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Comparison of self-study and instructor-led training procedures

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Comparison of Self-study and Instructor-led Training Procedures

A Thesis Presented

by

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The Department of Counseling Psychology, Rehabilitation and Special Education

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Master of Science in Applied Behavior Analysis
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Abstract

The current study examined the effects of an instructor-based and self-study training program on staffs' behavior of completing Protective Measure Critical Incident Reports (PMCIR). Participants included in the study were 57 newly hired employees who were exposed to either an instructor led training or the same training presented in a self-study paper format. A written scenario was used to describe the events that would occur when a protective measure would be required. Results show higher levels of correct responding for the self-study group. Acceptability results show a slight preference for the self-study training. The self-study group also averaged less errors on posttest measures than the instructor led group.

Comparison of Self-study and Instructor-led Training Procedures

When providing human services, it is important that employees carry out their responsibilities accurately, particularly those procedures that impact on client care. In the behavioral literature, the examination of the extent to which staff implement procedures correctly is referred to as procedural integrity. DiGennaro, Martens, and Kleinmann (2007) evaluated the effects that higher levels of treatment integrity had on students' off-task behavior. Teachers were taught to implement function-based treatments to address student problem behavior. Observations of teacher and student behavior indicated that higher treatment integrity was significantly correlated with lower levels of problem behavior for 3 of the 4 teacher/student groups.

Extensive training programs have been implemented to teach complicated procedures. Iwata et al. (2000) demonstrated the effectiveness of a training package including written materials, video models, quizzes, and feedback to teach functional analysis methodology to 11 psychology students who had no previous experience with the procedure. Prior to baseline, participants were provided with reading material related to conducting functional analyses. Their skill in implementing a functional analysis including attention, demand, and play conditions was then assessed. An increase in percentage of correct responses from an average of 69.9% prior to training to 97.5% after training was observed. The authors stated that it should be possible to establish the reported level of competence in less than half a day.

Moore et al., (2002) replicated the findings of Iwata et al (2000). They used the same methodology as Iwata et al. (2000), however 3 special education teachers served as participants. Findings showed the same high degree of accuracy following training (all

participants responded with over 95% accuracy) with special education teachers with no background in functional analysis methodology as seen with the psychology students.

Brief training packages also have been used to teach a variety of skills to a high degree of accuracy. Lavie and Sturmey (2002) taught 3 assistant teachers working with children diagnosed with Autism Spectrum Disorder to conduct paired-stimulus preference assessments. The 80-minute training consisted of brief instruction, video-modeling, and rehearsal with feedback. Baseline scores for all participants were below 25% correct responses. Following training, the mean percentage of correct responses increased to 99.33%. These results demonstrated that brief training can effectively teach complicated skills to employees.

Sarokoff and Sturmey (2004) also used a brief training package consisting of instructions, feedback, rehearsal, and modeling; however, they taught 3 special education teachers discrete trial methodology. In baseline, written instructions were provided that described how to implement discrete trial teaching. Following implementation of the training program, all 3 participants showed an immediate increase in correct responding. Their mean percentage of correct responding was 97%, 98%, and 99%. This study supported the effectiveness of a component training consisting of feedback, rehearsal and modeling in a brief training format to teach staff to implement discrete-trial teaching procedures.

More labor intensive training programs than those just described also have been demonstrated to be effective in teaching skills. Mueller et al. (2003) examined the effects of a multi-component training program to teach parents to implement feeding protocols. In the first study, 3 parents were first exposed to a baseline in which they were given written instructions regarding the feeding procedures. In the subsequent training, the parents were exposed to verbal instructions, therapist modeling, and rehearsal training. During the verbal

instruction, the trainer explained all aspects of the protocol and what to do during sessions. During modeling, two experienced instructors role-played the feeding protocol and demonstrated the prompts and consequences to be provided. During the role-play, the parents rehearsed the feeding protocols with a therapist who served as the child. During baseline, participants 1 and 2 implemented the protocols with 0-60% accuracy. After training, correct responding (prompts and consequences delivery) increased to 93.9% and 88.8% for participants 1 and 2. Participant 3 made no correct responses during baseline; however, after training responses increased but varied between 43% and 93%. An additional feedback component was required for participant 3 to reach high accuracy.

