Supplemental materials for:

Etz RS, Zyzanski SJ, Gonzalez MM, Reves SR, O'Neal JP, Stange KC. A New Comprehensive Measure of High-Value Aspects of Primary Care. *Ann Fam Med*. 2019;17(3):221-230.

Supplementary Appendix: Table of Contents

Appendix A   Items and response categories for the Person-Centered Primary Care Measure

Appendix B – in order of appearance

Appendix A: Items and response categories for the Person-Centered Primary Care Measure

For each item, choose the response that best fits your experience:	Response			
The practice makes it easy for me to get care.	Definitely	Mostly	Somewhat	Not at all
This practice is able to provide most of my care.	Definitely	Mostly	Somewhat	Not at all
In caring for me, my doctor considers all of the factors that affect my health.	Definitely	Mostly	Somewhat	Not at all
My practice coordinates the care I get from multiple places.	Definitely	Mostly	Somewhat	Not at all
This doctor or practice knows me as a person.	Definitely	Mostly	Somewhat	Not at all
My doctor and I have been through a lot together	Definitely	Mostly	Somewhat	Not at all
My doctor or practice stands up for me.	Definitely	Mostly	Somewhat	Not at all
The care I get takes into account knowledge of my family.	Definitely	Mostly	Somewhat	Not at all
The care I get in this practice is informed by knowledge of my community.	Definitely	Mostly	Somewhat	Not at all
Over time, this practice helps me to meet my goals.	Definitely	Mostly	Somewhat	Not at all
Over time, my practice helps me stay healthy.	Definitely	Mostly	Somewhat	Not at all

Appendix B

Table 1B.   Online sample 1 participant characteristics

Participant Characteristic	Online Sample 1* N= 1140	
Age	N	(%)
18-29	179	(17)
30-44	296	(29)
45-60	249	(24)
> 60	314	(30)
Gender (Female)	555	(54)
Self-identify as minority (Yes)	222	(20)
Region		
Northeast	221	(21)
Midwest	285	(28)
South	306	(30)
West	213	(21)
Single physician for care (Yes)	907	(83)
Years knowing physician		
<1	75	(7)
1-3	371	(33)
4-10	341	(31)
>10	320	(29)
Device used (Desktop/laptop)	689	(66)
Patient Enablement Index		
0	230	(21)
1-5	288	(26)
6-11	395	(35)
12	197	(18)

Table 2B: Items, descriptions, factor loading and goodness of fit statistic for online sample 1

Item	Online Sample1*			
	Mean	S.D.	Factor Loading	Item-Total Correlation
My practice makes it easy for me to get care.	3.13	0.85	0.70	0.67
My practice is able to provide most of my care.	3.11	0.84	0.70	0.66
In caring for me, my doctor considers all of the factors that affect my health.	3.24	0.85	0.80	0.76
My practice coordinates the care I get from multiple places.	2.83	1.01	0.64	0.62
My doctor or practice knows me as a person.	2.93	1.06	0.83	0.81
My doctor and I have been through a lot together.	2.26	1.16	0.66	0.64
My doctor or practice stands up for me.	2.74	1.01	0.85	0.83
The care I get takes into account knowledge of my family.	2.69	1.09	0.80	0.78
The care I get in this practice is informed by knowledge of my community.	2.30	1.06	0.71	0.70
Over time, this practice helps me to meet my goals.	3.03	0.91	0.85	0.82
Over time, my practice helps me stay healthy.	2.84	0.96	0.85	0.81

Table 3B: Items, Rasch item measures and standard error, item-total correlations, outfit mean squares and standardized fit statistics for online sample 2 (n= 1089)

Item	Item Measure	S.E.	Corrected Item Total Correlation	Outfit Mean Square	ZSTD
My practice makes it easy for me to get care.	-0.86	0.05	0.71	1.18	2.6
My practice is able to provide most of my care.	-0.73	0.05	0.71	1.33	4.8
In caring for me, my doctor considers all of the factors that affect my health.	-1.05	0.05	0.82	0.65	5.7
My practice coordinates the care I get from multiple places.	-0.12	0.05	0.74	1.15	2.7
My doctor or practice knows me as a person.	-0.06	0.05	0.82	0.86	2.7
My doctor and I have been through a lot together.	1.74	0.05	0.66	1.44	7.0
My doctor or practice stands up for me.	0.16	0.05	0.83	0.73	5.9
The care I get takes into account knowledge of my family.	0.40	0.05	0.77	1.03	0.7
The care I get in this practice is informed by knowledge of my community.	1.08	0.05	0.70	1.36	6.6
Over time, this practice helps me to meet my goals.	-0.54	0.05	0.84	0.62	7.5
Over time, my practice helps me stay healthy.	-0.02	0.05	0.82	0.79	4.3

Table 4B: Concurrent validity analyses for online sample 1

Validation Item	Online Sample 1*			
	N	Mean	S.D.	P
Age				
18-29	179	2.68	0.79	
30-44	296	2.66	0.80	.0001
45-60	249	2.90	0.74	
> 60	314	3.01	0.72	
Female				
Yes	555	2.80	0.78	.39
No	483	2.84	0.77	
Self-identify as minority				
Yes	222	2.82	0.77	.89
No	876	2.83	0.77	
Single physician for care				
Yes	907	2.93	0.71	.0001
No	191	2.35	0.84	
Years knowing physician				
<1	75	2.36	0.85	
1-3	371	2.63	0.71	.0001
4-10	341	2.93	0.71	
>10	320	3.16	0.66	
Device used				
Desktop/Laptop	689	2.80	0.76	
Other	349	2.88	0.80	.13
Was the survey hard to complete?				
Yes	41	2.56	0.86	.02
No	1057	2.84	0.76	
Do you have a single doctor or practice that you would say handles most of your care?				
Yes	907	2.93	0.71	.0001
No	191	2.35	0.84	
If your doctor or practice received the answers to these questions, would it help them to understand how you feel about your care?				

