

# Foot and Ankle Measure 0424

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**Table 1b. 2a Performance Scores for all Patients with Foot and Ankle Functional Status Measure 2011-2013**

	Orthopedic / Foot, Ankle					
Year	2011		2012		2013	
# of intake patients	39495		49251		86046	
# completed episodes	17206		22392		35375	
# of clinics	1162		1327		1947	
# of providers	2383		2601		3567	
# of states	40		43		48	
Patient FS Change						
Mean	17.66		18.02		17.61	
Standard Deviation	15.94		15.73		15.54	
Min	-70.39		-54.79		-63.19	
Max	99.21		98.27		98.54	
Quartiles	6.32	Q1	7.13	Q1	6.64	Q1
	16	Q2	16.38	Q2	16.04	Q2
	27.11	Q3	27.45	Q3	27.13	Q3
Deciles	0.00	D1	0.00	D1	0.00	D1
	4.23	D2	4.95	D2	4.49	D2
	8.41	D3	8.99	D3	8.56	D3
	12.13	D4	12.67	D4	12.28	D4
	16	D5	16.38	D5	16.04	D5
	19.98	D6	20.52	D6	19.9	D6
	24.7	D7	24.9	D7	24.69	D7
	30.37	D8	30.46	D8	30.2	D8
	38.72	D9	38.93	D9	38.27	D9
Risk-Adjusted Patient FS Change - Residual						
Mean	1.01		1.75		1.71	
Standard Deviation	13.87		13.76		13.65	
Min	-74.88		-62.37		-65.78	
Max	67.34		70.60		55.68	
Quartiles	-8.37	Q1	-7.58	Q1	-7.68	Q1
	0.0	Q2	0.8	Q2	0.9	Q2
	9.5	Q3	10.3	Q3	10.3	Q3
Deciles	-15.6	D1	-14.9	D1	-14.8	D1
	-10.3	D2	-9.6	D2	-9.7	D2
	-6.6	D3	-5.8	D3	-5.8	D3
	-3.3	D4	-2.5	D4	-2.4	D4
	0.0	D5	0.8	D5	0.9	D5

	3.3	D6	4.2	D6	4.2	D6
	7.2	D7	8.0	D7	8.0	D7
	12.2	D8	12.8	D8	12.8	D8
	19.5	D9	20.0	D9	19.8	D9
<b>FS Intake Measure</b>						
Mean	48.5		48.2		47.7	
Standard Deviation	15.4		15.1		15.1	
Min	0.68		0.68		0.68	
Max	99.22		99.22		99.22	
<b>Quartiles</b>	38.06	Q1	37.87	Q1	37.30	Q1
	47.15	Q2	47.15	Q2	47.15	Q2
	57.92	Q3	57.7	Q3	56.72	Q3
<b>Deciles</b>	30.71	D1	30.71	D1	29.92	D1
	36.53	D2	36.53	D2	35.92	D2
	40.47	D3	40.3	D3	39.44	D3
	44.47	D4	44.31	D4	43.53	D4
	47.15	D5	47.15	D5	47.15	D5
	51.04	D6	50.67	D6	49.86	D6
	55.18	D7	55.1	D7	54.75	D7
	60.58	D8	60.51	D8	60.01	D8
	68	D9	67.77	D9	67.74	D9
<b>FS Discharge Measure</b>						
Mean	65.8		65.9		64.8	
Standard Deviation	17.1		17.1		17.3	
Min	0.68		0.68		0.68	
Max	99.84		99.74		99.41	
<b>Quartiles</b>	53.71	Q1	54.34	Q1	52.82	Q1
	65.23	Q2	65.98	Q2	64.14	Q2
	76.97	Q3	76.97	Q3	76.69	Q3
<b>Deciles</b>	44.51	D1	44.55	D1	43.01	D1
	51	D2	51.04	D2	49.86	D2
	56.04	D3	56.2	D3	55.1	D3
	60.5	D4	60.59	D4	59.14	D4
	65.23	D5	65.98	D5	64.14	D5
	70.11	D6	70.19	D6	69.65	D6
	74.46	D7	74.6	D7	73.24	D7
	80.99	D8	80.99	D8	79.56	D8
	89.85	D9	89.85	D9	89.47	D9
<b>Clinician FS Change Score</b>						
Mean	17.39		17.95		17.06	
Standard Deviation	11.47		11.44		11.10	
Min	-39.78		-53.65		-63.19	

