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The Development of the Health and Safety Checklist for ECE Programs, Using CFOC3 and SS3

Abbey Alkon, RN PNP PhD

Administration for Children and Families (ACF)
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Acknowledgements

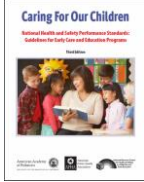
- Advisory Committee
 - Susan Aronson, MD, FAAP, PA Chapter of the AAP, Early Childhood Education Linkage System (ECELS) Advisor
 - Danette Swanson Glassy, MD, FAAP, Co-Chair *Caring for our Children* (CFOC3)
 - Richard Fiene, PhD, Research Institute for Key Indicators
 - Barbara U. Hamilton, MA, ECE Specialist/ U.S. DHHS, HRSA, MCHB
 - Jonathan Kotch, MD, MPH, Professor, University of North Carolina (NC), Chapel Hill Gillings School of Global Public Health
 - Marilyn Kracjcek, EdD, RN, FAAN, Professor, Univ. of Colorado, Denver School of Nursing; Director, National Resource Center for Health and Safety in Child Care and Early Education (NRC)
 - Jacqueline Quirk, RN, BSN, Project Coordinator, NC Child Care Health and Safety Resource Center
 - Ann Kaskel, RN, BSN, Child Care Health Consultation Program Specialist, First Things First , Arizona (AZ)
- National Survey participants n=42
- Pilot Study Child Care Health Consultants n=5

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Background

- Caring for our Children: National Health and Safety Performance Standards, 3rd Ed. (CFOC3, 2011)
 - Stepping Stones, 3rd Ed. (SS3, 2013) nrckids.org
- There are no comprehensive national health and safety assessment tools based on CFOC3.
 - CCHP Health and Safety Checklist, based on CFOC 2nd Ed.; used in 10+ states by CCHCs and others



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Study Objectives

- To develop an observational (walk-through) Checklist to assess health and safety in child care programs using standards from Stepping Stones, 3rd Edition.
- To pilot test the Checklist for ease of completion, feasibility, objective wording, and to establish validity and reliability.

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Checklist: Development

CFOC3: 686 Standards

SS3: 138 Standards

Pilot Checklist: 76 Observable Standards

Pilot Checklist: 124 Items
Final Checklist: 72 Stds, 112 Items

- Caring for Our Children, 3rd Ed. (CFOC3) includes **686** standards
 - 347 standards met one of the following criteria:
 - Included in SS2
 - Major change in standard since SS2
 - New CFOC3 standard
 - The 347 standards were ranked based on potential adverse outcomes; 10 panel groups & 55 experts
- Stepping Stones, 3rd Ed. (SS3) includes **138** of the highest ranked 347 standards
- Pilot Checklist included **76** 'observable' standards from the 138 SS3 standards
- Final Checklist includes **72** standards.

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76 'Observable' Standards

Definition:

- Requires minimal interaction with the staff or director.
- Able to observe when walking through a program in two hours.
- Components of the standard could be written in an objective way and are easy to understand.
- Requires touching structures (i.e., open windows), measuring facilities (i.e., check depth of impact surface, height of equipment), and reading labels (i.e., dates and instructions).
- Does not require checking records, policies or documents, such as child immunizations, staff training, staff background, written health and safety policies.


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National Online Survey (n=42 participants)

- Listserve
 - National Resource Center (NRC), North Carolina Smart Start, Arizona's First Things First, AAP Section on Early Childhood, National Association of Pediatric Nurse Practitioners (NAPNAP) Special Interest Group, CA eNews for Child Care Health Consultants, Head Start National Center on Health
- Survey of 76 'observable' Standards; 4 questions for each standard:
 - Is standard essential to prevent harm and promote health in ECE?
 - How easy is it for CCHC to help program meet standard?
 - How many programs did not meet the standard last year?
 - Rate severity of adverse outcome if standard is not followed.




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Pilot Health & Safety Checklist


- Pilot Health & Safety Checklist
 - 124 items, includes 76 standards
 - 3 main sections & subscales
 - Flesch-Kincaid level: 10th Grade readability
- User Manual
 - Background
 - Equipment needed
 - Rating Scale
 - Item-by-Item specifications




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Equipment



- Tape measure (at least 5 feet)
- Rigid measuring stick (9 inches)
- Refrigerator thermometer
- Choke tube
- Stop watch or timer
- Clipboard with paper copy of Checklist or Tablet/ Computer with electronic Checklist



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Rating Scale

Rating	Rating Word	Definition
0	Never	No components in the item are met.
1	Sometimes	Less than or 50% of the components in the item are met.
2	Usually	Meets >50% of the components in the item are met, but not 100%.
3	Always	Every component of the item is met 100% of the time.
NA	Not Applicable	The item is not applicable to the classroom or program. Explain why.
NoP	No Opportunity	There was no opportunity to observe the item. Explain why.

