Supplemental Tables and Figures

Reliability and validity of a Spanish-language measure assessing clinical capacity to sustain Pediatric Early Warning Systems (PEWS) in resource-limited hospitals

Table of Contents:

Agulnik A, *et al. BMJ Open* 2021; 11:e053116. doi: 10.1136/bmjopen-2021-053116

Supplemental Table 1: Participating center relevant characteristics and response rates

Center	Country	Type of Hospital	Hospital Funding Structure	New Annual Cancer Diagnoses	Pediatric Oncology Unit Structure	Time since Implementation of PEWS (months)	Number of Staff Working in Center	Staff Surveyed	Responses	Response Rate (%)
1	Argentina	General (Adult and Peds)	Mix (Public/private partnership)	37	Separate pediatric	2.10	85	15	13	87%
2	Brazil	Pediatric Multidisciplinary	Public	140	Integrated with pediatrics	1.10	71	10	8	80%
3	Chile	Pediatric Multidisciplinary	Public	100	Separate pediatric	39.67	70	8	6	75%
4	Costa Rica	Pediatric Multidisciplinary	Public	168	Separate pediatric	6.13	49	5	3	60%
5	Dominican Republic	Pediatric Multidisciplinary	Public	99	Separate pediatric	19.33	35	7	7	100%
6	Dominican Republic	Pediatric Multidisciplinary	Public	59	Separate pediatric	22.40	48	9	6	67%
7	Ecuador	Oncology (Adult and Peds)	Mix (Public/private partnership)	94	Separate pediatric	24.43	40	6	5	83%
8	Ecuador	Oncology (Adult and Peds)	Mix (Public/private partnership)	75	Separate pediatric	12.27	48	6	6	100%
9	El Salvador	Pediatric Multidisciplinary	Public	185	Separate pediatric	22.40	42	4	4	100%
10	Guatemala	Pediatric Oncology	Mix (Public/private partnership)	513	Separate pediatric	69.07	250	6	6	100%
11	Haiti	Pediatric Multidisciplinary	Private	89	Separate pediatric	22.40	16	4	3	75%
12	Honduras	General (Adult and Peds)	Public	365	Integrated with pediatrics	38.63	35	5	5	100%
13	Mexico	General (Adult and Peds)	Public	19	Separate pediatric	19.33	49	4	4	100%
14	Mexico	Oncology (Adult and Peds)	Public	110	Separate pediatric	9.20	77	6	5	83%
15	Mexico	Oncology (Adult and Peds)	Mix (Public/private partnership)	27	Integrated with pediatrics	22.80	19	4	1	25%
16	Mexico	Pediatric Multidisciplinary	Public	143	Separate pediatric	7.17	55	6	6	100%

17	Mexico	General (Adult and Peds)	Public	42	Integrated with pediatrics	15.33	230	7	5	71%
18	Mexico	General (Adult and Peds)	Public	136	Separate pediatric	6.13	103	6	5	83%
19	Mexico	General (Adult and Peds)	Public	58	Separate pediatric	7.17	66	9	4	44%
20	Mexico	General (Adult and Peds)	Public	45	Separate pediatric	10.23	31	4	4	100%
21	Mexico	General (Adult and Peds)	Public	60	Separate pediatric	26.47	34	6	5	83%
22	Mexico	Pediatric Oncology	Private	60	Separate pediatric	51.83	103	9	9	100%
23	Mexico	Pediatric Multidisciplinary	Public	121	Separate pediatric	13.30	94	6	4	67%
24	Mexico	Pediatric Multidisciplinary	Public	49	Separate pediatric	21.37	227	5	4	80%
25	Nicaragua	Pediatric Multidisciplinary	Public	301	Separate pediatric	14.30	39	5	3	60%
26	Panama	Pediatric Multidisciplinary	Public	55	Separate pediatric	20.37	22	10	7	70%
27	Peru	General (Adult and Peds)	Mix (Public/private partnership)	200	Separate pediatric	5.17	22	13	9	69%
28	Peru	General (Adult and Peds)	Public	150	Separate pediatric	7.17	42	12	10	83%
29	Peru	Oncology (Adult and Peds)	Public	800	Separate pediatric	17.37	230	13	12	92%
TOTAL								**210**	**169**	**80%**

Supplemental Figure 1: English version of the Clinical Sustainability Assessment Tool (CSAT) final survey instrument

CSAT Questions

In the following questions, rate the EVAT program across a range of specific factors that affect sustainability. Please respond to as many items as possible. The more honest you can be with your answers, the more helpful the report will be in moving forward with your program's sustainability planning. If you truly feel you are not able to answer an item, you may select "NA."

For each statement, select the number that best indicates the extent to which you agree. The scale has a range from 1 to 5. Selecting 1 indicates "strongly disagree" and selecting 5 indicates "strongly agree."