In study 2, 6 parents (3 groups of 2) were exposed to three different training programs. The first group was given written protocols, verbal instructions, and modeling; the second was given written protocols, verbal instructions, and rehearsal; and the remaining group was given written protocols and verbal instructions. All three training methods produced high levels of correct prompts and consequences delivery for all participants. The verbal instruction group required a second verbal instruction session suggesting that reiteration of procedures was required to achieve high levels of competency. This study suggested that training packages need not be complex and that intensive trainings including modeling and rehearsal may not be necessary to sustain high levels of treatment integrity.

Miller (1974), suggested self-study might be an effective and efficient method of training staff. This method provides administrators with a cost effective alternative to an instructor-led training program. Additionally, self-study has the advantage that it can be delivered to any number of employees at any given time.

To examine the benefits of self-study methodology, Slider, Noell, and Williams (2006) evaluated the effectiveness of printed packets and video tapes to teach behavior

management skills. The participants for this study were 3 master's level speech and language pathologists with more than 5 years experience and were certified to teach preschoolers with a speech and language delay. The targeted skills included giving instructions and praise and conducting time out procedures. A multiple baseline across participants was used to evaluate the training program. During baseline, participants were told to conduct an instructional activity as they typically would. Following baseline, a pretest was given to assess the participants' knowledge of the management skills. Training consisted of a summary card that listed the steps and operational definition for each skill. A videotape, in which correct and incorrect examples were modeled and explanations of each were given, was included in the training package. At the end of the tape, participants engaged in a self-test role-play. Data were collected on the praise and instruction given over a 10-minute period of time; i.e., 5 minutes for each skill. Pretest results for the three participants were 80%, 60%, and 60% correct responses. Despite the high percentage of accuracy on pretest measures, posttest results increased to 86.67%, 93.33%, and 93.33%. During direct observation of behavior, there was an increase of correct implementation of each skill for each of the participants. Training lasted less than 30 minutes. Additionally, the trained responses were maintained for each of the participants during two follow up probes.

Media-based trainings provide effect and efficient results without the mediation of an experienced instructor. In 2008, Macurik, O'Kane, Malanga, and Reid compared video training to an instructor-led training. Participants in their study were 38 support staff who were trained in implementing individual intervention plans for people with severe disabilities and challenging behavior. The participants were divided into two groups; 20 participants were shown a video of a behavior analyst describing the plan and 18 participants listened to the behavior analyst describing the plans. In the in vivo training, the trainer handed out a

written summary of each behavior plan and discussed the material. A behavior analyst answered questions and described the component of the behavior plans. The video training participants were shown a videotape of the behavior analyst describing the plans; periodically bullets summarizing each plan were displayed. Results showed no clear difference in effectiveness of either training. Participants' knowledge of the materials taught was assessed by a paper and pencil test. The in vivo group averaged 89% correct responses while the video trained group averaged 90% correct responses. On-the-job performance measures showed 85% correct on-the-job performance for the video trained group while the in vivo trained group averaged 72% correct on-the-job performance. The in vivo training required more trainer time (average 34 minutes) per training compared to an average of 30 minutes of behavior analyst time to create each video. The in vivo training sessions averaged 33 minutes while video trainings averaged 22 minutes of trainee time. Participants rated both trainings favorably based on a three-question Likert scale questionnaire, although in vivo training was rated slightly more favorable than video training. Results of this study demonstrated that although slightly less preferred by participants, video training was equally effective to in vivo training. Additionally, it requires fewer resources to implement.

Similar results were found in a study that used parents as participants. Kashima, Baker, and Landen (1988) compared a media-based to an instructor-led training program to teach self-help skills to children with special needs. Participants included 65 families with a special needs child. Participants were assigned to one of three conditions (instructor-led, media-based, or no intervention). The media-based group received information over four sessions through written instructions and video tapes. Participants assigned to the control group were equally distributed to each of the two training procedures. The control group began training when the last session of training for the other groups was complete. A service

provider with no experience in parent training monitored the control media-based groups. Video training and live training both demonstrated significant gains in the target child skills and target parent behavioral principle implementation. In the acceptability measures, both training mediums were rated positively. Although total training time for each group was approximately 8 hours, the media-based training group demonstrated similar increases in skills without requiring instructor time.