<b>Max</b>	98.43		79.06		77.40	
<b>Quartiles</b>	10.45	Q1	11.21	Q1	10.70	Q1
	16.47	Q2	17.28	Q2	16.68	Q2
	23.26	Q3	23.58	Q3	22.9	Q3
<b>Deciles</b>	4.61	D1	5.32	D1	4.20	D1
	8.85	D2	9.75	D2	8.98	D2
	11.81	D3	12.67	D3	12.04	D3
	14.26	D4	15.01	D4	14.46	D4
	16.45	D5	17.27	D5	16.68	D5
	18.84	D6	19.43	D6	18.85	D6
	21.78	D7	22.04	D7	21.41	D7
	25.09	D8	25.4	D8	24.61	D8
	30.9	D9	31.29	D9	30.09	D9
<b>Risk Adjusted Aggregated Clinician Residual Score</b>						
<b>Mean</b>	0.51		1.51		1.26	
<b>Standard Deviation</b>	9.97		10.07		9.84	
<b>Min</b>	-49.21		-61.03		-61.72	
<b>Max</b>	55.06		51.90		51.01	
<b>Quartiles</b>	-5.55	Q1	-4.16	Q1	-4.32	Q1
	0.2	Q2	1.3	Q2	1.1	Q2
	5.9	Q3	6.9	Q3	6.6	Q3
<b>Deciles</b>	-11.1	D1	-10.1	D1	-10.0	D1
	-7.0	D2	-5.5	D2	-5.7	D2
	-4.3	D3	-2.9	D3	-3.0	D3
	-2.0	D4	-0.8	D4	-0.9	D4
	0.2	D5	1.2	D5	1.1	D5
	2.2	D6	3.2	D6	3.1	D6
	4.6	D7	5.3	D7	5.2	D7
	7.5	D8	8.5	D8	8.2	D8
	12.5	D9	13.1	D9	12.8	D9
<b>Clinic FS Change Score</b>						
<b>Mean</b>	17.64		17.89		16.85	
<b>Standard Deviation</b>	10.16		10.11		9.08	
<b>Min</b>	-19.23		-53.65		-25.12	
<b>Max</b>	98.43		71.41		66.51	
<b>Quartiles</b>	12.20	Q1	12.51	Q1	11.81	Q1
	17.02	Q2	17.35	Q2	16.63	Q2
	22.23	Q3	22.29	Q3	21.2	Q3
<b>Deciles</b>	6.49	D1	7.88	D1	6.89	D1
	10.76	D2	11.27	D2	10.61	D2
	13.07	D3	13.65	D3	13.11	D3

	15.17	D4	15.71	D4	14.91	D4
	16.97	D5	17.32	D5	16.61	D5
	18.85	D6	18.74	D6	18.28	D6
	20.82	D7	20.81	D7	20.01	D7
	23.77	D8	23.6	D8	22.58	D8
	28.42	D9	28.64	D9	26.09	D9
<b>Risk Adjusted Aggregated Clinic Residual Score</b>						
<b>Mean</b>	0.39		1.17		0.93	
<b>Standard Deviation</b>	8.97		9.01		8.22	
<b>Min</b>	-40.62		-61.03		-44.54	
<b>Max</b>	55.06		49.06		43.76	
<b>Quartiles</b>	-4.88	Q1	-3.53	Q1	-3.17	Q1
	0.2	Q2	1.1	Q2	0.9	Q2
	4.9	Q3	5.4	Q3	4.8	Q3
<b>Deciles</b>	-10.2	D1	-8.4	D1	-7.7	D1
	-6.2	D2	-4.7	D2	-4.2	D2
	-3.8	D3	-2.5	D3	-2.2	D3
	-1.6	D4	-0.7	D4	-0.5	D4
	0.2	D5	1.1	D5	0.9	D5
	1.8	D6	2.7	D6	2.4	D6
	3.8	D7	4.3	D7	3.9	D7
	6.3	D8	6.6	D8	6.0	D8
	10.2	D9	10.6	D9	9.5	D9

**Table 1b. 2b Performance Scores for Patients with Foot and Ankle FS Measures within Ranked Clinics 2011-2013**

	Orthopedic / Foot, Ankle					
<b>Year</b>	<b>2011</b>		<b>2012</b>		<b>2013</b>	
<b># of intake patients</b>	15241		21882		38078	
<b># completed episodes</b>	7980		12084		18322	
<b># of clinics</b>	122		176		266	
<b># of providers</b>	6		10		14	
<b># of states</b>	26		29		33	
<b>FS Intake Measure</b>						
Mean	48.9		49.0		48.6	
Standard Deviation	15.4		14.9		14.9	
Min	0.68		0.68		0.68	
Max	99.22		99.22		99.22	
<b>Quartiles</b>	38.46	Q1	39.06	Q1	38.34	Q1
	47.73	Q2	47.68	Q2	47.15	Q2

	58.51	Q3	58.58	Q3	58.24	Q3
<b>Deciles</b>	30.98	D1	31.42	D1	31.32	D1
	36.91	D2	36.91	D2	36.91	D2
	40.87	D3	41.17	D3	40.47	D3
	44.72	D4	44.91	D4	44.55	D4
	47.73	D5	47.68	D5	47.15	D5
	51.36	D6	51.2	D6	50.99	D6
	56.07	D7	55.67	D7	55.1	D7
	61.87	D8	62.15	D8	60.59	D8
	68.85	D9	68.09	D9	68.09	D9
<b>FS Discharge Measure</b>						
Mean	66.1		66.8		66.2	
Standard Deviation	16.9		16.8		16.9	
Min	0.68		0.68		0.68	
Max	99.22		99.74		99.41	
<b>Quartiles</b>	54.82	Q1	55.10	Q1	54.70	Q1
	66.07	Q2	66.96	Q2	66.01	Q2
	76.97	Q3	78.96	Q3	76.97	Q3
<b>Deciles</b>	44.63	D1	45.82	D1	45.34	D1
	51.2	D2	51.97	D2	51.08	D2
	56.6	D3	57.55	D3	56.51	D3
	61.1	D4	62.16	D4	60.59	D4
	66.07	D5	66.96	D5	66.01	D5
	70.44	D6	70.72	D6	70.55	D6
	74.46	D7	74.93	D7	74.36	D7
	80.99	D8	80.99	D8	79.92	D8
	89.85	D9	89.85	D9	89.67	D9
<b>Patient FS Change</b>						
Mean	17.41		18.03		18.14	
Standard Deviation	15.55		15.52		15.33	
Min	-62.31		-54.79		-45.93	
Max	99.21		98.27		88.76	
<b>Quartiles</b>	6.15	Q1	7.17	Q1	7.40	Q1
	15.84	Q2	16.52	Q2	16.71	Q2
	26.94	Q3	27.23	Q3	27.52	Q3
<b>Deciles</b>	0.00	D1	0.00	D1	0.00	D1
	4.08	D2	5.16	D2	5.34	D2
	8.29	D3	9.05	D3	9.28	D3
	12.02	D4	12.78	D4	12.94	D4
	15.84	D5	16.52	D5	16.71	D5
	19.85	D6	20.53	D6	20.54	D6
	24.62	D7	24.86	D7	25.1	D7
	30.06	D8	30.19	D8	30.37	D8