NA		1	2	3	4	5
Not able to answer		Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree

Engaged Staff & Leadership: Having supportive frontline staff and management within the organization

1. EVAT engages leadership and staff throughout the process.
2. Clinical champions of EVAT are recognized and respected.
3. EVAT has engaged, ongoing champions.
4. EVAT has a leadership team made of multiprofessional partnerships.
5. EVAT has team-based collaboration and infrastructure.

Engaged Stakeholders: Having external support and engagement for EVAT

Stakeholders: individuals, groups, or organizations that positively or negatively influence the results of a project/initiative, which has authority and power.

1. EVAT engages the patient and family members as stakeholders.
2. There is respect for all stakeholders involved in EVAT.
3. The EVAT importance is valued by a diverse set of stakeholders.
4. EVAT engages other medical teams and community partnerships as appropriate.
5. The EVAT leadership team has the ability to respond to stakeholder feedback about EVAT.

Organizational Readiness: Having the internal support and resources needed to effectively manage EVAT

1. Organizational systems are in place to support the various needs of EVAT.
2. EVAT fits in well with the culture of the team.
3. EVAT has feasible and sufficient resources (e.g., time, space, funding) to achieve its goals.
4. EVAT has adequate staff to achieve its goals.
5. EVAT is well integrated into the operations of the hospital.

Workflow Integration: Designing EVAT to fit into existing practices and technologies

1. EVAT is built into the clinical workflow.
2. EVAT is easy for clinicians to use.
3. EVAT integrates well with established clinical practices.
4. EVAT aligns well with other clinical systems (e.g., EMR).
5. EVAT is designed to be used consistently.

Implementation & Training: Using processes that guide the direction, goals, and strategies of EVAT

1. EVAT clearly outlines roles and responsibilities for all staff.
2. The reason for EVAT is clearly communicated to and understood by all staff.
3. Staff receive ongoing coaching, feedback, and training.
4. EVAT implementation is guided by feedback from stakeholders.
5. EVAT has ongoing education across professions.

Monitoring & Evaluation: Assessing EVAT to inform planning and document results

1. EVAT has measurable process components, outcomes, and metrics.
2. Evaluation and monitoring of EVAT are reviewed on a consistent basis.
3. EVAT has clear documentation to guide process and outcome evaluation.
4. EVAT monitoring, evaluation, and outcomes data are routinely reported to the clinical care team.
5. EVAT process components, outcomes, and metrics are easily assessed and audited.

Outcomes & Effectiveness: Understanding and measuring EVAT outcomes and impact

1. EVAT has evidence of beneficial outcomes.
2. EVAT is associated with improvement in patient outcomes that are clinically meaningful.
3. EVAT is clearly linked to positive health or clinical outcomes.
4. EVAT is cost-effective.
5. EVAT has clear advantages over alternatives (including not implementing EVAT)

Intervention

The following questions will ask about EVAT. Please answer considering the time BEFORE COVID at your institution.

6. Please rate the strength of the scientific evidence supporting EVAT implementation.
    a. Very weak
    b. Weak
    c. Neither weak nor strong
    d. Strong
    e. Very strong
    f. Don't know/NA
7. How important is EVAT to provide quality care to your patients?
    a. Not at all important
    b. Somewhat unimportant
    c. Neither important nor unimportant
    d. Somewhat important
    e. Very important

8. How difficult was the implementation of EVAT, or do you expect the implementation of EVAT to be, in your hospital?
    a. Very difficult
    b. Somewhat difficult
    c. Neither easy nor difficult
    d. Somewhat easy
    e. Very easy
    f. Don't know/NA

9. Regarding patients under my care, how often is EVAT used in their care?
    a. EVAT is not yet implemented in my hospital
    b. None of the time
    c. Some of the time
    d. Most of the time
    e. All of the time

Organization

Please indicate how much you agree or disagree with each of the following statements.

	Not aplicable	Strongly Disagree	Somewhat Disagree	Neither agree nor disagree	Somewhat agree	Strongly Agree
10. Our resources (personnel, time, financial) are too tightly limited to improve care quality.		1	2	3	4	5
11. Our EVAT implementation team understands and uses quality improvement skills effectively.		1	2	3	4	5
12. Our clinical team has changed or created systems in the hospital that make it easier to provide high quality care.		1	2	3	4	5
13. We choose new processes of care that are more advantageous than the old to everyone involved (patients, clinicians, and our entire clinical team).		1	2	3	4	5
14. The working environment in our clinical team is collaborative and cohesive, with shared sense of purpose, cooperation, and willingness to contribute to the common good.		1	2	3	4	5
15. Our clinical team has greatly improved quality of care in the past 12 months.		1	2	3	4	5

Participant

The following questions will ask about your work. Please indicate your response for each question or statement.