As indicated by the studies just described, self-study training procedures are effective methods for providing staff with the skills they need to implement care procedures. The self-study methodology achieves these results without requiring access to an experienced instructor to lead the trainings; this can save an employer time and money while providing them with well trained employees. The current study compared the effectiveness of self-study printed materials to an instructor-led training to teach staff to complete a form documenting the use of protective measures with service recipients.

Method

Participants and Setting

Participants were 45 newly hired employees at a school for children with special needs. All were college graduates who had no previous experience with the training materials. The sessions were conducted in conference rooms at a school. The rooms were equipped with a computer and a projection screen.

Materials

The materials included a Protective Measure Critical Incident Report (PM CIR), a self-study training packet, PowerPoint presentation, pre and posttest, and a Training Evaluation Questionnaire. A PM CIR (see Appendix A for a blank PM CIR) is a legal document that must be completed following implementation of any protective measure with

a student. For training purposes, the PM CIR was divided into 10 sections: protective hold indicator, date and time, staff involved, notification and approval, student processing, a grid, CALM curriculum statement, monitoring of hold, injury/protective equipment check, and follow up (for detailed description see data collection and analysis below).

Self-Study Packet. The self-study packet contained three units of printed materials. The first unit included an overview of the PM CIR and a detailed description of the 10 sections listed above. A completed example of each section was provided that depicted events described in an accompanying scenario.

In the second unit, a scenario describing the events that might occur during a protective measure was presented. Immediately following, one blank section of the PM CIR was provided, which the participant was to complete. The same section correctly completed appeared on the next page. The participants completed all 10 PM CIR sections in this manner.

The third unit consisted of a new scenario of a protective hold and a blank PM CIR. The participant was to read the scenario and complete the PM CIR in its entirety. The correctly completed PM CIR was provided on the following page.

PowerPoint Presentation. The PowerPoint presentation used in the instructor-led training covered the main points involved in completing a PM CIR. Each section of the PM CIR was displayed and a brief overview of the section provided. A slide was then presented that contained a practice scenario and exercise. All practice exercises included in Unit 2 of the self-study packet were shown. However, the final PM CIR practice exercise included in Unit 3 of the self-study packet was not presented.

Pre-Posttest. The effectiveness of both training methods was assessed by pre and posttests. In the tests, participants were given a scenario that included all of the information

required to complete a PMCIR (see Appendix B for a scenario example). This scenario was different than those presented in the exercises included in the training program.

Questionnaire. Participants were also given a training evaluation that included five questions (see Appendix C for questionnaire). The questions asked how enjoyable the training was, whether the training was clear and organized, how comfortable the participant was with the material following training, the usefulness of the teaching method, and to what extent the participant would want to experience the training method again. The participants used a 5-point rating scale in which 1 represented strongly disagree and 5 represented strongly agree to each affirmation.

Independent Variable

Two types of training were included in this study, self-study and instructor-led. In the self-study training participants were given a packet of written information pertaining to the completion of a PMCIR. In the instructor-led training, an experienced instructor at the school gave a PowerPoint presentation regarding completion of the PMCIR. All training sessions lasted approximately 60 minutes.

Dependent Variable

Responses made on the PMCIR served as the dependent variable for this study. A scoring system, which is described below, was used to assess responses. The experimenter used a correctly completed PMCIR as an answer key (see Appendix D for answer key). A second experimenter conducted reliability measures between the written scenario and the PMCIR answer key. There was 100% reliability between the second and first experimenters.

Data Collection and Analysis

Data were collected from the pretests and posttests, i.e., the completed PMCIRs. The experimenter used a key to score the tests (see Appendix D). Table 1 lists the sections of the

PM CIR and the number and specific nature of the responses required. In all, 54 responses were required. In order to be scored as correct, a response had to match the one on the answer key.

According to the provided scenario, in Section 1, the participant was to indicate whether a protective hold was used and enter the date, time, location, and conditions under which the protective measures occurred. In the second section, the participant was to enter the staff initials and a position label, and write a signature for each staff member. In Section 3, the names of supervisors who approved the procedures were to be provided. Section 4 pertained to the activities conducted following a protective hold. Based on the scenario, two boxes were to be checked and the name of the person conducting the activities provided. Section 5 required five responses. Firstly, the box indicating that the procedures were carried out following the standard protocol should have been checked. The other four responses included the name of the staff responsible for monitoring the student and information regarding the student's position, respiration and skin color.

