28	29	68	16.86	14.04	66	9.41	11.13
60578	ALL	Ortho: Hip	259	311	83	47	29	24	80	16.78	13.54	76	10.57	11.77
60578	ALL	Ortho: Knee	854	1028	83	43	30	27	75	20.94	17.07	73	11.98	13.19
60578	ALL	Ortho: Foot/Ankle	731	841	87	44	31	25	79	21.86	16.02	91	11.71	12.35
60578	ALL	Ortho: Lumbar	995	1278	78	42	31	27	66	16.42	13.51	66	9.43	10.90
60578	ALL	Ortho: Other	61	84	73	39	25	36	53	20.58	14.91	80	9.36	10.41
60578	ALL	Neuro: All	42	51	82	54	32	15	92	14.94	11.20	80	10	15.66
60578	ALL	Neuro: CVA	13	15	87	83	8	8	96	14.09	9.33	72	10.92	19.67
60578	ALL	Neuro: PNS	1	1	100	0	0	100	*	7.33	14.09	*	8	12.38
60578	ALL	Neuro: Vertigo	5	5	100	20	60	20	* 48	15.91	15.18	* 63	5.40	7.09
60578	ALL	Neuro: Other	23	30	77	48	39	13	70	15.33	11.18	67	10.61	15.66

Justifying Quality



The Science of FOTO

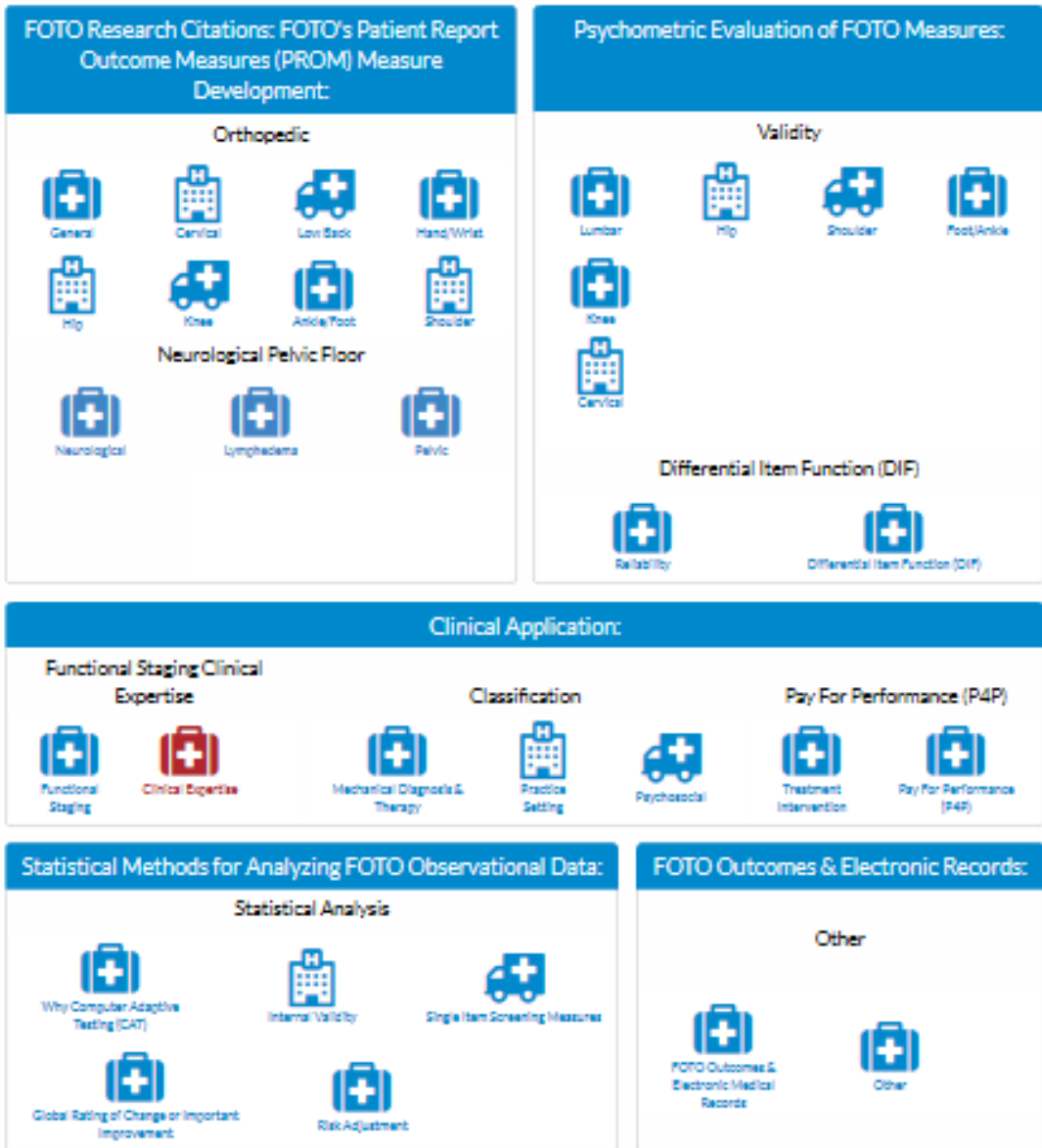
"In God we trust – everyone else bring data." Dennis L. Hart, PT, PhD