16. What is your primary profession?
    a. Nurse
    b. Physician
    c. Healthcare Administration
    d. Other (please list): _____

17. Where is your primary area of work?
    e. Pediatric or Pediatric Hematology-Oncology floor
    f. Intensive Care Unit
    g. Non-clinical work
    h. Other (please list): _____

18. In relation to EVAT, what is your primary role in the implementation team?
    a. EVAT leader
    b. Clinical staff
    c. Hospital administrator
    d. Data manager (responsible to collect/send EVAT data)
    e. Other _____

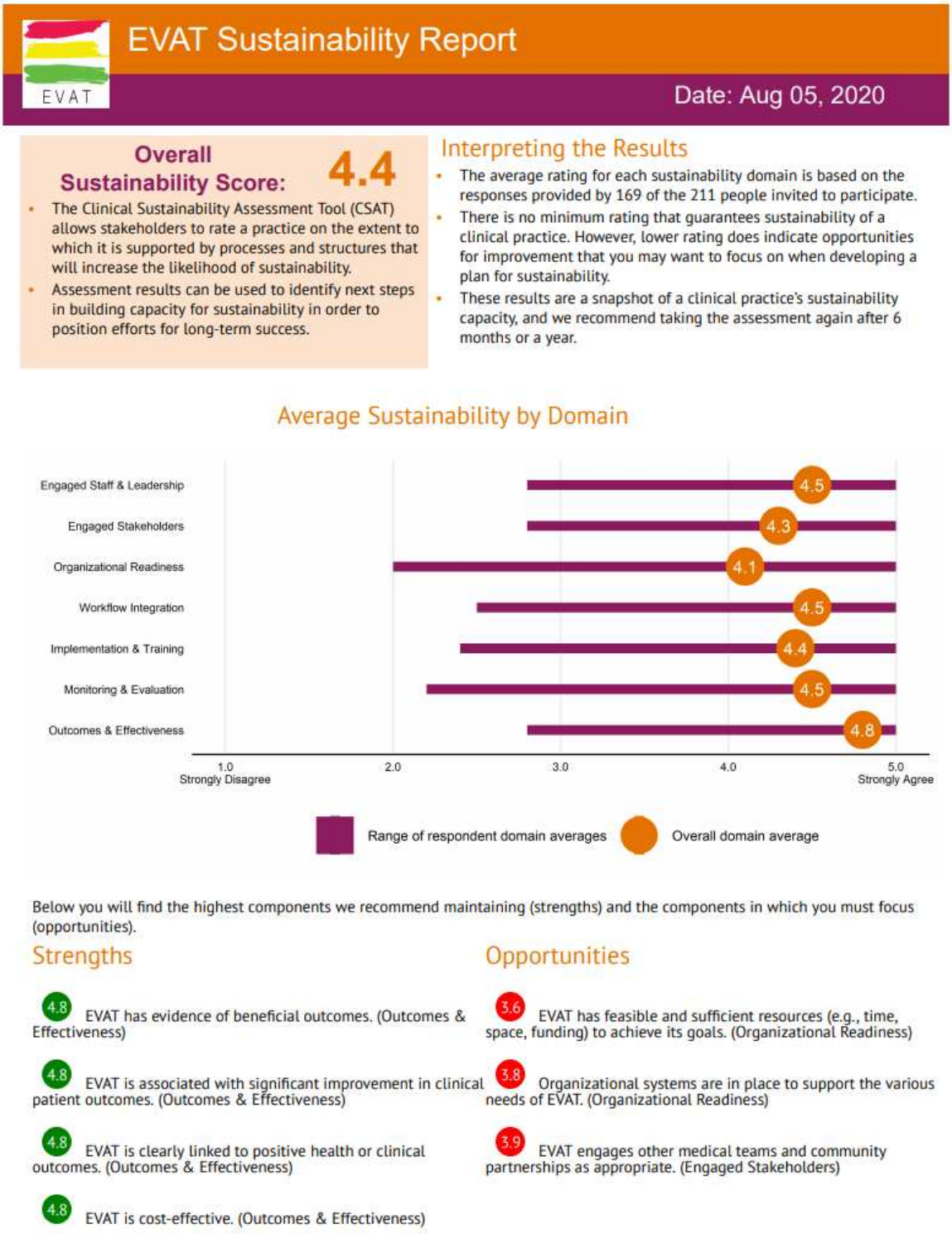
19. How many years have you worked **since completing medical or nursing training**?
    a. 0-5 years
    b. 6-10 years
    c. 11-15 years
    d. 16-20 years
    e. Greater than 20 years
    f. N/A

20. How many years have you worked **at this hospital**?
    g. 0-5 years
    h. 6-10 years
    i. 11-15 years
    j. 16-20 years
    k. Greater than 20 years