In Section 6, the participant had to indicate that no student injury had occurred, a staff required minor first aid, and protective equipment was checked for damage. Additionally, the participant had to provide a sentence explaining the injury and the treatment.

In Sections 7 through 9, the participants filled out sections of a grid. In Section 7 specific information about each protective measure implemented was required. The participants had to code the behaviors emitted, the protective measure used, the student's position, and the duration of the procedure. Four protective measures (Scooped arm movement (PM3), time-out (TO), floor hold (PH4), and a helmet application (PE1)) were used in the provided scenario. Each protective measure had an individual position, code, justifying behavior, and duration.

In Section 8, the participant was to provide information about the antecedent de-escalation strategies attempted. The boxes for contingency review and redirection must have been filled-in on the rows where PM3 and TO were written to be marked correct. The severity prevents box must also have been checked on the rows where PH4 and PE1 were filled in to be scored correct.

In Section 9, the participant was to provide information about the alternatives attempted prior to the protective measure. Based on the scenario, the boxes evasion and deflection must have been checked on the rows where PM3 and TO had been written and the severity prevents boxes must have been checked on the row where PH4 and PE1 were written.

Section 10 required one response. The box labeled student specific release criteria must have been checked on the row where PH4 was written.

Experimental Design and Procedures

As stated above, pretest and posttest measures were collected to assess the effectiveness of each training method. A training evaluation questionnaire assessed the staff perception of the training methods.

Pretest. Prior to training, the participants were assigned to either the self-study or the instructor-led training. Each participant was given a blank PM CIR (see Appendix A) and a scenario describing a protective measure (see Appendix B). Participants were instructed to read over the scenario and then use the information provided to complete the relevant sections of the PM CIR to the best of their abilities. Approximately 5 minutes were allotted for this pretest. When participants completed the pretests, the experimenter collected them. No questions were answered regarding the pretest nor was feedback provided about pretest performance.

Training. Training began when all pretest materials were completed and collected. Each group went into separate conference rooms. For the self-study group, the experimenter was present in the room to hand out and collect materials, read instructions for using the packet, and answer questions regarding the use of the packet. No questions were answered concerning the completion of PMCIRs or the material contained within the packet. The experimenter remained in the room while the participants read through the material and completed the practice exercises. No other interactions occurred.

In the instructor-led group, the instructor gave a PowerPoint presentation that contained the self-study materials. Additionally, the instructor supplemented the information that was provided in the PowerPoint, led the practice exercises, provided feedback, and answered questions.

Posttest. When the training was completed, a post-test was given to each participant. The same instructions and materials were given as in the pre-test. The instructor did not answer questions and gave no feedback about posttest performance.

Training Evaluation Questionnaire. Following the completion of the post-test, each participant was given the five-item questionnaire regarding the training experience. A space was also provided for the participants to write specific comments. No identifying information was asked of the participant.

Interobserver Agreement. Interobserver agreement data (IOA) was taken on 36% of the completed PMCIRs. Eight pre-tests and eight post-tests from both training methods were randomly selected. All IOA data are displayed in Table 2. Total agreement on all PMCIRs scored was 98.8%.

Results

Figure 1 compares the pretest and posttest results for the two training groups. The average number of correct responses on the pretest for the instructor-led group was 22.96 with a range of 6 to 39 correct responses. The self-study group averaged 24.18 correct responses with a range of 4 to 47 correct responses. The median pretest scores for the instructor-led training and self-study groups were 26 and 22, respectively. The instructor-led group posttest scores increased over the pretest an average of 40.43 correct responses with a range of 12 to 53 correct responses. The self-study group posttest scores increased an average of 46.59 correct responses over pretest scores with a range of 31 to 54. The median posttest scores for the instructor-led training and self-study groups were 43 and 47, respectively.

Individual results show that 3 participants made 27 or less correct responses in the instructor-led training group while no one in the self-study group scored within this range. From the instructor-led training group, 11 participants made between 28 and 43 correct responses compared to 3 participants in the self-study group. Six participants in the instructor-led group made between 44 and 49 correct responses compared to 13 participants from the self-study group. Three participants from the instructor-led training group made between 50 and 54 correct responses compared to 6 participants from the self-study group.