	38.1	D9	38.23	D9	38.2	D9
<b>Risk-Adjusted Patient FS Change - Residual</b>						
Mean	1.08		1.93		2.29	
Standard Deviation	13.56		13.46		13.43	
Min	-66.82		-62.37		-65.78	
Max	67.34		70.60		54.77	
Quartiles	-8.15	Q1	-7.2	Q1	-7.04	Q1
	0.0	Q2	1.1	Q2	1.40	Q2
	9.7	Q3	10.2	Q3	10.74	Q3
Deciles	-15.3	D1	-14.4	D1	(14.01)	D1
	-10.0	D2	-9.2	D2	(9.01)	D2
	-6.3	D3	-5.4	D3	(5.08)	D3
	-3.0	D4	-2.2	D4	(1.74)	D4
	0.0	D5	1.1	D5	1.40	D5
	3.3	D6	4.4	D6	4.80	D6
	7.3	D7	8.1	D7	8.56	D7
	12.2	D8	12.6	D8	13.19	D8
	19.3	D9	19.6	D9	20.04	D9
<b>Clinician FS Change Score</b>						
Mean	17.94		16.77		19.07	
Standard Deviation	3.26		5.31		3.61	
Min	11.98		9.64		13.11	
Max	22.89		26.82		25.72	
Quartiles	15.75	Q1	10.99	Q1	16.65	Q1
	17.79	Q2	17.95	Q2	18.66	Q2
	19.23	Q3	18.87	Q3	22.05	Q3
Deciles	13.05	D1	9.70	D1	14.60	D1
	15.75	D2	9.87	D2	15.83	D2
	16.57	D3	10.99	D3	16.8	D3
	17.79	D4	12.44	D4	18.3	D4
	18.29	D5	17.56	D5	18.66	D5
	19.23	D6	17.95	D6	20.64	D6
	19.27	D7	18.04	D7	21.82	D7
	20.68	D8	18.65	D8	23.11	D8
	21.87	D9	18.87	D9	24.32	D9
<b>Risk Adjusted Aggregated Clinician Residual Score</b>						
Mean	1.03		1.01		3.95	
Standard Deviation	3.24		5.25		2.86	
Min	-7.73		-7.68		-0.90	
Max	4.90		12.58		9.12	

<b>Quartiles</b>	0.58	Q1	-3.93	Q1	1.49	Q1
	1.2	Q2	0.5	Q2	3.5	Q2
	1.6	Q3	3.4	Q3	6.9	Q3
<b>Deciles</b>	-1.61	D1	-5.56	D1	0.84	D1
	0.6	D2	-4.1	D2	1.0	D2
	1.0	D3	-3.9	D3	2.0	D3
	1.2	D4	-1.9	D4	3.3	D4
	1.5	D5	-0.1	D5	3.5	D5
	1.6	D6	0.5	D6	5.4	D6
	2.6	D7	1.1	D7	6.4	D7
	3.1	D8	3.4	D8	7.1	D8
	4.1	D9	3.4	D9	7.8	D9
<b>Clinic FS Change Score</b>						
<b>Mean</b>	17.16		18.05		18.08	
<b>Standard Deviation</b>	4.74		4.05		3.87	
<b>Min</b>	7.75		6.68		8.31	
<b>Max</b>	33.38		32.81		29.07	
<b>Quartiles</b>	14.05	Q1	15.86	Q1	15.20	Q1
	17.14	Q2	17.88	Q2	17.81	Q2
	19.46	Q3	20.15	Q3	20.69	Q3
<b>Deciles</b>	11.57	D1	13.30	D1	13.15	D1
	13.36	D2	15.11	D2	14.67	D2
	14.65	D3	16.11	D3	15.69	D3
	16.37	D4	17.04	D4	16.69	D4
	17.14	D5	17.74	D5	17.77	D5
	17.79	D6	18.49	D6	18.7	D6
	18.87	D7	19.42	D7	19.89	D7
	20.21	D8	20.46	D8	21.2	D8
	22.77	D9	22.26	D9	22.79	D9
<b>Risk Adjusted Aggregated Clinic Residual Score</b>						
<b>Mean</b>	0.81		1.90		2.22	
<b>Standard Deviation</b>	4.30		3.75		3.55	
<b>Min</b>	-10.39		-9.04		-7.51	
<b>Max</b>	16.46		13.64		13.99	
<b>Quartiles</b>	-1.7	Q1	-0.29	Q1	0.04	Q1
	0.9	Q2	1.7	Q2	2.1	Q2
	3.7	Q3	4.2	Q3	4.4	Q3
<b>Deciles</b>	-5.2	D1	-2.8	D1	-2.3	D1
	-2.9	D2	-0.8	D2	-0.5	D2
	-1.3	D3	0.3	D3	0.3	D3
	-0.1	D4	1.0	D4	1.1	D4