Yes	670	3.00	0.72	.0001
No	428	2.57	0.77	
Region				
Northeast	221	2.78	0.78	
Midwest	285	2.87	0.77	.55
South	306	2.82	0.79	
West	213	2.79	0.75	
Patient Enablement Index				
0	230	1.98	0.59	
1-5	288	2.55	0.60	.0001
6-11	395	3.12	0.50	
12	197	3.65	0.35	

Figure 1B: Scree test for online (cross-validation) sample 2 (n= 1089)
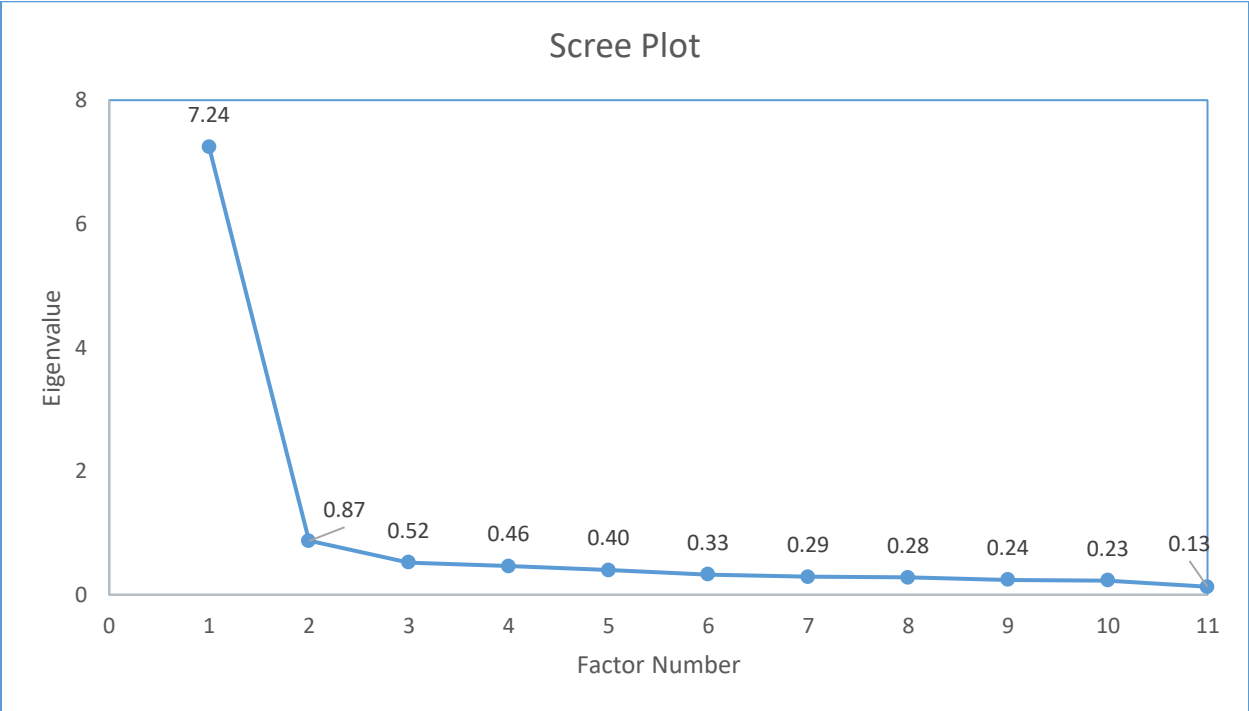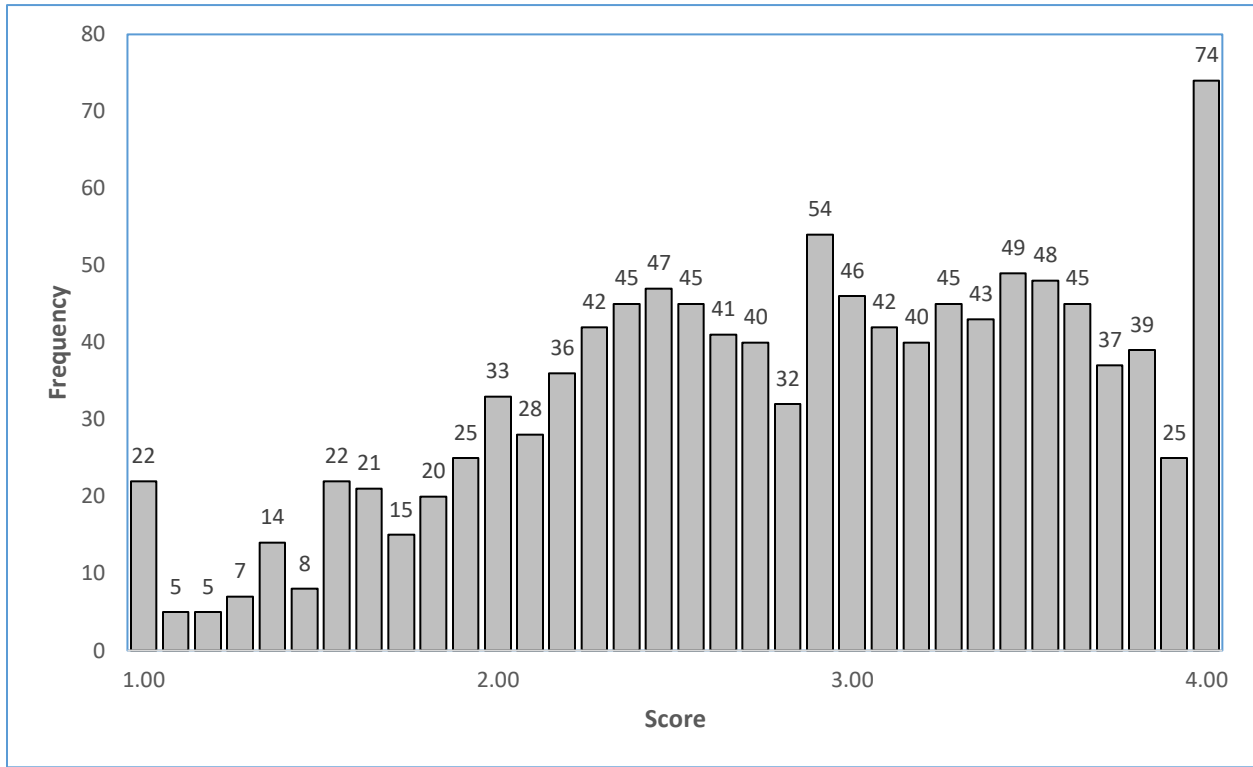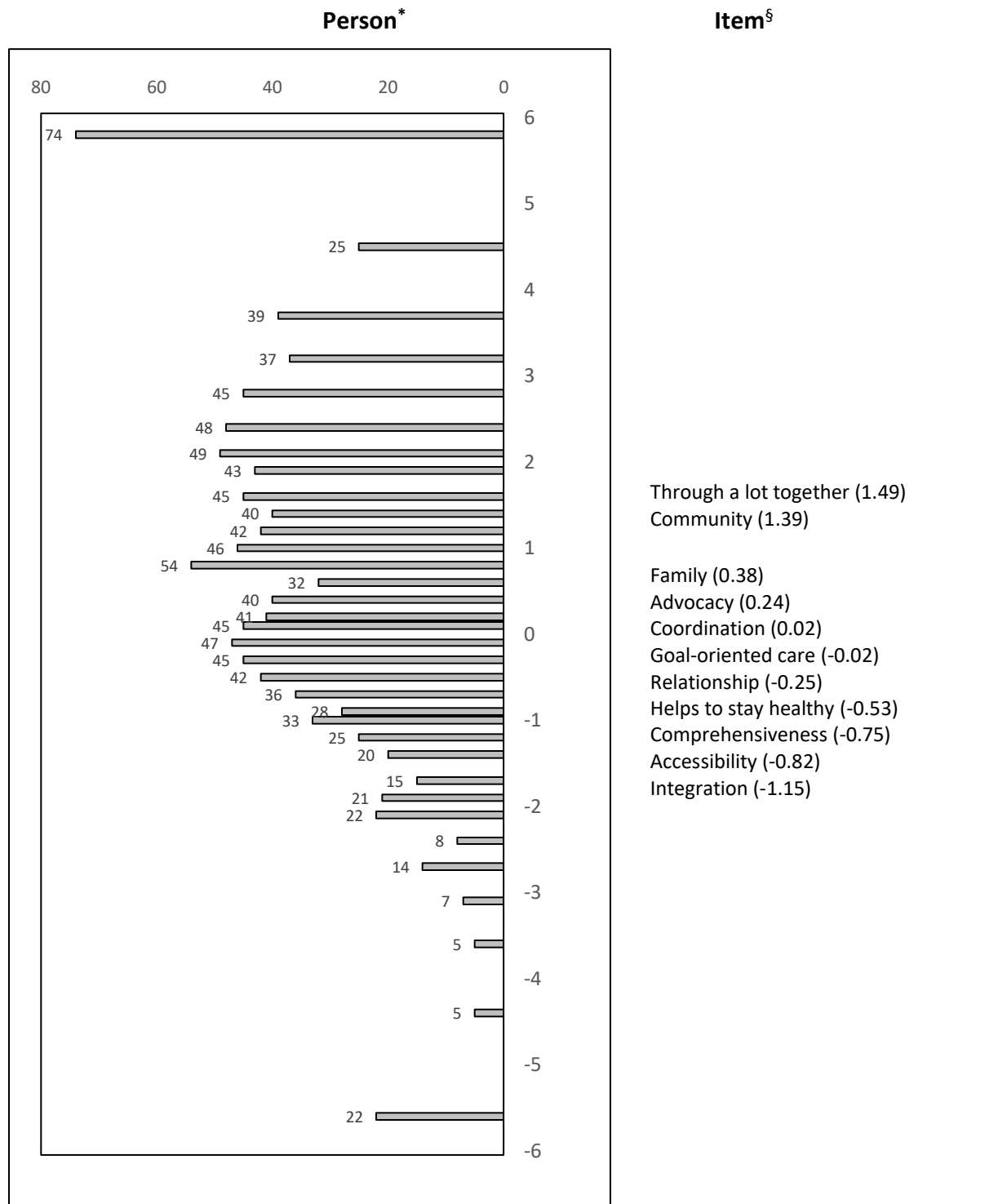

Scree Plot

Figure 2B: Distribution of scores in online sample 1 (n=1140)

Figure 3B: Rasch Model item-person map for online sample 1 (n= 1140)

Person*   Item§

Through a lot together (1.49)
Community (1.39)

Family (0.38)
Advocacy (0.24)
Coordination (0.02)
Goal-oriented care (-0.02)
Relationship (-0.25)
Helps to stay healthy (-0.53)
Comprehensiveness (-0.75)
Accessibility (-0.82)
Integration (-1.15)

* Bars under *Person* heading show distribution of person's responses across the range of difficulty of the items.