21. What is your gender?
    a. Male
    b. Female
    c. Other

22. What is your age?
    a. <30 years old
    b. 30-40
    c. 40-50
    d. >50 years old

Supplemental Figure 2: Sample CSAT Report



EVAT Sustainability Report:

Date: Aug 05, 2020

Engaged Staff & Leadership

Score 4.5

		Score
1.	EVAT engages leadership and staff throughout the process.	4.7
2.	EVAT leaders are recognized and respected.	4.3
3.	EVAT has engaged, ongoing champions.	4.7
4.	EVAT has a multidisciplinary leadership team.	4.6
5.	EVAT has team-based collaboration and infrastructure.	4.4

Engaged Stakeholders

Score 4.3

		Score
1.	EVAT engages the patient and family members as stakeholders.	4.4
2.	There is respect for all stakeholders involved in EVAT.	4.4
3.	The importance of EVAT is valued by a diverse set of stakeholders.	4.3
4.	EVAT engages other medical teams and community partnerships as appropriate.	3.9
5.	The EVAT leadership team has the ability to respond to stakeholder feedback about EVAT.	4.6

Organizational Readiness

Score 4

		Score
1.	Organizational systems are in place to support the various needs of EVAT.	3.8
2.	EVAT fits in well with the culture of the team.	4.4
3.	EVAT has feasible and sufficient resources (e.g., time, space, funding) to achieve its goals.	3.6
4.	EVAT has adequate staff to achieve its goals.	4.2
5.	EVAT is well integrated into the operations of the hospital.	4.2

Workflow Integration

Score 4.5

		Score
1.	EVAT is built into the clinical workflow.	4.6
2.	EVAT is easy for clinicians to use.	4.5
3.	EVAT integrates well with established clinical practices.	4.6
4.	EVAT aligns well with other clinical systems (e.g., EMR).	4.1
5.	EVAT is designed to be used consistently.	4.7

Implementation & Training

Score 4.3

		Score
1.	EVAT clearly outlines roles and responsibilities for all staff.	4.6
2.	The reason for EVAT is clearly communicated to and understood by all staff.	4.4
3.	Staff receive ongoing coaching, feedback, and training.	4.3
4.	EVAT implementation is guided by feedback from stakeholders.	4.3
5.	EVAT has ongoing education across professions.	4.1

Monitoring & Evaluation

Score 4.5

		Score
1.	EVAT has measurable process components, outcomes, and metrics.	4.7
2.	Evaluation and monitoring of EVAT are reviewed on a consistent basis.	4.5
3.	EVAT has clear documentation to guide process and outcome evaluation.	4.7
4.	EVAT monitoring, evaluation, and outcomes data are routinely reported to the clinical care team.	4.2
5.	EVAT process components, outcomes, and metrics are easily assessed and audited.	4.4

Outcomes & Effectiveness

Score 4.8

		Score
1.	EVAT has evidence of beneficial outcomes.	4.8
2.	EVAT is associated with significant improvement in clinical patient outcomes.	4.8
3.	EVAT is clearly linked to positive health or clinical outcomes.	4.8
4.	EVAT is cost-effective.	4.8
5.	EVAT has clear advantages over alternatives (including not implementing EVAT).	4.6

Next Steps

- These results can be used to guide sustainability planning for your clinical practice.
- Areas with lower ratings indicate that there is room for improvement.
- Address domains that are modifiable and have data available to support the needed changes.
- Develop long-term strategies to tackle the domains that may be more difficult to modify.
- Make plans to assess your practice's sustainability on an ongoing basis to monitor changes as you strive for an ongoing impact.

Supplemental Figure 3: Focus group facilitator guide

Welcome:	Welcome to this focus group that aims to discuss the EVAT Sustainability Report based on the Clinical Sustainability Assessment Tool (CSAT), that you received. Thank you again for accepting our invitation and for giving us some of your valuable time to chat with us.
Description:	This session is part of a series of focus groups that we will be conducting with people who completed the Clinical Sustainability Assessment Tool (CSAT) in different institutions and countries. Our goal today is to ensure that everyone has the opportunity to share their comments and feedback with the group in order to evaluate and improve the CSAT assessment tool.
Description of rules to follow: Before we begin, I would like to go over some basic rules to follow during this focus group.	• Make sure you have the EVAT Sustainability Report (based on the CSAT) that was provided to you. • This session will be recorded, which will allow me to focus my attention on you rather than trying to take notes about the conversation. • It is important that only one person speaks at a time in order to facilitate later transcription of the recording. • The audio obtained from the recording will be transcribed and de-identified for later analysis. We will not use video for the purposes of this analysis. • For the purposes of this session, we will identify ourselves and refer to each participant using only their first names to avoid hierarchies and facilitate communication. We remind you that your comments will be subsequently de-identified. • What is shared in the session stays in the session. As facilitators, we are committed to maintaining the confidentiality of what is discussed here and, in the same way, we appreciate that what is said here is not discussed with other people once the session is over. • There are no right or wrong answers to the questions we will ask today, we just want to know about your ideas, experiences and opinions, all of which are of great value to us. Listening to each other's points of view is imperative, both positive and negative. It is important for us to listen to everyone's ideas and opinions. We want the ideas of each participant in the focus group to be equally represented; so, do not hesitate to share your opinions. • You do not have to agree with others, but you must listen to and respect the opinions expressed by other participants. • You do not have to wait to be called to intervene in the question round. It is an open discussion so you can comment at any time.
Technical considerations:	○ We appreciate that each participant keeps their camera active throughout the session. If you have any problem activating your camera, remember that you can ask (co-facilitator) for help via chat. ○ It is recommended to use the grid view so you can see all the participants on one screen. This will help give the feel of an in-person meeting. The grid view can be selected from the menu in the upper right corner of your screen. ○ Remember to keep your microphone muted, and to activate it whenever you want to comment or say something. ○ We understand that you may need to answer a phone call or a pager message. If you can turn off those devices, please do so. If that is not possible, please mute your microphone while you are on the call and return to the group as soon as possible. ○ Please use the “chat” function only to communicate technical problems as we want you to express your comments out loud on the subject at hand today.