	0.9	D5	1.7	D5	2.0	D5
	1.6	D6	2.7	D6	2.8	D6
	2.8	D7	3.6	D7	3.5	D7
	4.0	D8	4.3	D8	4.8	D8
	4.9	D9	5.3	D9	6.2	D9

**Table 1b.4 Disparities Data Years 2011-2013**

	Foot and Ankle Impairments					
Year	2011		2012		2013	
# of intake patients	39495		49251		86046	
# completed episodes	17206		22392		35375	
# of clinics	1162		1327		1947	
# of providers	2383		2601		3567	
# of states	40		43		48	
<b>Race Question</b>						
# answered	1727		1446		838	
White	1455	84.3%	1152	79.7%	640	76.4%
Black/African American	110	6.4%	102	7.1%	109	13%
Asian or Pacific Islander	25	1.5%	27	1.9%	19	2.3%
American Indian, Aleut, Eskimo	12	.7%	17	1.2%	6	.7%
Other	125	7.2%	148	10.2%	64	7.6%
<b>Gender</b>						
Male	14613	37%	18224	37%	31558	36.7%
Female	24882	63%	31025	63%	54487	63.3%
<b>Average Age</b>	47.8		47.7		49.5	
<b>Standard Deviation</b>	18.3		18.5		19.2	
<b>Min</b>	14		14		14	
<b>Max</b>	100		101		109	
14-19	2434	9.8%	3250	10.4%	4647	10.1%
20-29	2252	9.1%	2888	9.2%	3836	8.3%
30-39	3262	13.1%	4093	13%	5274	11.4%
40-49	4708	18.9%	5760	18.4%	7744	16.8%
50-59	5365	15.9%	6476	20.6%	9335	20.3%
60-69	3953	15.9%	5075	16.2%	8017	17.4%
70-79	2002	8.8%	2707	8.6%	5056	11.1%
80-89	827	3.3%	1041	3.3%	1936	4.2%
90-99	89	.4%	97	.3%	237	.5%
100-109	1	.0%	3	.01%	6	.01%
	24893		31390		46088	
<b>Payer Source</b>						

# Answered	39411		49173		86045	
Indemnity Insurance	753	1.9%	911	1.9%	1240	1.4%
Litigation	37	.1%	35	.1%	56	.1%
Medicaid	1689	4.3%	2069	4.2%	3249	3.8%
Medicare A	865	2.2%	1129	2.3%	938	1.1%
Medicare B	5225	13.3%	6934	14.1%	18159	21.1%
Patient	450	1.1%	469	1%	10195	11.9%
HMO	4959	11.7%	5327	10.9%	10195	11.9%
Preferred Provider	19219	48.8%	24198	49.2%	38377	45%
Workers Comp	2431	6.2%	2804	5.7%	4283	5%
No Fault	39	.1%	44	.1%	106	.1%
Other	3907	9.9%	4868	9.9%	7128	8.3%
Early Intervention	4	0.01%	5	0.0%	5	0.0%
School	17	.0%	20	.0%	44	.1%
No Charge	48	.1%	109	.2%	174	.2%
Auto Insurance	103	.3%	158	.3%	2998	.4%
Medicare C	29	.1%	93	.19%	123	.1%
<b>Education</b>						
<b>Desktop Version of PI - Education Responses</b>						
# Answered	928		487		86	
1st - 8th grade	31	3.3%	19	3.9%	6	7%
Some high school	111	12%	47	9.7%	14	16.3%
High school diploma	270	29.1%	134	27.5%	24	27.9%
GED or equivalent	40	4.3%	21	4.3%	3	3.5%
Some college but no degree	202	21.8%	93	19.1%	17	19.8%
College degree (undergraduate)	175	18.9%	107	22%	15	17%
Postgraduate course work but no advanced degree	24	2.6%	25	5.3%	3	3.5%
Postgraduate degree (college Masters, Doctorate of Professional)	75	8.1%	41	8.4%	4	4.7%
<b>WEB Version of PI - Education Responses</b>						
# Answered	759		933		743	
Less Than 1st Grade	1	.1%	7	.8%	0	.0%
1st, 2nd, 3rd Or 4th Grade	18	2.4%	13	1.4%	8	1.1%
5th Or 6th Grade	21	2.3%	24	2.6%	20	2.7%
7th Or 8th Grade	24	3.2%	45	4.8%	26	3.5%
9th Grade	12	1.6%	25	2.7%	23	3.15
10th Grade	16	2.1%	30	3.2%	23	3.1%
11th Grade	18	2.4%	29	3.1%	28	3.8%
12th Grade No Diploma	12	1.6%	21	2.3%	34	4.6%

High School Grad-Diploma or Equiv (GED)	109	14.4%	149	16.6%	102	13.7%
Some College But No Degree	144	19.9%	180	19.3%	144	19.4%
Associate Degree- Occupational/Vocational	32	4.2%	48	5.1%	39	5.3%
Associate Degree-Academic Program	29	3.8%	48	5.15	33	4.4\$
Bachelor's Degree(ex:ba, ab, bs)	202	26.6%	195	20.9%	169	22.8%
Master's Degree(ex:MA, MS, MEng, MEd, MSW)	83	10.9%	89	9.5%	70	9.4%
Professional School Deg(ex:MD, DDS, DVM)	21	2.8%	15	1.6%	9	1.2%
Doctorate Degree(ex:PhD, EdD)	17	2.2%	15	1.6%	15	2.2%
<b>Income</b>						
<b># Answered</b>	1302		1171		653	
\$10,000 - 25,000	237	18.2%	181	15.5%	115	17.6%
\$25,000 - 50,000	327	25.1%	277	20.8%	172	26.3%
\$50,000 – 75,000	288	22.2%	270	23.1%	115	17.6%
\$75,000 - 100,000	183	14.1%	199	17%	100	15.3%
Over \$100,000	267	20.51%	244	20.8	151	23.1%