§ Numbers in parentheses after each *Item* heading show distribution and lack of redundancy of items across the range of difficulty.

Not pictured: On *Person* side of map, mean = 0.68, 1 standard deviation = 1.71; on the *Item* side of the map, mean = 0.0, 1 standard deviation = 0.81

Table 5B: Participant characteristics for each of three clinical sub-samples

Participant Characteristic	2 Private Family Medicine Practices N= 126		Community Health Center N = 97		Pediatric Practice N = 100	
Age	N	(%)	N	(%)	N	(%)
18-29	15	(22)				
30-44	31	(41)	***		***	
45-60	52	(25)				
> 60	28	(12)				
Gender (Female)	88	(70)	***		69	(69)
Years knowing physician						
<1	28	(22)	6	(7)		
1-3	52	(41)	21	(23)	***	
4-10	31	(25)	33	(37)		
>10	15	(12)	30	(33)		
WMI						
0	43	(39)	***		62	(69)
1	32	(29)			22	(24)
≥ 2	35	(32)			6	(7)
Patient Enablement Index						
0	8	(6)	15	(17)		
1-5	15	(12)	13	(15)	***	
6-11	50	(41)	31	(34)		
12	50	(41)	31	(34)		

*** Item not included on this version of the survey

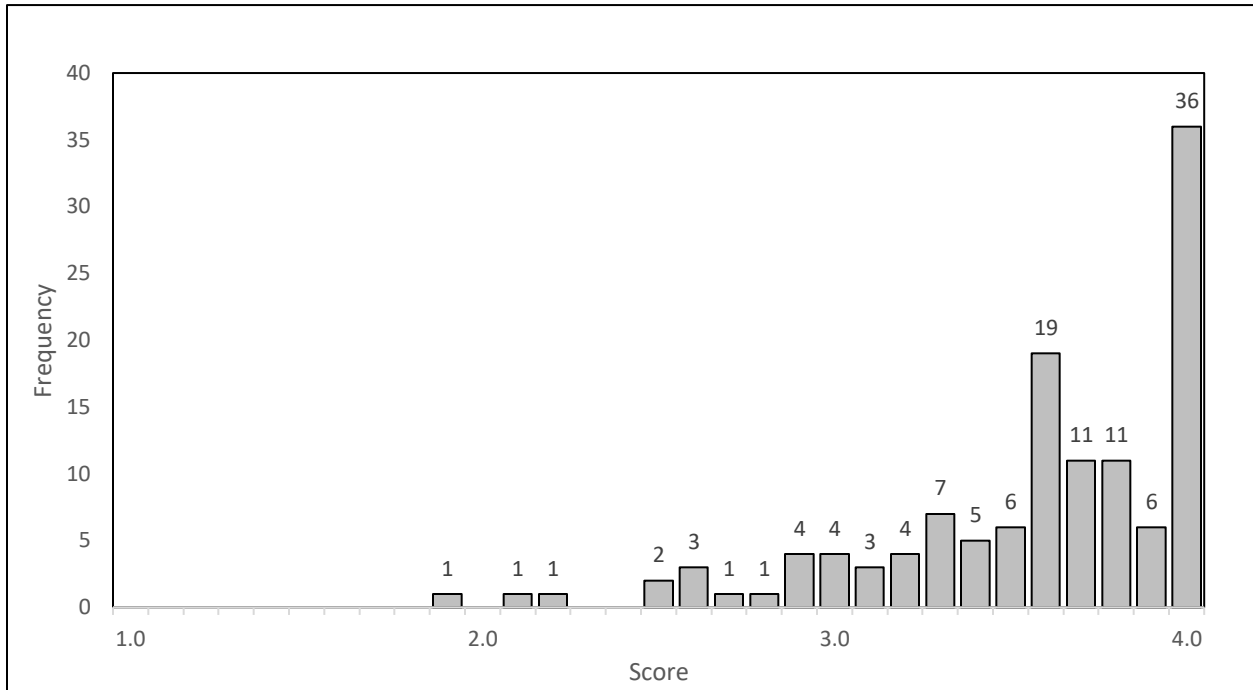## Table 6B: Items, descriptions, factor loading and goodness of fit statistic for clinical sub-samples

Item	2 Private Family Medicine Practices N= 126				Community Health Center N = 97				Pediatric Practice N = 100			
	Mean	SD	Factor Loading	Item-Total Correlation	Mean	SD	Factor Loading	Item-Total Correlation	Mean	SD	Factor Loading	Item-Total Correlation
My practice makes it easy for me to get care.	3.72	.57	.68	.59	3.68	.67	.75	.70	3.73	.52	.31	.27
My practice is able to provide most of my care.	3.75	.52	.73	.67	3.70	.63	.72	.65	3.88	.33	.63	.54
In caring for me, my doctor considers all of the factors that affect my health.	3.79	.50	.69	.56	3.77	.62	.79	.69	3.88	.36	.48	.41
My practice coordinates the care I get from multiple places.	3.57	.62	.62	.56	3.53	.75	.40	.40	3.71	.57	.52	.44
My doctor or practice knows me as a person.	3.63	.71	.47	.44	3.44	.85	.74	.76	3.51	.84	.47	.45
My doctor and I have been through a lot together.	3.02	1.2	.44	.41	2.74	1.1	.60	.61	2.69	1.1	.44	.45
My doctor or practice stands up for me.	3.58	.68	.76	.69	3.43	.89	.86	.86	3.44	.77	.66	.58
The care I get takes into account knowledge of my family.	3.52	.76	.54	.49	3.44	.89	.76	.71	3.63	.61	.73	.63
The care I get in this practice is informed by knowledge of my community.	3.29	.88	.53	.46	3.00	1.0	.70	.66	3.27	.91	.58	.52
Over time, this practice helps me to meet my goals.	3.64	.64	.80	.72	3.60	.71	.80	.77	3.72	.54	.47	.38
Over time, my practice helps me stay healthy.	3.71	.57	.88	.79	3.49	.71	.79	.76	3.81	.45	.48	.41