original quote by W. Edwards Deming

101 

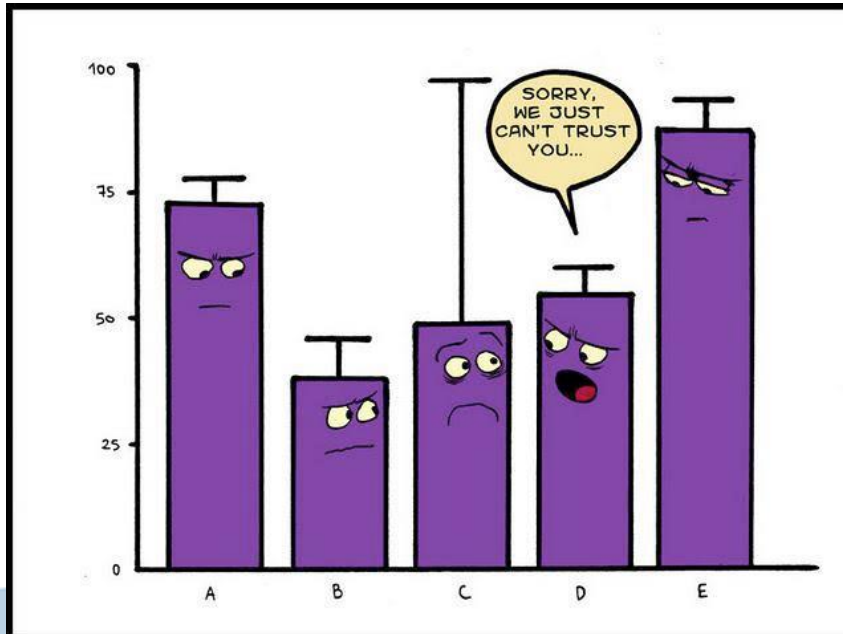
Articles and Counting...

Supporting Research by Topic



Why Use FOTO?

- Improves your bottom line
 - risk adjustment allows for fair and accurate comparison of patient outcomes



1 Increase Productivity

Time to Obtain a Patient Self-Report Score	Time to Input Data for End of Episode	Time to Share Clinical Performance
Manual 15-20 min., Not Scored	Manual Depends, Incomplete Data	Manual 1-2 Hour Group Meeting
FOTO 3 min., Scored	FOTO 30 Sec., Full Data Set	FOTO 5 Min., Real Time

2 Increase Patient Satisfaction and Decrease No Shows & Cancellations

Happy patients have their needs met and spread the word about your services. Missed patient appointments affect your patients' outcomes and your business.

Industry Average	FOTO
15% Cancel / No Show Rate	6% Cancel / No Show Rate

3 Increase Patient Referrals by Marketing

Physicians	Patients
Third party measurement of quality increases trust	Save time and money by creating visuals that focus on results and differentiate you from competitors
Easily share reports with physicians to increase referrals	Easily share to your website and social media

Why Use FOTO?

- https://youtu.be/6d_gPBAu4Wg

Valley Health Rehabilitation's Orthopedic Score Card

Outcomes Period: Last 12 months Ending: 09/2019 Preliminary (not final). Includes episodes through 10/11/2019

News Scorecard & Satisfaction Profile Awards Marketing Tools Help

[Guide to Scorecard](#)

Group: Valley Health System

Care Type: Orthopedic (5319) Bodypart/Impairment:

Payer Type:

Surgical Code:

Impairment:

Completion Rate Utilization Effectiveness Efficiency Duration Satisfaction Key Process Indicators Non Participation Completion Rate Tbl

Scorecard 12 month period ending 09/2019, Group: Valley Health System, Care Type: Orthopedic