Doubts before proceeding	**Do you have any questions regarding the rules or a technical matter before we start the question round?**
Introduction of the facilitators and participants:	Now we will introduce ourselves, briefly and in turns. In this section I will call you so that each one of you can tell what your name is, your place of origin, your role as part of your work team and how many months or years of experience each one has providing medical care to children with cancer. (*The facilitator will lead this part of the session using the list of participants*). My name is <state your name, origin, role, and length of service>, and I will serve as a facilitator for our conversation today *[if a co-facilitator is present]* Today we are joined by <Name of the co-facilitator> who will serve as co-facilitator, take notes, and help us to ensure that everything runs smoothly from a technical standpoint. <Co- facilitator> will be waiting for your comments in the chat to attend to any technical problem (audio, difficulties to see the video, etc.) Remember to keep your camera turned on as much as possible. **Introduction of the participants:** Now the moderator will call each participant to introduce themselves. (*The facilitator will lead this part of the session using the list of participants*)
Introduction to Question Round:	In the previous section I have called you to introduce yourself. However, I would like to clarify that in the question section you do not have to wait to be called. Please give your opinion or comment when you consider it appropriate.
Understandability and utility of the report: The CSAT Sustainability Report provides you with a score to help you understand how prepared your hospital is to maintain EVAT.	1. Do you feel that the score is easy to understand? a. What does the score mean to you? How do you interpret the score? b. Can you tell what are the strengths and weakness of your center based on the report? (Pause after the question to await additional comments. Follow new routes according to comments and opinions) c. Is there anything in the report that surprised you? Or something that you disagree with? 2. How does the written information in the report help you understand how to use your score? 3. If you were able, do you feel like you could take action to improve sustainability of [name of intervention] based on this report? How? Please give an example based on your report. (Keep the focus more on the report, rather than EVAT) 4. What other information you would need that would help you take action based on this report? 5. Do you find the second page useful? Informative?
Overall look and feel: We're also interested in your opinion about the best way to present the information in the report so that people would like to read it. We've broken it up into these sections: - score - written text - domain graphs, and - details on the 2nd page (**Request that the co-facilitator share his/her**	1. In your opinion, does the way in which the information is organized make sense? a. What would you do to improve it? b. Is there something missing from the report? c. Does the report appear to you to be coherently organized? 2. Is there any aspects of the report that you find confusing? Or that you would recommend changing? (tell them: there might be something we would like to change that we think would make it easier to read or understand or just aesthetics) What would you suggest? For example, a. Score review box? b. Written text? (ask them: Do you think it has a lot of text? Or if they could communicate the same idea with fewer words, or perhaps explain more specifically offering more details or more descriptive? Maybe make the report a little more concise?) c. The domain averages graph? d. Detailed info on 2nd page?

screen with the report image)	3. Any feedback overall design? (If they offer a negative opinion, offer them **positive feedback.** For example, "how interesting what you say, we would like to know more about it ...") 4. The report offers a snapshot at a certain moment. Would you find it useful to complete the survey periodically to follow up on those aspects that pose an opportunity for improvement? And, if so, how often would you consider it appropriate to carry out the evaluation? [The principal investigator recommends not addressing this point unless the participants speak about it spontaneously].
Conclusion:	Before closing, we would like to know if there is anything else that, in your opinion, we have not covered. Is there anything else about conducting this assessment and receiving the report that you would like us to know? Do you have any additional recommendations about something that you consider important?
Closing:	Thank you for participating and for spending your valuable time with us. We will work in coordination with you to offer you information about the analysis of the results of this project. If you have additional questions, you can contact Dr. Asya Agulnik directly or any of the EVAT team members at St. Jude who will always be happy to assist you.