Table 7B: Concurrent validity analyses for clinical sub-samples

Validation Item	2 Private Family Medicine Practices n= 126				Community Health Center n= 97				Pediatric Practice n= 100			
	N	Mean	S.D.	P	N	Mean	S.D.	P	N	Mean	S.D.	P
Age												
18-29	15	3.54	.45		***	***	***	***	***	***	***	***
30-44	31	3.41	.48	.17								
45-60	52	3.60	.46									
> 60	28	3.67	.44									
Female												
Yes	88	3.58	.48	.64	***	***	***	***	69	3.55	.42	.65
No	38	3.54	.43						31	3.59	.31	
Years knowing physician												
<1	18	3.51	.50		6	2.97	.63	.01	***	***	***	***
1-3	53	3.59	.45	.93	21	3.38	.42					
4-10	41	3.59	.44		33	3.42	.65					
>10	8	3.44	.64		30	3.72	.43					
WMI												
0	43	3.60	.35						62	3.63	.30	
1	32	3.55	.47	.83	***	***	***	***	22	3.36	.51	.02
≥ 2	35	3.61	.52						6	3.64	.47	
Patient Enablement Index												
0	8	2.94	.65		15	3.09	.83		***	***	***	***
1-5	15	3.38	.56	.0001	13	3.11	.59	.0001				
6-11	50	3.51	.42		31	3.49	.47					
12	50	3.78	.29		31	3.77	.33					

****Item not included in this version of the survey

Figure 4B: Distribution of scores in two private practices (n= 126)