Care Type: Impairment	Completion Rate (#Complete Discharged Episodes / #Intakes)			Utilization				Effectiveness			Efficiency	
	Intakes	Complete Discharged Episodes	Rate	More Effective /Efficient	Expect	Less Effective /Efficient	Pct Rank	FS Change	Predicted	Pct Rank	#Visits	Predicted
Orthopedic: All (Summary)	7470	5319	71%	37%	32%	30%	65	16.12	15.56	57	11.32	12.26
Orthopedic: Shoulder	1177	928	79%	34%	35%	31%	62	17.13	19.06	45	12.96	13.85
Orthopedic: Wrist/Hand	798	505	63%	41%	35%	24%	73	18.79	18.42	64	9.17	11.38
Orthopedic: Elbow	229	136	59%	38%	29%	32%	58	18.51	16.91	55	10.80	10.94
Orthopedic: Cervical	606	433	71%	44%	29%	26%	73	12.85	10.98	67	9.50	10.90
Orthopedic: Hip	679	511	75%	37%	32%	31%	66	14.90	13.74	57	11.99	12.50
Orthopedic: Knee	1399	1067	76%	35%	35%	30%	65	18.85	17.70	53	12.14	13.00
Orthopedic: Foot/Ankle	526	352	67%	40%	31%	30%	71	19.24	17.08	71	11.78	12.39
Orthopedic: Lumbar	1739	1164	67%	39%	32%	29%	68	13.29	12.44	59	10.24	11.34
Orthopedic: Other	317	223	70%	28%	30%	42%	42	10.33	10.45	53	12.57	11.46

Winchester Medical Center's Pelvic Floor Score Card

[Guide to Scorecard](#)

Group: Valley Health System

Bodypart/Impairment: Bwl Leak (12) ▾

Payer Type: ▾

Impairment: ▾

Completion Rate Utilization Effectiveness Efficiency Duration Satisfaction Key Process Indicators Non Participation Completion Rate Tbl

Scorecard 12 month period ending 06/2019, Group: Valley Health System, Clinic: Winchester Medical Center, Bodypart/Impairment: Bwl Leak

Care Type: Impairment	Completion Rate (#Complete Discharged Episodes / #Intakes)			Utilization				Effectiveness			Efficiency	
	Intakes	Complete Discharged Episodes	Rate	More Effective /Efficient	Expect	Less Effective /Efficient	Pct Rank	FS Change	Predicted	Pct Rank	#Visits	Predicted
Pelvic: Urinary	11	9	82%	56%	22%	22%	83 *	8.41	8.57	54 *	5.11	7.87
Pelvic: Bwl Const	8	9	100%	56%	22%	22%	80 *	9.30	6.90	72 *	5.11	8.08
Pelvic: Bwl Leak	16	12	75%	42%	50%	8%	76 *	11.04	9.52	78 *	5.25	8.03
Pelvic: Prolapse	3	2	67%					-14.58			6.50	
Pelvic: Pain	7	1	14%					16.67			5.00	

[Guide to Score](#)

Group: Valley Health System

Bodypart/Impairment: Prolapse (11) ▾

Payer Type: ▾

Impairment: ▾

Completion Rate Utilization Effectiveness Efficiency Duration Satisfaction Key Process Indicators Non Participation Completion Rate Tbl

Scorecard 12 month period ending 06/2019, Group: Valley Health System, Clinic: Winchester Medical Center, Bodypart/Impairment: Prolapse

Care Type: Impairment	Completion Rate (#Complete Discharged Episodes / #Intakes)			Utilization				Effectiveness			Efficiency	
	Intakes	Complete Discharged Episodes	Rate	More Effective /Efficient	Expect	Less Effective /Efficient	Pct Rank	FS Change	Predicted	Pct Rank	#Visits	Predicted
Pelvic: Urinary	17	8	47%	50%	38%	13%	86 *	10.18	8.88	70 *	6.75	8.06
Pelvic: Bwl Const	6	4	67%	56%	22%	0%	74 *	1.74	0.00	4 *	6.00	10.00

References

- Benchmark Comparison. [Video]. Fotoinc.com. <https://www.fotoinc.com/benchmark-comparison?wvideo=jsmx4karwq>
- Johnson, Craig. Why Outcomes...Why FOTO? <https://therapypartners.com/why-outcomes-why-foto/>
- Resnik L, Hart DL. Using clinical outcomes to identify expert physical therapists. Phys Ther. 2003;83(11):990-1002.
- Resources. Retrieved from <https://www.fotoinc.com/>
- Risk Adjustment and Predictive Analysis [Video]. Fotoinc.com. <https://www.fotoinc.com/risk-adjustment-predictive-analysis?wvideo=sycsw91nz4>
- The Growing Role of Patient-Reported Outcomes [Video]. YouTube. <https://youtu.be/IKkmp4viLD4> Published March 13, 2017.
- Tinker, Ann. The Top Seven Healthcare Outcomes Measures and Three Measurement Essentials. <https://www.healthcatalyst.com/insights/top-7-healthcare-outcome-measures>
- Why Measure Outcomes? [Video]. YouTube. <https://www.youtube.com/watch?v=5MW5Gmg2iMI&feature=youtu.be> Published May 17, 2018.
- Why Use FOTO? [Video]. YouTube. https://www.youtube.com/watch?v=6d_gPBau4Wg&feature=youtu.be Published October 30, 2014.