**Table 1.5: Measured Entities by level of analysis and Data Source**

Analysis	Data source (years)	Entities tested			
		Patients	Clinicians	Clinics	States
a. Test-retest reliability	2010	36	NR+	10	NR+
b. Internal consistency	2002-2004	379	NR+	81	20
c. Structural validity	2002-2004	379	NR+	81	20
d. Construct validity (sample 1)	2008-2010	6620	NR+	616	24
e. Sensitivity to change (sample 1)	2008-2010	6620	NR+	616	24
f. Responsiveness (sample 1)	2008-2010	6620	NR+	616	24
d. Construct validity (sample 2)	2005-2007	10,287	NR+	276	30
e, f. Sensitivity, responsiveness (sample 2)	2005-2007	10,287	NR+	276	30
g. Exclusions analysis		79795	8644	2238	47
h. Risk adjustment modeling	2000-2003	306,556	3447	552	40
i. Performance patient level	2005-2007	10,287	NR+	276	30
j. Performance individual clinician level	2011-2013				
	2011	9898	*617	331	32
	2012	12196	*761	401	36
	2013	22552	*1365	715	43
k. Performance clinic/group practice level	2011-2013				
	2011	11461	1015	**236	27
	2012	13917	1083	**277	32
	2013	24657	1863	**489	39
l. Missing data	2011-2013				
	2011	39044	4444	1335	39
	2012	47223	5280	1497	44
	2013	83417	8417	2229	50

+ NR=not reported  
 \*Clinicians with 10+ patients with FS measures at intake & discharge.  
 \*\*Clinics with 10+ patient per clinician for small clinics (up to 4 clinicians) or 40+ patients for large clinics (5 or more clinicians), with FS measures at intake & discharge

**Table 1.6a: Characteristics of Patients in Reliability Tests N=36**

Gender F	50%
Intake FS (mean0	46
Age (mean)	55 yr
Surgery	37%
Comorbs	
None	35%
1	36%
2 or 3	19%
4 or more	10%
Elevated Fear	56%

Payer	MedicareB	38%
	Patient	3%
	HMO	36%
	PPO	15%
	WC	5%
	Other	3%

**Table 1.6b: Characteristics of Patients in Structural Validity Analysis N=379**

Age (mean $\pm$ SD, min, max in years)		45 $\pm$ 15, 14, 88
Age category (%)		
	Age 14 to <45	52
	Age 45 to 65	39
	Age >65	8
Gender (% female)		65
Acuity of symptoms (%)		
	Acute	10
	Subacute	35
	Chronic	55
Surgical history (%)		
	None	87
	One or more	13
Exercise History (%)		
	At least 3 $\times$ /week	41
	1–2 $\times$ /week	24
	Seldom or never	35
Payer Source (%)		
	Indemnity	14
	Medicaid	5
	Medicare	7
	Patient private pay	2
	HMO	43
	PPO	12
	Workers' compensation	14
	Other	3

**Table 1.6c Characteristics of patients in analyses d-f (sample 1)**

Characteristic	Value			
	mean	SD	min	max
Intake FS	46	14	4	94
Discharge FS	63	17	4	99
FSCH	17	415	-47	88
Risk-adjusted FSCH Predicted	17	4	5	27
Risk-adjusted FSCH Residual	0	14	-56	53
Age (mean $\pm$ SD, min, max in years)	41	17	18	99

Age category		
	Age 18 to <45 (%)	35
	Age 45 to 65 (%)	43
	Age >65 to 75 (%)	14
	Age >75 (%)	9
Gender		
	% female	63
Acuity of Symptoms (%)		
	Acute (0 to 21 days)	16
	Subacute (22-90 days)	35
	Chronic (> 90 days)	49
Surgical History (%)		
	None	68
	One or more	32
Payer Source (%)		
	Indemnity Insurance	3
	Litigation	1
	Medicaid	1
	Medicare A	3
	Medicare B	16
	Patient private pay	1
	Health Maintenance Organization	9
	Preferred Provider Organization	47
	Work'ers Compensation	7
	Auto Insurance	1
	Other	12
Number of Functional Comorbidities (%)		
	None	40
	One	25
	Two	14
	Three or more	21
Fear Avoidance		
	No fear	56
	Intimidated	44

**Table 1.6d Characteristics of patients in analyses d-f (sample 2) N=6629**

Age (mean $\pm$ SD, min, max in years)	47 $\pm$ 15, 18, 94
Age category (%)	
Age 18 to <45 years	37
Age 45–65 years	41
Age >65 years	12
Missing	10
Gender (%)	
Female	59
Missing	11
Acuity of symptoms (%)	
Acute (0–21 days)	11
Subacute (22–90 days)	34

Chronic ([90 days)	44
Missing	11
Surgical history (%)	
None	70
1	23
2	5
3	1
4 or more	1
Missing	0
Exercise history (%)	
At least 3 times per week	43
1–2 times per week	24
Seldom or never	31
Missing	2
Payer source (%)	
PPO	16
HMO	13
Workers' compensation	6
Medicare part B	5
Indemnity	3
Medicaid	2
Medicare part A	1
Other	3
Missing	51
Number of functional comorbidities (%)	
None	29
1	26
2	17
3 or more	24
Missing	4

**Table 2b3.2a Sensitivity analysis of exclusion criteria for age: Comparison of beta coefficients and R<sup>2</sup> of risk adjustment models predicting FS at discharge (Data combined 2011-2013)**