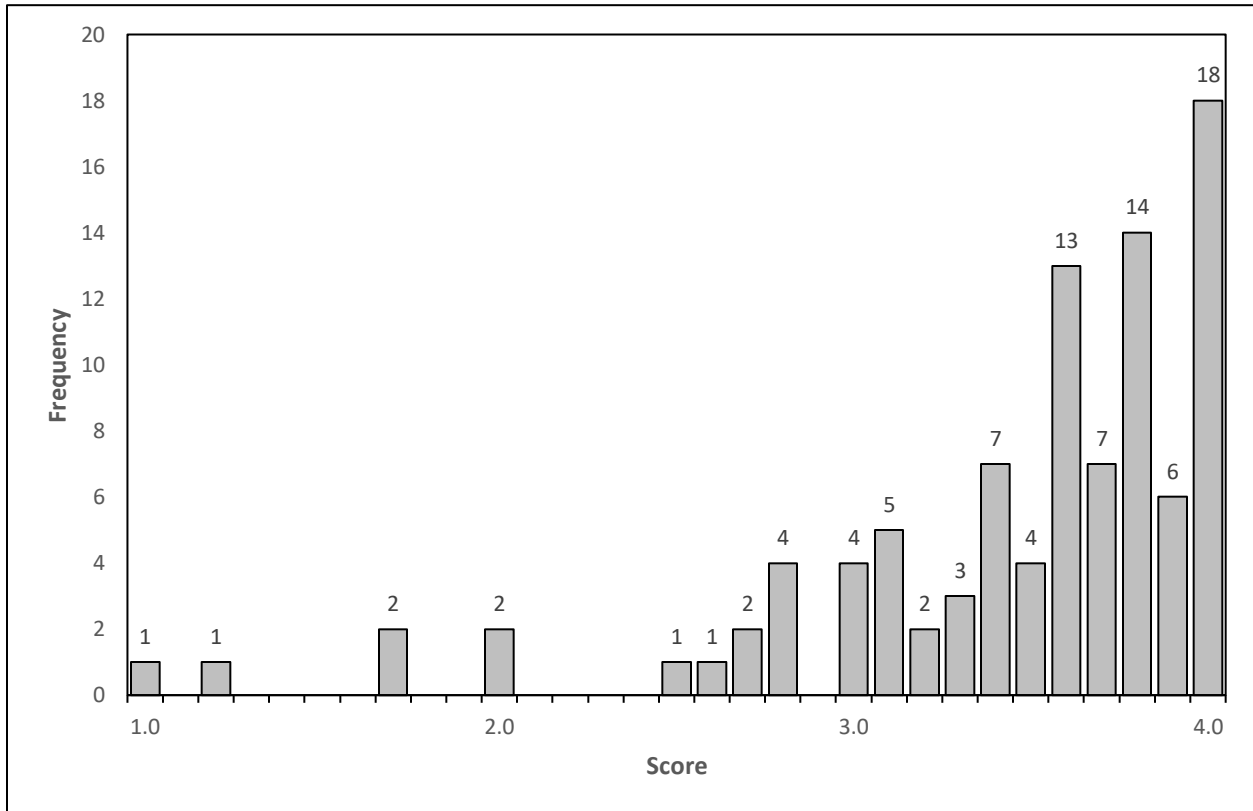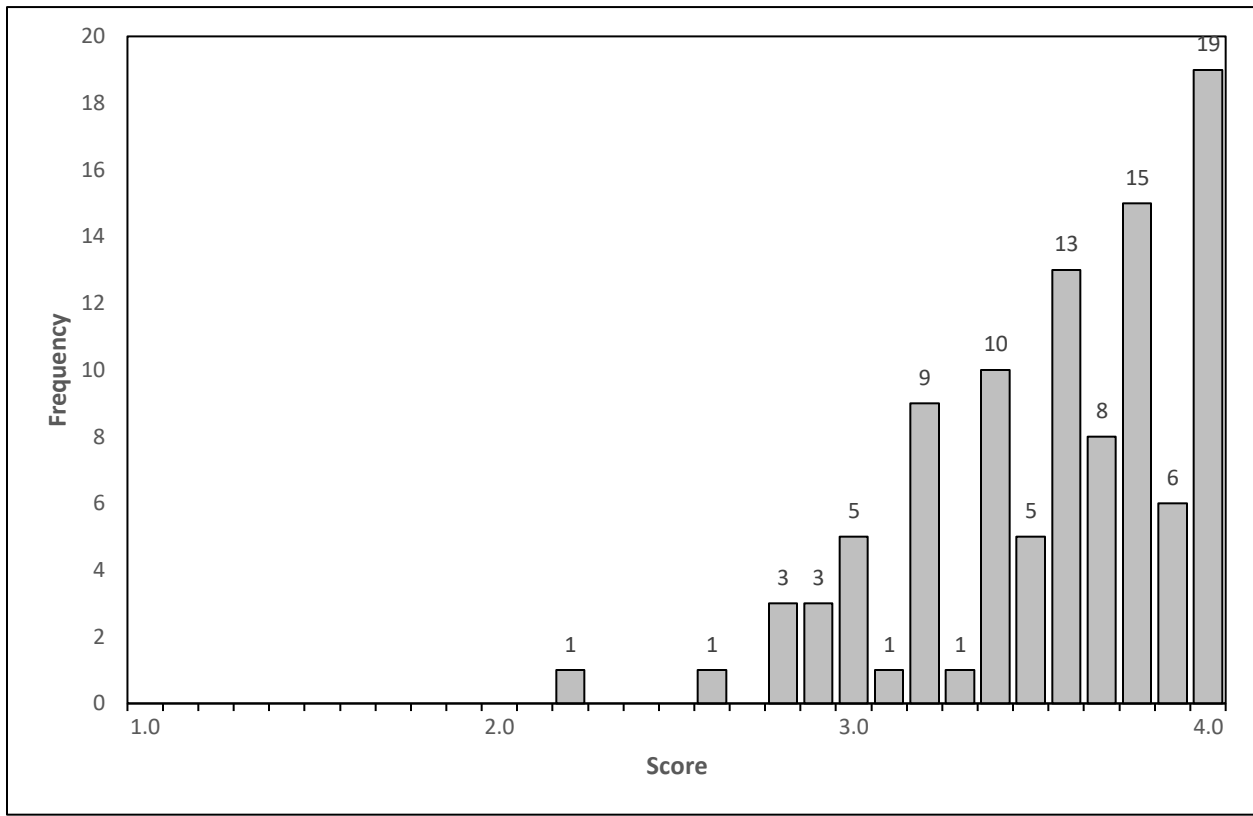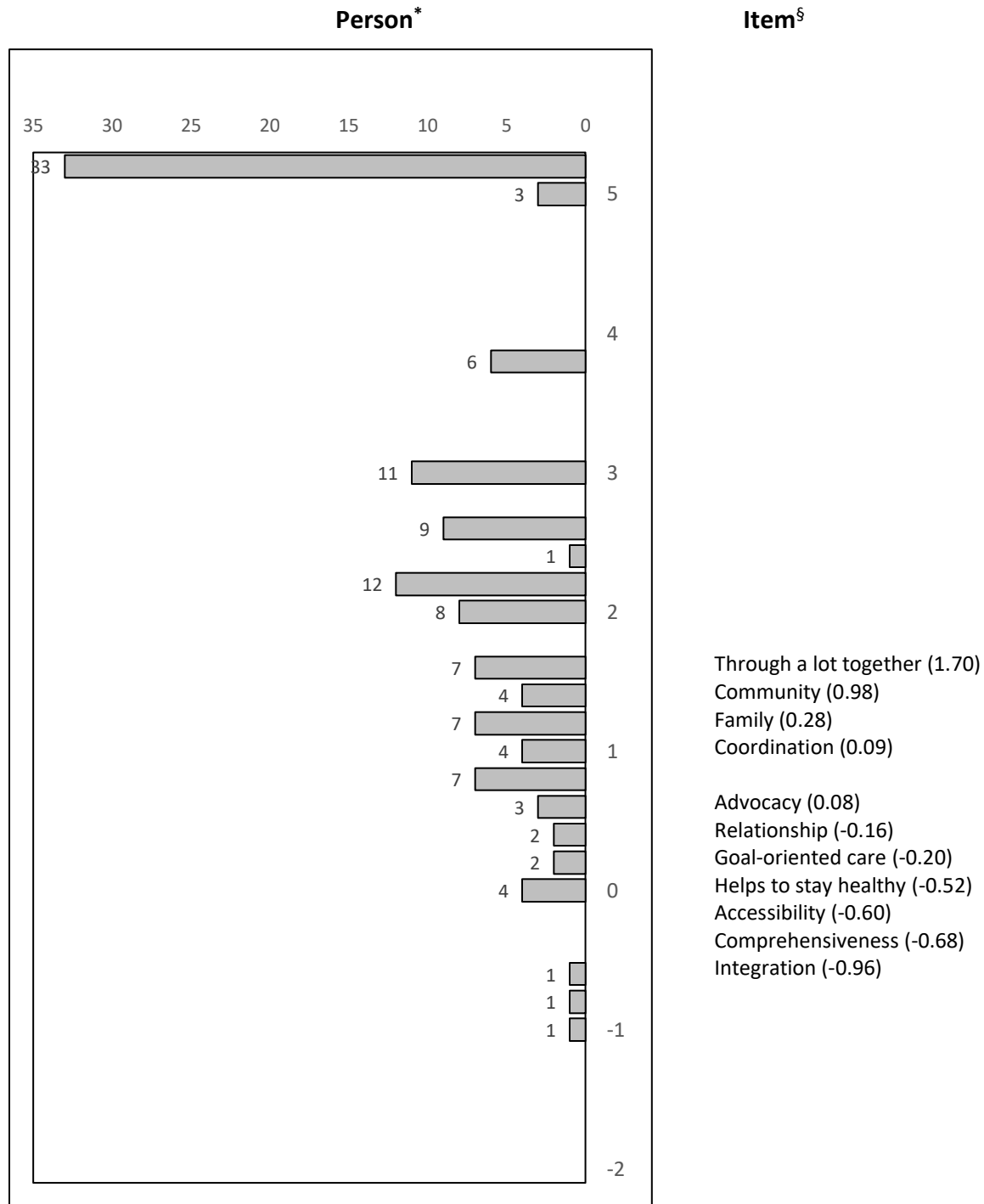**Figure 5B: Distribution of scores in community health center (n= 97)**