Supplemental Table 2: Focus group code book

Domain	Code	Definition
Interpreting Report	Ease of Interpretation	Comments on how easy or hard it is to interpret the report, including to use it to identify the center's strengths/weaknesses, both for the participant or members of their team
	Report Interpretation	The participants actual interpretation of their report, including their center's strengths and weaknesses as described by the report (this shows us we need to work on x, or we do a good job with y), anything they were surprised by from their report and if they agree with it. General comments about ease of interpretation or how one could understand the strengths and weaknesses, without specific mentions of them, coded as "ease of interpretation".
	Report Use	Mentions of how the respondents or their team plans to use the report to improve their EVAT program or its sustainability
	Additional Information	Additional information that should be provided in the report to improve usability or anything that is missing that should be provided
Report Components	Written Material	Comments about the quality of the written text in the report and how it does/does not help with interpretation
	Second Page	Comments about the utility of the second page of the report
	Score Review Box	Comments about the score review box
	Domain Graph	Comments about the domain averages graphs
	Other individual components	Comments about an individual component of the report not mentioned in the other "report components' codes. General comments about the report should be coded as 'overall report'
Overall Look and Feel	Overall Report	Comments about the overall organization and design of the report, including things that should be adjusted or changed in the report in general, or things that are confusing. Do not code comments about individual components (code one of the 'report components')
CSAT	CSAT Components	Comments about clarity of specific CSAT domains or questions, including the Likert scale, not related to the report itself
	CSAT Use	Comments about how the CSAT was administered at the center (how many people, how often, etc.) or how it should be used in the future
Negative	Negative comment	Double code with any comment of something that is negative or needs improvement in the report or the CSAT tool itself

Supplemental Table 3: CSAT domains and time from PEWS implementation

		Individual-Level			Center-Level		
Domain	Time since Implementation of PEWS (Months)	n (%) n=169	Mean CSAT	p-value	n (%) n=29	Mean CSAT	p-value
Engaged Staff & Leadership	1-12 months	67 (39.6)	4.37		10 (34.5)	4.43	
	12-24 months	66 (39.1)	4.68	<0.001	13 (44.8)	4.66	0.040
	>24 months	36 (21.3)	4.64		6 (20.7)	4.65	
Engaged Stakeholders	1-12 months	67 (39.6)	4.13		10 (34.5)	4.18	
	12-24 months	66 (39.1)	4.50	<0.001	13 (44.8)	4.50	0.122
	>24 months	36 (21.3)	4.38		6 (20.7)	4.40	
Organizational Readiness	1-12 months	67 (39.6)	3.95		10 (34.5)	4.00	
	12-24 months	66 (39.1)	4.15	0.141	13 (44.8)	4.15	0.393
	>24 months	36 (21.3)	4.18		6 (20.7)	4.19	
Workflow Integration	1-12 months	67 (39.6)	4.26		10 (34.5)	4.33	
	12-24 months	66 (39.1)	4.61	<0.001	13 (44.8)	4.60	0.011
	>24 months	36 (21.3)	4.68		6 (20.7)	4.69	
Implementation & Training	1-12 months	67 (39.6)	4.19		10 (34.5)	4.20	
	12-24 months	66 (39.1)	4.47	0.004	13 (44.8)	4.41	0.224
	>24 months	36 (21.3)	4.51		6 (20.7)	4.51	
Monitoring & Evaluation	1-12 months	67 (39.6)	4.36		10 (34.5)	4.40	
	12-24 months	66 (39.1)	4.53	0.039	13 (44.8)	4.46	0.438
	>24 months	36 (21.3)	4.61		6 (20.7)	4.61	
Outcomes & Effectiveness	1-12 months	67 (39.6)	4.65		10 (34.5)	4.71	
	12-24 months	66 (39.1)	4.80	0.022	13 (44.8)	4.75	0.410
	>24 months	36 (21.3)	4.86		6 (20.7)	4.86	