Variable	Sample includes patients 14+ N=79795		Sample includes patients 18+ N=73719	
	Beta, CI	P	Beta, CI	P
<b>Constant</b>	57.2, 56.45 to 57.92	P<0.001	55.3, 54.44 to 56.10	P<0.001
<b>Intake FS</b>	0.5, 0.54 to 0.55	P<0.001	0.6, 0.55 to 0.57	P<0.001
<b>Age (continuous)</b>	(-)0.1, (-)0.14 to (-)0.13	P<0.001	(-)0.1, (-)0.13 to (-)0.11	P<0.001
<b>Acuity:</b>				
0-7 days (REF)				
8-14 days	(-)2.1, (-)2.76 to (-)1.39	P<0.001	(-)1.5, (-)2.23 to (-)0.71	P<0.001
15-21 days	(-)3.5, (-)4.11 to (-)2.82	P<0.001	(-)2.8, (-)3.55 to (-)2.12	P<0.001
22-90 days	(-)5.3, (-)5.84 to (-)4.73	P<0.001	(-)4.7, (-)5.35 to (-)4.10	P<0.001
91 days to 6 months	(-)7.7, (-)8.32 to (-)7.14	P<0.001	(-)7.1, (-)7.75 to (-)6.45	P<0.001
Over 6 months	(-)10.3, (-)10.83 to (-)9.69	P<0.001	(-)9.6, (-)10.22 to (-)8.96	P<0.001

<b>Gender:</b>					
Male (REF)					
Female	(-)0.9, (-)1.10 to (-)0.70	P<0.001	(-)0.7, (-)0.93 to (-)0.52	P<0.001	
<b>Payer:</b>					
Indemnity	(-)1.5, (-)2.26 to (-)0.65	P<0.001	(-)1.6, (-)2.44 to (-)0.76	P<0.001	
Litigation	(-)4.5, (-)8.13 to (-)0.90	0.014	(-)3.9, (-)7.66 to (-)0.23	0.037	
Medicaid	(-)3.9, (-)4.48 to (-)3.31	P<0.001	(-)4.6, (-)5.29 to (-)3.98	P<0.001	
Medicare A	(-)3.3, (-)4.04 to (-)2.58	P<0.001	(-)3.5, (-)4.23 to (-)2.76	P<0.001	
Medicare B	(-)2.3, (-)2.63 to (-)2.01	P<0.001	(-)2.5, (-)2.86 to (-)2.22	P<0.001	
Patient	(-)0.9, (-)1.93 to 0.03	0.058	(-)1.2, (-)2.22 to (-)0.17	0.022	
HMO	(-)0.1, (-)0.39 to 0.26	0.690	(-)0.2, (-)0.53 to 0.14	0.253	
Preferred Provider					
(REF)					
Workers Comp	(-)4.4, (-)4.81 to (-)3.99	P<0.001	(-)4.2, (-)4.63 to (-)3.80	P<0.001	
No Fault	(-)2.9, (-)5.69 to (-)0.04	0.047	(-)3.0, (-)5.89 to (-)0.08	0.044	
Other	(-)1.2, (-)1.59 to (-)0.89	P<0.001	(-)1.3, (-)1.68 to (-)0.94	P<0.001	
Early Intervention	(-)1.4, (-)16.83 to 14.12	0.864	(-)1.1, (-)16.53 to 14.36	0.891	
School	(-)2.7, (-)7.24 to 1.82	0.241	(-)4.8, (-)10.14 to 0.57	0.08	
No Charge	(-)2.3, (-)4.38 to (-)0.19	0.033	(-)2.7, (-)4.80 to (-)0.54	0.014	
Auto Insurance	(-)4.0, (-)5.64 to (-)2.43	P<0.001	(-)4.1, (-)5.79 to (-)2.48	P<0.001	
Medicare C	(-)2.6, (-)4.97 to (-)0.22	0.032	(-)2.8, (-)5.16 to (-)0.41	0.022	
<b>Surgical history:</b>					
No surgery (REF)					
1 or more surgeries	(-)1.7, (-)1.96 to (-)1.52	P<0.001	(-)1.6, (-)1.87 to (-)1.42	P<0.001	
<b>Fear Avoidance-Physical:</b>					
Not Elevated (REF)					
Elevated	(-)0.8, (-)0.99 to (-)0.60	P<0.001	(-)0.8, (-)1.01 to (-)0.61	P<0.001	
<b>Number of comorbidities:</b>					
None (REF)					
One	(-)0.8, (-)1.12 to (-)0.48	P<0.001	(-)0.9, (-)1.21 to (-)0.52	P<0.001	
Two	(-)1.4, (-)1.71 to (-)1.08	P<0.001	(-)1.4, (-)1.69 to (-)1.03	P<0.001	
Three or more	(-)3.5, (-)3.77 to (-)3.22	P<0.001	(-)3.5, (-)3.79 to (-)3.22	P<0.001	
<b>Model R<sup>2</sup></b>	<b>0.372</b>		<b>0.356</b>		

**Table 2b5.2.a Functional Staging System: Expected Performance at Each Functional Stage Level**

TABLE 2 Functional Staging: Expected Performance at Each Functional Staging Level					
	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
FS Score Range	0-23	24-39	40-52	53-65	66-100
Activity	Physiological ambulator	Household ambulator	Limited community ambulator	Independent community ambulator	Active community ambulator
Running on even ground	Unable	Unable	Unable	Moderate difficulty	A little difficulty
Walking for 1 mile (1.6km)	Unable	Unable	A lot of difficulty	A little difficulty	No difficulty
Walking 2 blocks	Unable	A lot of difficulty	Moderate difficulty	A little difficulty	No difficulty
Walking between rooms	Unable	Moderate difficulty	A little difficulty	No difficulty	No difficulty