Figure 6B: Distribution of scores in pediatric practice (n= 100)

Figure 7B: Rasch Model item-person map in two private practices (n= 126)

Person*   Item§

Through a lot together (1.70)
Community (0.98)
Family (0.28)
Coordination (0.09)

Advocacy (0.08)
Relationship (-0.16)
Goal-oriented care (-0.20)
Helps to stay healthy (-0.52)
Accessibility (-0.60)
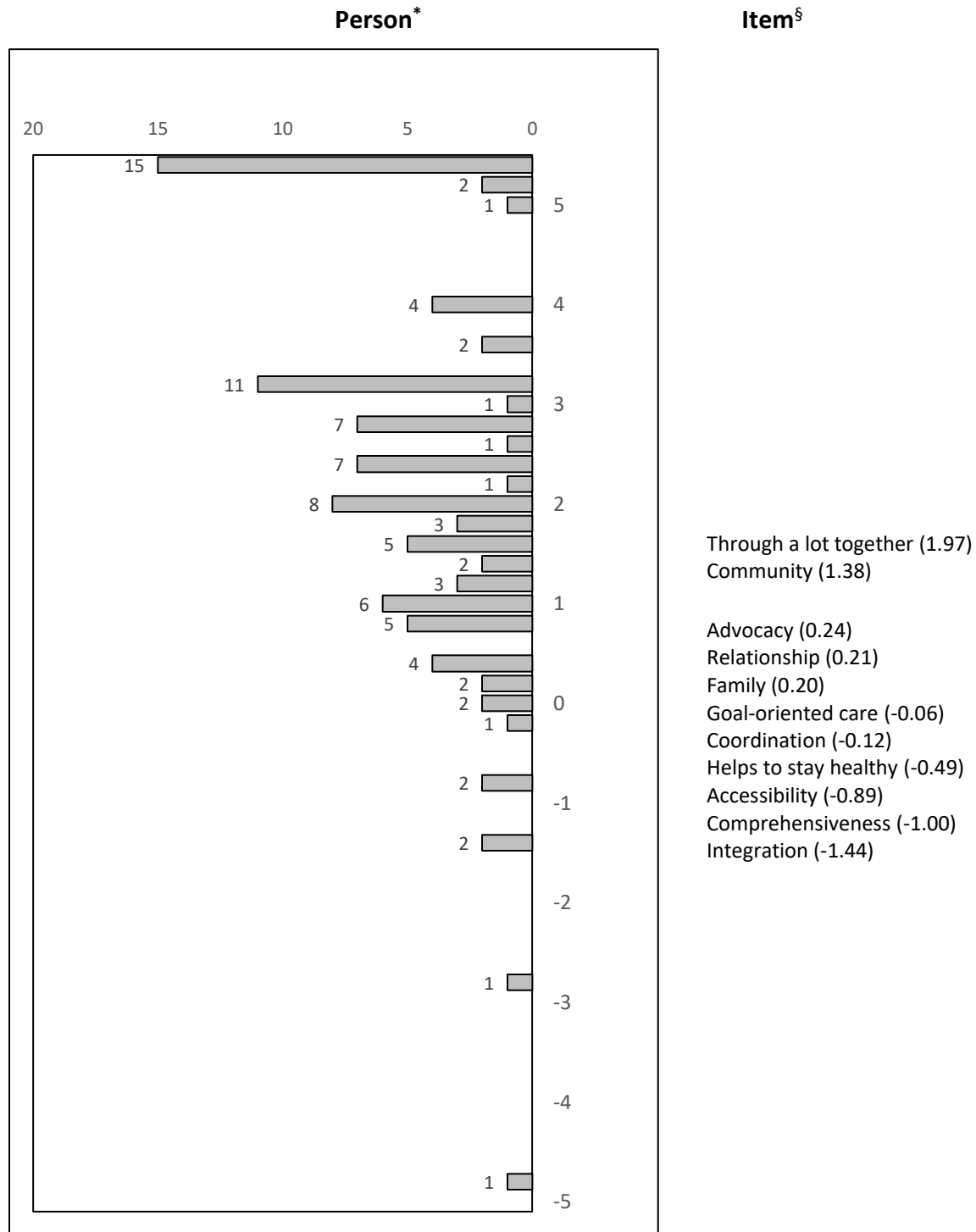Comprehensiveness (-0.68)
Integration (-0.96)

* Bars under *Person* heading show distribution of person's responses across the range of difficulty of the items.

§ Numbers in parentheses after each *Item* heading show distribution and lack of redundancy of items across the range of difficulty.