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Checklist Format: 3 Sections

Section I
Facilities, Supervision, Sanitation, and Nutrition

Section II
Pools, Spas, and Hot Tubs

Section III
Infant/Toddler




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Section I

<p>Facilities</p> <ul style="list-style-type: none"> Emergencies Medications Equipment and Furnishings (Indoors and Outdoors) Equipment and Furnishings (Outdoors Only) 	<p>Supervision, Interaction and Activity</p> <p>Sanitation</p> <ul style="list-style-type: none"> Handwashing Toothbrushing Environmental Health <p>Nutrition</p> <ul style="list-style-type: none"> Food Safety/Food Handling Eating and Drinking
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Sections II and III

Section II: Pools, Spas, and Hot Tubs

Section III: Infant/Toddler

- Relationship
- Activity (<=12 months)
- Sleep (<=12 months)
- Diapering
- Injury Prevention
- Nutrition



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Item Example #1

17. Fresh air is provided by windows or ventilation system. There are no odors or fumes (for example, mold, urine, excrement, air fresheners, chemicals, pesticides). (Stds. 5.2.1.1, 3.3.0.1, 5.2.8.1)

Never	Sometimes	Usually	Always	Not applicable	Not observed
0	1	2	3	NA	NO

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Item Example # 2

90. Drinking water is available, in indoor and outdoor areas, throughout the day for children over 6 months of age. (Std. 4.2.0.6)

Never	Sometimes	Usually	Always	Not applicable	Not observed
0	1	2	3	NA	NO

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Pilot Study



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Pilot Study: Methods

- Participating States
 - Arizona, California, North Carolina
- Trained 5 child care health consultants (CCHCs) on how to complete the Checklist
- CCHCs enrolled 37 centers (5 Head Start centers)
 - Center director interviews
 - Gift cards
- CCHCs completed the Checklist in 37 centers
- Arizona and North Carolina participate in a Quality Rating and Improvement System (QRIS) program and collected Environmental Rating Scales (ERS), such as the ECERS or ITERS in some centers.

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Pilot Study: Results

- Demographic characteristics
 - Directors
 - Centers
 - Children
- Child care health consultant qualitative and quantitative feedback
 - Feasibility
 - Time to complete
 - Ease of completion
 - Wording of the items: objective, level of literacy
- Descriptive statistics
 - Checklist subscale means
 - Item frequency

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Results: Validity and Reliability

- Validity
 - Face and content validity
 - Concurrent validity
- Reliability
 - Inter-rater reliability
 - Test-retest reliability
 - Internal consistency (alpha coefficient)

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Demographics: Centers (n=37)

State	n (%)
Arizona	12 (32%)
California	13 (36%)
North Carolina	12 (32%)

Observed Classroom Type	n (%)
Infants only / infants & toddlers	15 (41%)
Toddlers only	10 (27%)
Preschool-age children	12 (32%)

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Demographics: Children (n= 2,627)

	Mean(SD)	Range (n)
# children per center	71 (44)	10 - 198
# children subsidized per center	38 (37)	0 - 156

Child Ethnicity	Arizona (%)	California (%)	North Carolina (%)	Overall (%)
White	56	21	39	36
African American/ Black	5	28	58	32
Asian, Pacific Islander	5	17	3	9
Latino	19	23	6	16
Native American	20	4	0	7
Mixed	0	9	2	6
Total*	105	102	105	105

* Total is >100% since some children in mixed ethnicity group are in 2 categories.

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Demographics: Center Directors (n=37)

Director Ethnicity	Arizona (n)	California (n)	North Carolina (n)	Total N (%)
White	8	5	5	18 (48%)
African American/ Black	1	6	7	14 (38%)
Asian, Pacific Islander	1	1	0	2 (5%)
Latino	1	0	0	1 (3%)
Native American	1	0	0	1 (3%)
Mixed	0	1	0	1 (3%)
Total	12	13	12	37 (100%)

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Demographics: Center Directors (n=37)

Experience	Mean(SD)	Range (n)
Years employed at center	9.2 (9.3)	1-32
Years in child care field	21.3 (11.7)	4-42

Highest level of education	% (n)
No college degree	32% (12)
BA/BS	38% (14)
Masters degree or higher	30% (11)


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Child care health consultant feedback

- The health and safety checklist was easy to complete as a primarily 'walk-through' assessment.
- Completing the Checklist did not disrupt center activities.
- The items were objective and 'observable'.
- The user manual included information to help the user understand the item/standard and determine how to rate the item.