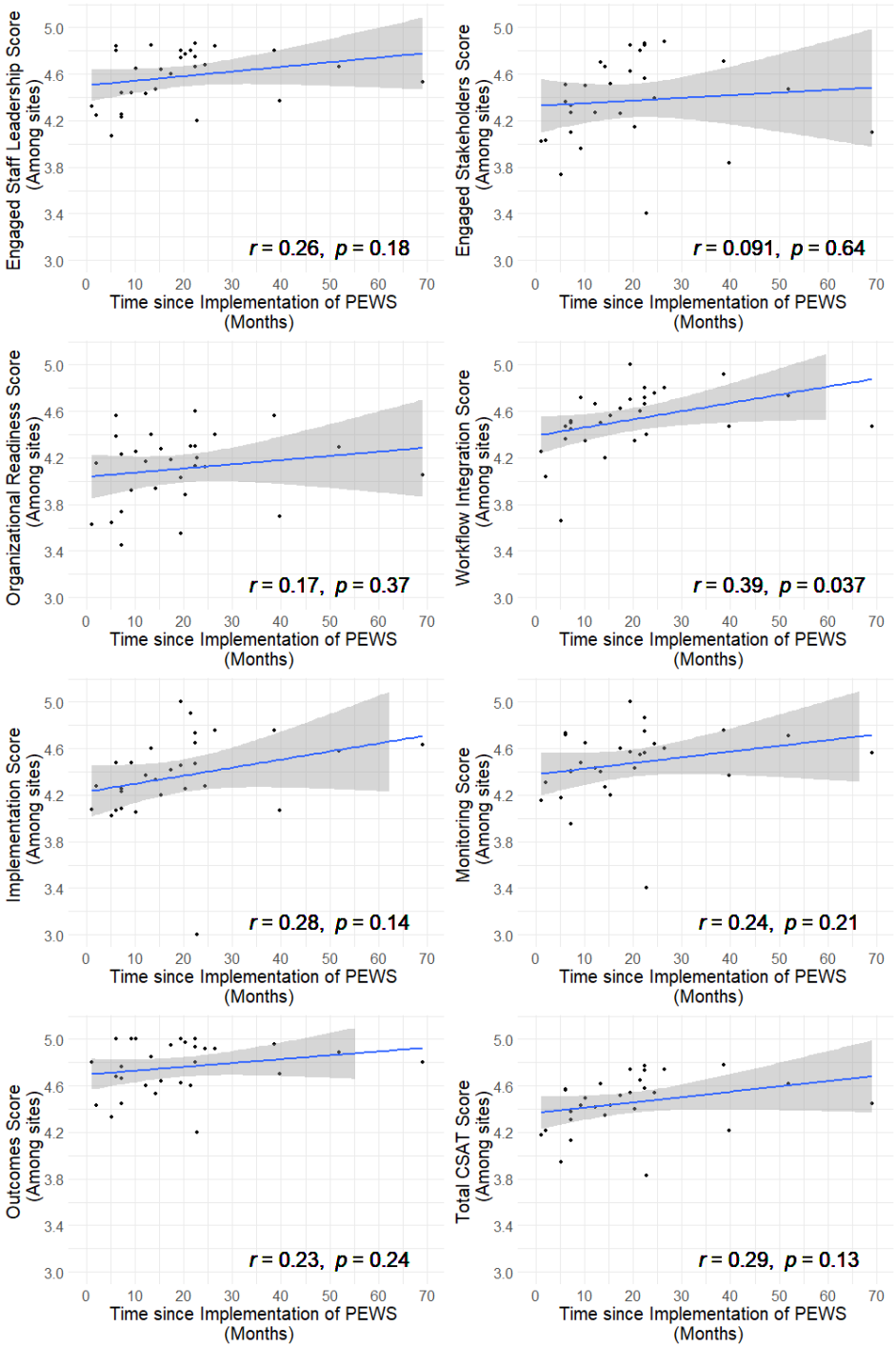
Abbreviations: CSAT-Clinical Sustainability Assessment Tool, PEWS-Pediatric Early Warning System

Supplemental Table 4: Center demographics influencing CSAT results (among centers)