Not pictured: On *Person* side of map, mean = 1.84, 1 standard deviation = 1.12; on the *Item* side of the map, mean = 0.0, 1 standard deviation = 0.74

Figure 8B: Rasch Model in community health center (n= 99)

Person*

Item§

Through a lot together (1.97)
Community (1.38)

Advocacy (0.24)
Relationship (0.21)
Family (0.20)
Goal-oriented care (-0.06)
Coordination (-0.12)
Helps to stay healthy (-0.49)
Accessibility (-0.89)
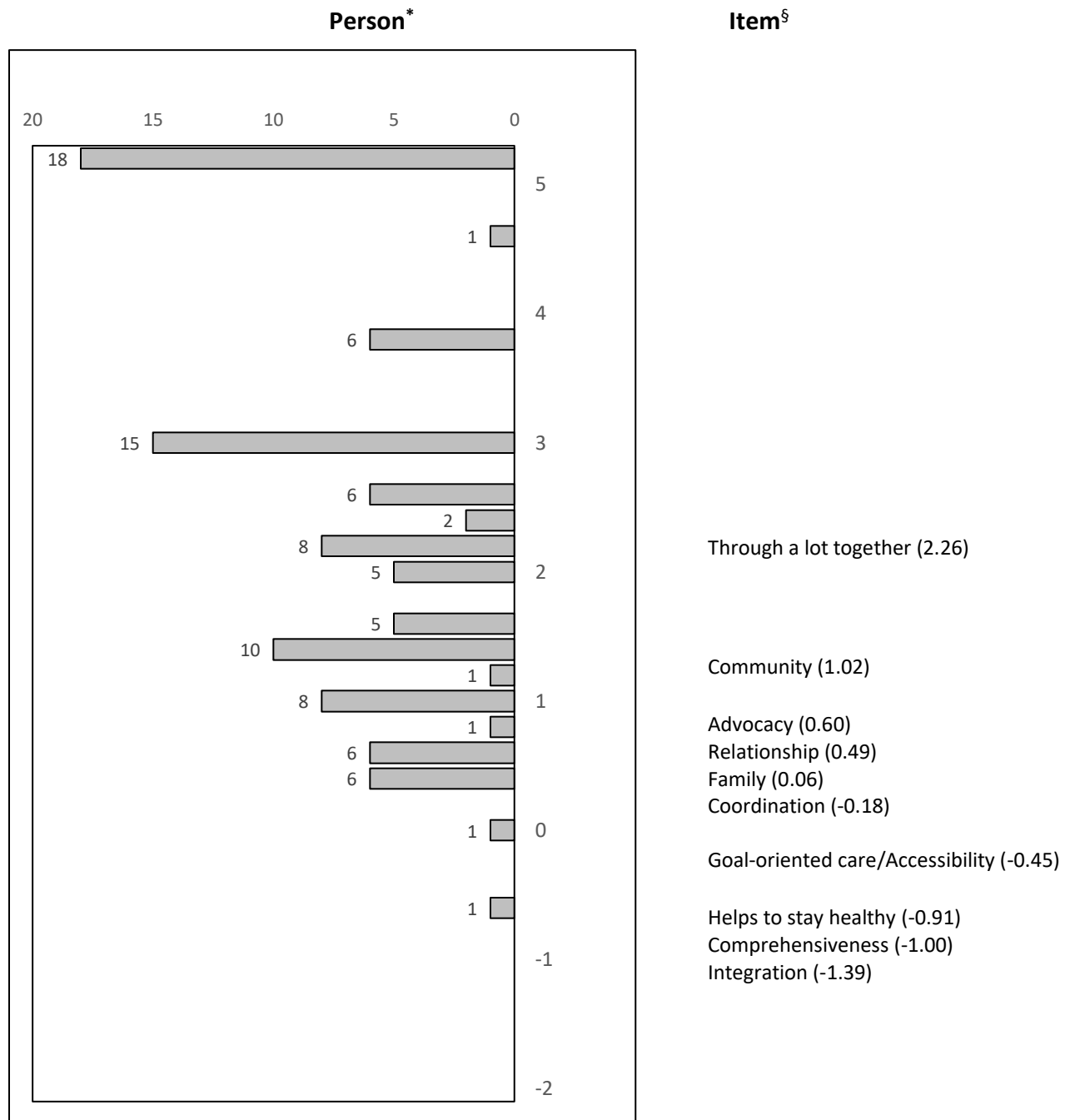Comprehensiveness (-1.00)
Integration (-1.44)

* Bars under *Person* heading show distribution of person's responses across the range of difficulty of the items.

§ Numbers in parentheses after each *Item* heading show distribution and lack of redundancy of items across the range of difficulty.

Not pictured: On *Person* side of map, mean = 1.81, 1 standard deviation = 1.37; on the *Item* side of the map, mean = 0.0, 1 standard deviation = 0.96

Figure 9B: Rasch Model in pediatric practice (n= 100)

Person*   Item§

Item values (right side of map):

Through a lot together (2.26)

Community (1.02)

Advocacy (0.60)
Relationship (0.49)
Family (0.06)
Coordination (-0.18)

Goal-oriented care/Accessibility (-0.45)

Helps to stay healthy (-0.91)
Comprehensiveness (-1.00)
Integration (-1.39)

* Bars under *Person* heading show distribution of person's responses across the range of difficulty of the items.

§ Numbers in parentheses after each *Item* heading show distribution and lack of redundancy of items across the range of difficulty.

Not pictured: On *Person* side of map, mean = 1.97, 1 standard deviation = 1.07; on the *Item* side of the map, mean = 0.0, 1 standard deviation = 1.00