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Reliability

- Inter-rater reliability
 - CCHCs completed the Checklist with a "gold standard" person in each state (n=6 pairs)
 - 80% to 95% initially; 98% to 100% after discussion
- Test-Retest reliability
 - Completed in CA by CCHC and trained RA
 - Checklist completed in 11 centers ~2 weeks apart
 - No mean difference between the 2 raters on most of the subscales and the overall scores (infant/toddler and total)
 - Differences were significant for:
 - Nutrition subscale
 - Equipment and furnishings inside and outside subscale
- Internal Consistency
 - Alpha coefficients for each subscale and total score



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Results by Subscales (range 0-3)


Section I	Mean (SD)	# Centers
Emergencies	2.19 (.34)	37
Medications	2.74 (.47)	27
Equipment & Furnishings: in- & outdoors	2.48 (.25)	37
Equipment & Furnishings: outdoors only	2.20 (.70)	37
Supervision, Interaction, and Activity	2.79 (.26)	37
Handwashing	2.09 (.69)	37
Toothbrushing	1.70 (1.41)	15
Environmental Health	2.73 (.30)	37
Nutrition (Food safety, Food handling Eating, Drinking)	2.67 (.29)	37

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Results by Subscales (range 0-3)

Section II	Mean (SD)	#Centers
Pools, Spas, and Hot Tubs	2.2 (.72)	3


Section III – Infant/Toddler	Mean (SD)	#Centers
Relationships	2.74 (.50)	25
Activity (<=12 months)	2.13 (1.9)	15
Sleep (<=12 months)	2.70 (.33)	18
Diapering	2.15 (.78)	26
Injury Prevention	2.77 (.54)	26
Nutrition	2.55 (.52)	22



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Lowest Ranked Items


Mean	Item #42	Never	Sometimes	Usually	Always	Not applicable	Not observed
.04	42. All children one year of age and over wear properly fitted and approved helmets while riding toys with wheels (for example, tricycles, bicycles) or using any wheeled equipment (for example, rollerblades, skateboards). Helmets are removed as soon as children stop riding wheeled toys or using wheeled equipment. (Std. 6.4.2.2)	73%	3%	-	-	5%	19%



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Lowest Ranked Items



Mean	Item	Never	Sometimes	Usually	Always	Not applicable	Not observed
.94	18. Windows open less than 4 inches or are protected by a window guard to prevent exit by children. (Std. 5.1.3.2)	35%	-	3%	14%	43%	5%
1.0	8. Carbon Monoxide detectors are present in hallways or areas outside of sleeping areas. (Std. 5.2.9.5)	62%	-	3%	30%	-	5%



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Checklist and ERS: Concurrent Validity

- Correlation ERS and Checklist overall means= -.27, n=12 Arizona centers
- Relevant Checklist items correlated with ERS Personal Care Routines subscale items:
 - Greeting/ Departing
 - Meals/ Snacks
 - Nap/ Rest
 - Toileting/ Diapering
 - Health Practices
 - Safety Practices

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ERS-Checklist Results (n=12 AZ centers)


ERS Personal Care Routine Item	# Items on H&S Checklist	Correlation
Greeting/ Departing	0	--
Meals/ Snacks	10	.01
Nap/ Rest	11	-.60
Toileting/ Diapering	12	.27
Health Practices	30	.15
Safety Practices	40	.32

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Feedback and Changes Made to Checklist

- Subjective feedback
 - Wording - double negatives
 - Observational vs. ask provider for assistance
 - Infant items were not relevant to toddler classrooms
 - When to use 'not observed' versus 'not applicable'
 - Water, spa and pools were only observed in 3 centers
 - State regulations were different than CFOC standards
- Changes Made
 - Review wording of every item
 - Identify items requiring assistance
 - Separate infant and toddler sections
 - Change format to include filled blocks if 'not observed' or 'not applicable' should not be completed
 - Keep water, spa, pools subscale since high mortality/ morbidity if standards are not met
 - Include extra rows under each subscale for state regs, etc.





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Final Checklist: Revisions

- Reviewed findings with CCHCs and Advisory Committee
 - Subjective and objective feedback
- Reviewed and rewrote items to be at the 8th grade reading level
- Developed a Web-based Checklist with links to the CFOC3 Standards
- Updated User Manual
- Future projects:
 - Other Checklists – Policies, Health Records, Staff Training
 - Develop an online training
 - Psychometrics on Final Checklist





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Final Checklist

- 112 items; 72 Standards
- Five sections: facilities, supervision, sanitation, pools, spas, and hot tubs, infants and toddlers
- Identifies items which may include asking director or staff about (e.g. where toxic substances are stored).
- Includes additional rows to add state-specific regulations under each subscale.
- Rating areas are grey if the rating choice is not an option.




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The final Health and Safety Checklist and User Manual on the California Childcare Health Program website:

www.ucsfchildcarehealth.org

- Health and Safety Checklist:
http://www.ucsfchildcarehealth.org/pdfs/Checklists/HS_Checklist.pdf
- User Manual
http://www.ucsfchildcarehealth.org/pdfs/Checklists/HS_Checklist_User%20Manual.pdf



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Implications

- HHS Administration for Children and Families (ACF): Child Care and Development Fund (CCDF) regulations
- Head Start Performance Standards
 - Health and Safety Screener
- State licensing regulations
- Race-To-The Top Quality Rating and Improvement (QRIS) programs