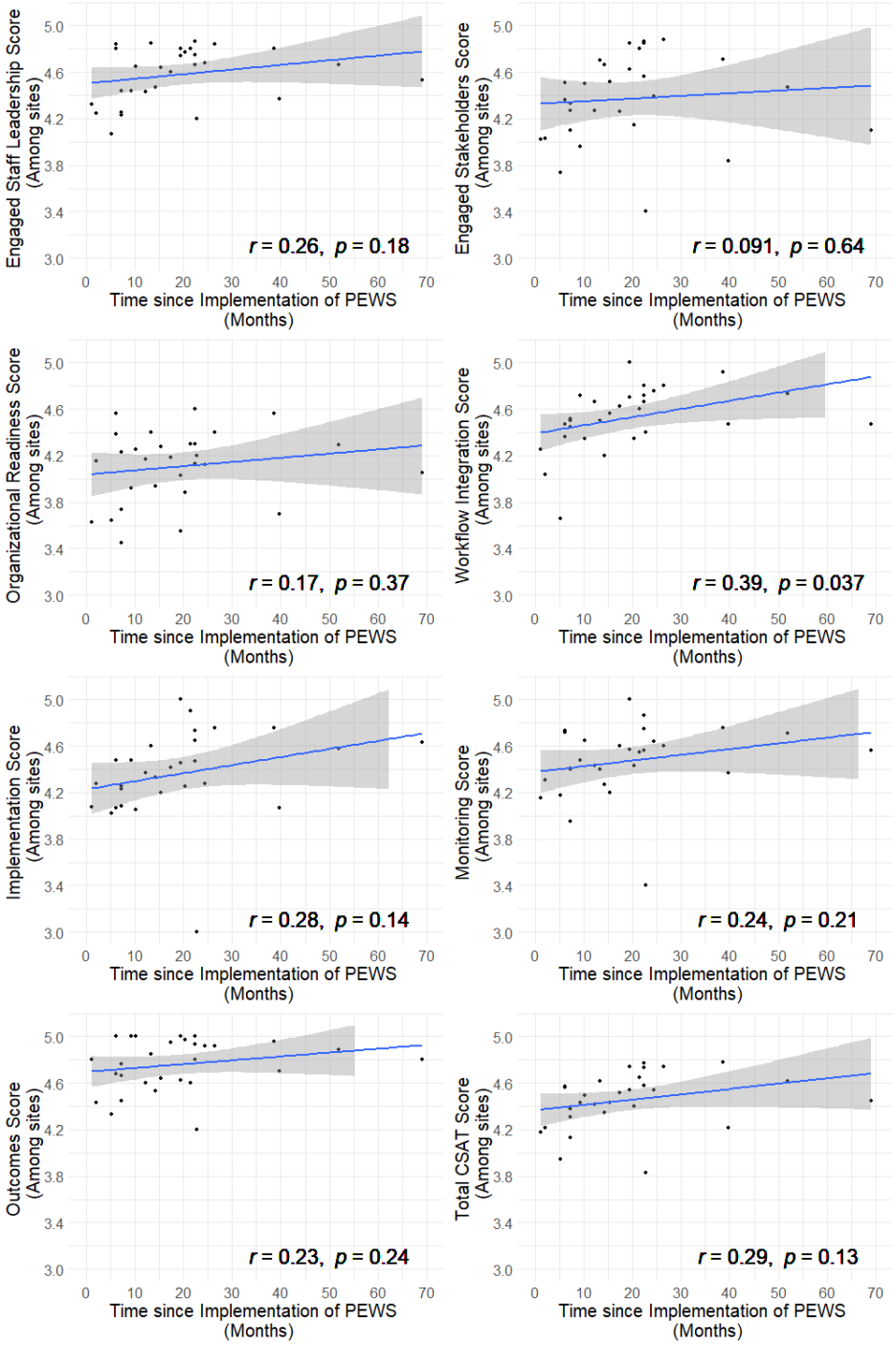
Category	Sub-Category	n (29)	mean	p-value
Hospital Characteristics (Among sites)				
Type of Hospital	General (adult and pediatric)	11	4.46	0.811
	Oncology (adult and pediatric)	7	4.4	
	Pediatric multidisciplinary	11	4.48	
Hospital Funding	Public	21	4.49	0.245
	Private or public/private partnership)	8	4.34	
Annual New Cancer Diagnoses	1-75	12	4.44	0.96
	76-150	9	4.47	
	>150	8	4.46	
Pediatric Oncology Structure	No pediatric oncology unit (integrated with pediatrics or other unit)	4	4.31	0.463
	Separate pediatric	25	4.48	
Time since Implementation of PEWS	1-12 months	10	4.32	0.085
	12-24 months	13	4.51	
	>24 months	6	4.56	
Number of staff working in center	0-249	5	4.41	0.74
	>249	24	4.46	

Abbreviations: CSAT-Clinical Sustainability Assessment Tool, PEWS-Pediatric Early Warning System

Supplemental Figure 4: CSAT result trends with time from PEWS implementation (center-level, n=29). Center-level scatter plot between time since implementation of PEWS (months) vs domain scores and total CSAT result (using jitter method, added smooth line and correlation coefficient), demonstrating consistency of relationship between time since implementation and sustainability of PEWS.



Supplemental Figure 5: CSAT result trends with time from PEWS implementation (individual, n=169). Individual-level scatter plot between time since implementation of PEWS (months) vs domain scores and total CSAT result (using jitter method, added smooth line and correlation coefficient), demonstrating consistency of relationship between time since implementation and sustainability of PEWS.



Supplemental Table 5: Focus group participant demographics

Focus Group	Characteristics		n (%)
ICU Physicians	Total		8
	Gender	Male	4 (50%)
		Female	4 (50%)
	Countries Represented		6
Floor Physicians	Total		7
	Gender	Male	2 (29%)
		Female	5 (71%)
	Countries Represented		6
Nurses	Total		7
	Gender	Male	0 (0%)
		Female	7 (100%)
	Countries Represented		6
Overall	Total		22
	Gender	Male	6 (27%)
		Female	16 (72%)
	Countries Represented*		10

*Counties Represented: Argentina, Chile, Dominican Republic, Ecuador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Peru

Abbreviations: ICU-Intensive Care Unit