

Program Evaluation of NH-ME ECHO SCOPE Project Year 2*

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Aim

To evaluate the effectiveness of the **NH-ME PROJECT ECHO SCOPE** on early intervention service providers' knowledge, skills, attitudes, and use of evidence-based practices as it pertains to Neonatal Abstinence Syndrome (NAS).



Above. ECHO SCOPE views parents and babies at the center of care.⁵

NH-ME Project ECHO SCOPE

- SCOPE = Supporting Children of the Opioid Epidemic
- A professional development program addressing the complex needs of children with Neonatal Abstinence Syndrome and their families in New Hampshire and Maine⁶
- Program delivered via Zoom using the Extension for Community Health Outcomes (ECHO) Model[®]; includes 10 1.5-hour sessions delivered weekly or biweekly⁶

What is the NAS?

A group of postnatal withdrawal symptoms, including severe irritability, difficulty feeding, respiratory problems, and seizures, that develop from prenatal substance exposure, including through maternal opioid use.⁴

In **NH**, NAS births accounted for 24.4 (**2.4%**) of 1,000 live hospital births in 2015.⁵

In **ME**, NAS births accounted for 331 (**33.1%**) of 1,000 live hospital births in 2016.²

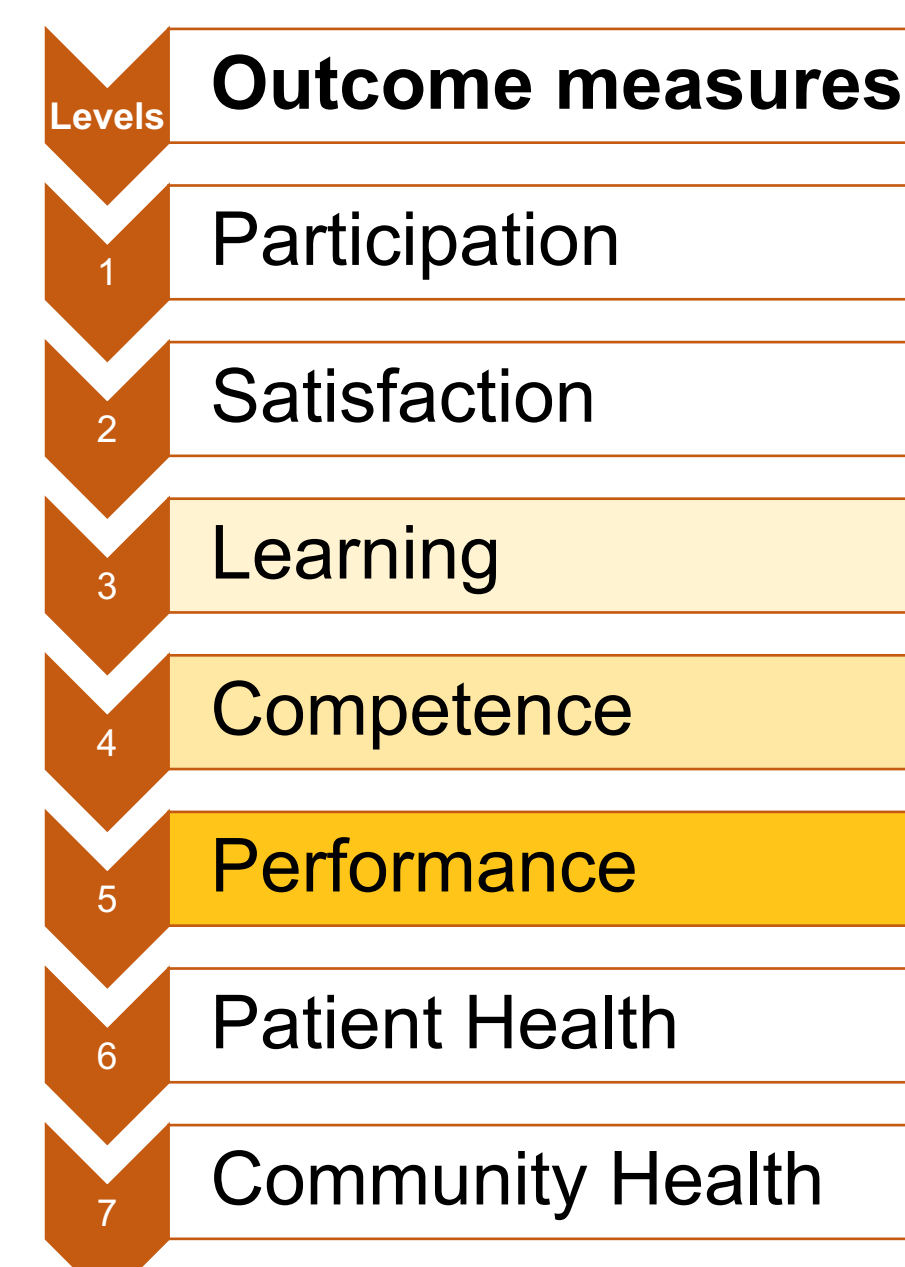
What is the ECHO[®] model?