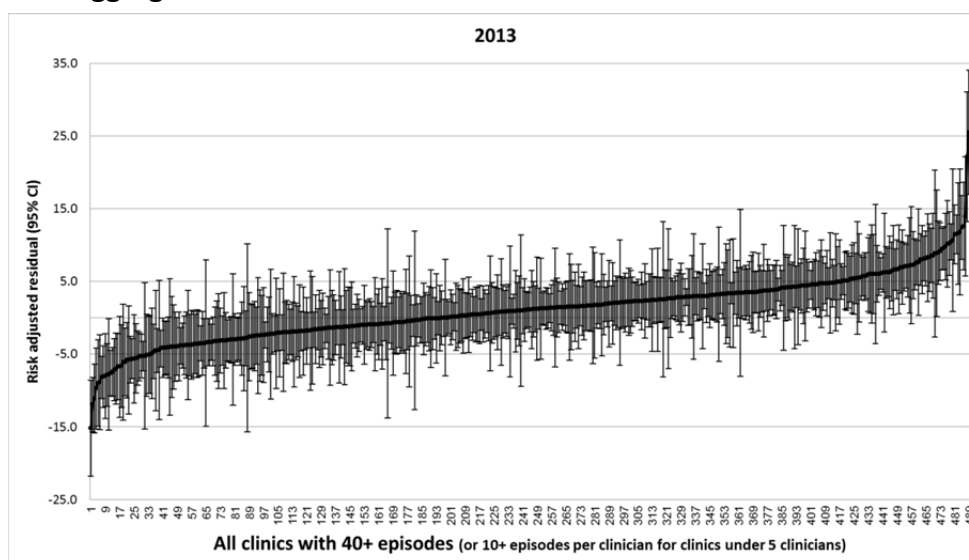
**Table 2b5.2b Distribution of Clinician Performance Categories by Year**

Year	Performance level	N Clinicians (%)
2011	Low performance	32 (5.2)
	Average performance	472 (76.5)
	High performance	113 (18.3)
	Total	617 (100.0)
2012	Low performance	48 (6.3)
	Average performance	583 (76.6)
	High performance	130 (17.1)
	Total	761 (100.0)
2013	Low performance	95 (7.0)
	Average performance	1088 (79.7)
	High performance	182 (13.3)
	Total	1365 (100.0)

**Table 2b5.2c Distribution of Clinic Performance Categories by Year**

Year	Performance level	N Clinics (%)
2011	Low performance	24 (10.2)
	Average performance	147 (62.3)
	High performance	65 (27.5)
	Total	236 (100.0)
2012	Low performance	20 (7.2)
	Average performance	176 (63.5)
	High performance	81 (29.2)
	Total	277 (100.0)
2013	Low performance	43 (8.8)
	Average performance	337 (68.9)
	High performance	109 (22.3)
	Total	489 (100.0)

**Figure 2b52a. Plot of aggregated residual scores with 95% CI bars in 2013**



**Table 2b7. 1 Missing Data Analysis and Minimizing Bias**

		Complete data (group 1)			Missing data (groups 2&3)			
Year		Total N	% missing		Total N	% missing	P-value	
Factors higher or more prevalent in patients with complete data								
Age (years): Mean(SD)	2011	48.1 (18.4)	18805	0.0%	46.3 (18.1)	9368	0.0%	<.001
	2012	48.2 (18.6)	23036	0.0%	46.4 (18.5)	12699	0.0%	<.001
	2013	50.5 (19.2)	39449	0.0%	47.6 (18.8)	24541	0.0%	<.001
Surgical history: 1 or more	2011	30.5%	18607	1.1%	27.6%	9245	1.3%	<.001
	2012	30.2%	22917	0.5%	25.8%	12614	0.7%	<.001
	2013	30.1%	39416	0.1%	24.6%	24509	0.1%	<.001
Payer: Medicare B age 60 or more	2011	13.7%	18736	0.4%	10.1%	9355	0.1%	<.001
	2012	14.1%	22966	0.3%	10.8%	12694	0.0%	<.001
	2013	21.4%	39449	0.0%	15.3%	24541	0.0%	<.001
Factors higher or more prevalent in patients with missing data								
Intake FS: Mean(SD)	2011	48.2 (14.7)	18805	0.0%	48.8 (15.7)	9368	0.0%	0.002
	2012	47.6 (14.6)	23036	0.0%	48.5 (15.3)	12699	0.0%	<.001
	2013	46.9 (14.4)	39449	0.0%	48.4 (15.4)	24541	0.0%	<.001
Acuity: Chronic - over 3 months	2011	47.2%	18793	0.1%	49.1%	9362	0.1%	0.003
	2012	47.4%	23023	0.1%	49.6%	12692	0.1%	<.001
	2013	48.7%	39424	0.1%	49.9%	24521	0.1%	0.004
Payer: Medicaid	2011	3.1%	18736	0.4%	5.3%	9355	0.1%	<.001
	2012	3.0%	22966	0.3%	5.0%	12694	0.0%	<.001
	2013	2.6%	39449	0.0%	4.5%	24541	0.0%	<.001
Factors with similar values or prevalence between patients with complete or missing data								
Number of comorbidities: Mean(SD)	2011	3.0 (2.7)	18767	0.2%	3.0 (2.8)	9343	0.3%	0.981
	2012	2.7 (2.8)	23024	0.1%	2.8 (3.0)	12692	0.1%	<.001
	2013	3.2 (3.0)	39448	0.0%	3.2 (3.2)	24538	0.0%	0.894
Gender (Female)	2011	63.9%	18805	0.0%	62.6%	9368	0.0%	0.036
	2012	63.5%	23036	0.0%	62.9%	12699	0.0%	0.215
	2013	64.0%	39449	0.0%	62.8%	24541	0.0%	0.002
Payer: Medicare B age under 60	2011	1.4%	18736	0.4%	2.3%	9355	0.1%	<.001
	2012	1.8%	22966	0.3%	2.1%	12694	0.0%	0.049
	2013	2.5%	39449	0.0%	3.1%	24541	0.0%	<.001
High Fear Avoidance at intake (Physical)	2011	63.5%	18528	1.5%	64.1%	9191	1.9%	0.326
	2012	56.8%	22824	0.9%	56.5%	12581	0.9%	0.681
	2013	52.1%	39313	0.3%	52.2%	24478	0.3%	0.782
Exercise history: 1 or more / week	2011	72.0%	18428	2.0%	70.3%	9155	2.3%	0.004
	2012	72.4%	22749	1.2%	71.0%	12549	1.2%	0.004
	2013	69.4%	39370	0.2%	69.5%	24504	0.2%	0.948
Difference not supporting potential for selection bias								
Differences supporting potential for selection bias								
Differences interpreted as not clinically important								