"Extension for Community Healthcare Outcomes" is a web-based educational model for disseminating expert knowledge to at-risk and/or remote locations due to the unevenly distributed location of specialists and growing shortage of medical and other professional service providers to deliver specialized care.^{3,7}

Why Evaluate the ECHO model?

- U.S. Senate passed the **Expanding Capacity for Health Outcomes ECHO Act 2016** calling for the efforts to examine the model and implicitly to spread it through existing programming¹
- There is a gap in evidence determining whether the model promotes better performance, patient health, and community health outcomes^{3,7}

Moore's Continuing Medical Education Evaluation Framework³



Methods

Survey Research

- Demographics Questionnaire (Pre-)
- Knowledge, Skills, Attitudes, & Practices Questionnaire (Pre- and Post-)
- Opioid Knowledge Questionnaire (Pre- and Post-)
- Session knowledge and satisfaction surveys after each session
- Data Analyses (data managed on RedCap; analysis using SPSS)
 - Demographics Questionnaire -descriptive statistics
 - Post-ECHO SCOPE Session Evaluation Questionnaires -descriptive statistics
 - Pre- and post- ECHO SCOPE NAS Knowledge, Skills, Attitudes, and Practices Questionnaire mean scores compared using paired samples t-test
 - Pre- and post- ECHO SCOPE Opioid Knowledge Questionnaire mean scores compared using paired samples t-test

Results

Demographics

Variable	Cohort 1		Cohort 2		Cohort 3		Total	
	N	%	N	%	N	%	N	%
N (all participants)	45	33.7	33	24.6	56	41.8	134	100.0
N (research participants)	17	38.6	12	27.3	15	34.1	44	100.0
State								
NH	12	70.6	7	58.3	3	20.0	22	50.0
ME	5	29.4	4	33.3	10	66.7	19	43.2
MA	0	0	0	0	2	13.3	2	4.5
N/A	0	0	1	8.3	0	0	1	2.3
Discipline								
Early Intervention/ Developmental Specialist	10	58.8	0	0	0	0	10	22.7
Home Visitor	0	0	0	0	5	33.3	5	11.4
Occupational Therapist	2	11.8	6	50.0	2	13.3	10	22.7
Physical Therapist	2	11.8	1	8.3	0	0	3	6.8
Speech Language Pathologist	2	11.8	1	8.3	0	0	3	6.8
Social Worker	0	0	0	0	2	13.3	2	4.5
Administrator*	1	5.9	0	0	6	40.0	7	15.9
Other**	0	0	4	33.3	0	0	4	9.1
Years experience								
1-2	1	5.9	2	16.7	2	13.3	5	11.4
3-5	5	29.4	3	25.0	2	13.3	10	22.7
6-10	2	11.8	0	0	3	20.0	5	11.4
11-20	5	29.4	4	33.3	3	20.0	12	27.2
21+	4	23.6	3	25.0	5	33.3	12	27.2
M (SD)	13.24	(9.77)	12.13	(9.45)	16.57	(12.97)	14.07	(10.80)

*Admin = Government Position, Program Administrator, Nurse Coordinator, Family Engagement Manager, Care Coordinator, Early Intervention Director
 **Other = Lead Teacher, Professor, Service Coordinator/Case Manager



Session Satisfaction and Knowledge Gained

Cohort 1:

- Overall, participants were **satisfied** with each session **93.3%** of the time.
- Participants felt each session **contributed to their knowledge** of strategies to support children impacted by the opioid crisis **90.3%** of the time.

Cohort 2:

- Overall, participants were **satisfied** with each session **97.9%** of the time.
- Participants reported an average **14% increase in knowledge** of presented topics after each session.

NAS Knowledge, Skills, Attitudes, Practices Pre- Versus Post- ECHO SCOPE

	KAPQ Pre (n = 15)	KAPQ Post (n = 15)	T-test (n = 15)
	M (SD)	M (SD)	
Knowledge and Skills	19.07 (5.2)	32.20 (6.5)	t(14) = -8.30, p < .001
Practice	26.20 (6.8)	28.60 (6.4)	t(14) = -1.99, p = .067
Confidence	32.13 (8.5)	43.53 (6.6)	t(14) = -5.44, p < .001
Total*	77.63 (17.1)	97.81 (30.2)	t(14) = -2.62, p = .019
Attitudes	16.47 (2.3)	14.60 (2.6)	t(14) = 2.68, p = .018

*Total = Knowledge and Skills, Practice, and Confidence scores

Opioid Knowledge Pre- Versus Post- ECHO SCOPE

	Opioid Knowledge Pre (n = 16)	Opioid Knowledge Post (n = 16)	T-test (n = 15)
	M (SD)	M (SD)	
Total	65.25 (11.3)	70.21 (10.6)	t(14) = -1.28, p = .222

Conclusions

NH-ME ECHO SCOPE resulted in changes for service (mostly early intervention) providers related to:

- Increased NAS knowledge and skills
- Increased confidence in working with children with NAS and their families
- Increase in implementation of best practices but not statistically significant
- Decreased biased attitudes surrounding children with NAS and their families

Surveys also indicated:

- High participant satisfaction with SCOPE content and structure

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