**Table 2b7.2a Summary of FS Data Collection at Admission and Discharge**

Year at episode start	Patients at admission (N= 172968)		Patients after 6 months from admission N= 169684			
			Has DC FS + N (%)  % represents CR	Reason for Missing FS at DC N (%)		
	FS N (%)	FS missing* (NPA) N (%)		Open episode	NPA at DC	Unknown
2011	39044 (99.5)	190 (0.5)	18805 (48.2)	10871 (27.8)	1096 (2.8)	8272 (21.2)
2012	47223 (97.8)	1085 (2.2)	23036 (48.8)	11488 (24.3)	4427 (9.4)	8272 (17.5)
2013	83417 (97.6)	2009 (2.4)	39449 (47.3)	19427 (23.3)	12674 (15.2)	11867 (14.2)
<b>Total</b>	169684 (98.1)	3284 (1.9)	81290 (47.9)	41786 (24.6)	18197 (10.7)	28411 (16.7)

+Only data from closed episodes with status/discharge FS are included in the aggregate dataset for calculation of risk adjustment coefficients.

\*FS missing at intake with NPA completed indicating reason for missing data

CR = Completion rate = Number of discharged patients who had FS at DC/ Number of patients who had FS at intake, includes episodes that are still “open”.

**Table 2b7.2b Mean and SD of data completion by clinics (all clinics):**

Year	N Clinics	Patients with intake FS data Mean N (SD)	Has DC FS		Does not have DC FS Mean N (sd)
			Mean N (SD)	Mean CR(SD)	
2011	1335	29.2 (42.1)	14.1 (22.6)	47.0 (31.8)	15.2 (23.9)
2012	1497	31.5 (43.6)	15.4 (23.6)	49.2 (31.5)	16.2 (24.7)
2013	2229	37.4 (54.9)	17.7 (27.8)	47.1 (28.9)	19.7 (31.6)

CR = Completion rate = Number of discharged patients who had FS at DC/ Number of patients who had FS at intake, includes episodes that are still “open”.

**Table 2b7.2c Mean and SD of data completion by clinics with 40+ complete episodes per year (or 10+ complete episodes per clinician for clinics under 5 clinicians):**

Year	N Clinics	Patients with intake FS data Mean N (SD)	Has DC FS		Does not have DC FS Mean N (sd)
			Mean N (SD)	Mean CR(SD)	
2011	236	85.3 (62.5)	48.6 (33.1)	62.3 (17.7)	36.7 (37.4)
2012	277	86.7 (64.6)	50.2 (34.5)	63.2 (17.0)	36.5 (37.2)
2013	489	91.7 (87.3)	50.4 (42.9)	61.3 (17.1)	41.3 (50.5)

CR = Completion rate = Number of discharged patients who had FS at DC/ Number of patients who had FS at intake, includes episodes that are still “open”.

Table 2b7.2d

Pearson Correlations (r)			Clinic CR
2011	Residual	r	-.016
		Sig. (2-tailed)	.802
		N patients	236
2012	Residual	r	.070
		Sig. (2-tailed)	.248
		N patients	277
2013	Residual	r	-.014
		Sig. (2-tailed)	.758
		N patients	489
**. Correlation is significant at the 0.01 level (2-tailed).			

Table 2b7.2e Average residuals by completion rate categories

		Mean residuals	N patients	Std. Deviation
<b>2011</b>	10 to <20	3.6*	1	.
	20 to <30	3.5	11	4.5
	30 to <40	3.7	13	4.9
	40 to <50	0.0	28	4.5
	50 to <60	1.7	42	4.3
	60 to <70	0.3	64	4.7
	70 to <80	2.6	38	4.1
	80 to <90	1.1	21	4.2
	90 to Highest	2.3	18	7.1
	<b>Total</b>	1.5	236	4.8
<b>2012</b>	20 to <30	5.2*	9	5.4
	30 to <40	0.0	18	4.3
	40 to <50	1.0	30	3.7
	50 to <60	1.8	58	4.9
	60 to <70	1.5	72	4.9
	70 to <80	1.0	47	4.4
	80 to <90	1.9	23	4.8
	90 to Highest	4.5	20	7.8
	<b>Total</b>	1.7	277	5.0
<b>2013</b>	10 to <20	0.3*	2	6.2
	20 to <30	1.8	15	4.2
	30 to <40	0.9	40	5.1
	40 to <50	1.5	71	5.1
	50 to <60	1.2	98	4.1
	60 to <70	0.9	114	3.8
	70 to <80	0.3	81	3.7

	80 to <90	1.5	40	4.3
	90 to Highest	1.7	28	6.4
	<b>Total</b>	1.1	489	4.4

CR = Completion rate = Number of discharged patients who had FS at DC/ Number of patients who had FS at intake, includes episodes that are still "open".

\* Average residuals for CR categories that had less than 10 clinics