Figures 2 and 3 present error analysis data for the posttests. Figure 2 displays the number of posttest errors for the hold indicator and date, staff involved, notification and approval, student processing, followed protocol and monitoring, and the injury and protective equipment check sections for the two groups. The average number of errors for the instructor-led training group on the indicator and date section was 1.17 errors compared to 1.05 errors for the self-study group. On the staff involved section, the instructor-led training

group averaged 1.39 errors compared to 0.68 errors for the self-study group. The average number of errors for the instructor-led group on the notification and approval section was 0.35 and the self-study group averaged 0.5 errors. The instructor-led training group averaged 0.57 errors on the student processing section compared with 0.18 errors for the self-study group. On the protocol and monitoring sections, the instructor-led group averaged 0.26 errors and the self-study group averaged 0.9 errors. On the injury and protective equipment section the instructor-led group averaged 0.91 errors compared to 0.36 errors for the self-study group.

Figure 3 compares the average number of errors made on the grid sections for each group. The instructor-led training group made an average of 3.70 errors while the self-study group averaged 1.50 errors of the total possible 16 correct responses on the protective measure information section of the grid. The average number of errors for the instructor-led group on the antecedent de-escalation section of the grid was 2.65 compared to 1.55 errors for the self-study trained group. The average number of errors for the instructor-led training group was 2.35 on the alternatives to protective measure section while the self-study group averaged 1.68 errors. On the release section of the PM CIR, the instructor-led training group averaged 0.22 errors compared to 0.55 errors for the self-study group.

A modal analysis is presented in Figure 4. In the self-study group, no participants scored within the 0-27 range compared to 3 participants from the instructor-led training group. In the 28-43 correct response range, 3 participants from the self-study group fell within this range compared to 11 from the instructor-led training group. Thirteen participants from the self-study group scored within the 44-49 range as opposed to 3 participants from the instructor-led training group. The numbers in the 50-54 range were 6 and 3 participants for self-study and instructor-led training groups respectively.

Acceptability questionnaire results are displayed in Figure 5. On a scale of 1-5, five representing strongly agree, the average enjoyment of the self-study training was 3.82 compared with the 3.78 rating from the instructor-led training group. The average clarity of the self-study training was rated at 3.77 compared with 3.39 for the instructor led training. Self-study participants reported a comfort level with the material of 4.05 compared to the 3.78 comfort rating from the instructor led training. The usefulness of the self-study training was averaged 3.82 compared to the 3.52 rating from the instructor led training. When given the option of being present the method of training again, the average rating from the self-study group was 3.68 compared to the average rating of 3.61 from the instructor-led training group.

Discussion

In the present study, self-study was more successful than the instructor-led training in teaching new staff to complete a PM CIR. This finding supports and extends those of Slider, Noell, & Williams (2006). While scores for both groups improved from pretest to posttest, the average posttest score for the self-study group was 6 correct responses higher than participants in the instructor-led training group.

Individual results indicated that more participants from the self-study group scored higher than participants in the instructor-led group. On the posttest, only 3 participants from the self-study group scored below 44 correct responses out of a total possible of 54 compared to 14 participants from the instructor-led group. On the posttest, 19 of 22 participants from the self-study group scored between 44 and 54 correct responses as compared to 9 participants from the instructor-led group. An error analysis indicated that participants in the self-study group, on the average, made fewer errors per section than the instructor-led training group. The one exception was on the release section (Section 10) where the

instructor-led training group made an average of .22 errors compared to an average of .55 errors for the self-study group. The discussion component of the instructor-led training for that section may have provided more information on this section than that presented in the self-study packet. Despite this one exception, self-study training results were higher with less overall errors than the instructor-led training group. This finding demonstrates the relative effectiveness of self-study packets in training staff to complete PMCIRS to a high degree of competency.

Results of the acceptability questionnaire indicated that the participants preferred the self-study slightly more than the instructor-led training. The average enjoyment ratings for both trainings differed by .04 points. The average rating for each question on the training assessment for both training groups was between 3 and 4, scoring closer to strongly agree. The results of the questionnaire indicate that both training methods were acceptable to staff. The self-study training appeared to be slightly more favorable than instructor-led training, which is contrary to the findings of Macurik, O’Kane, Malanga, & Reid (2008) that suggest that participants prefer instructor-led training.

In addition to producing a high degree of accuracy on the targeted task, self-study has several practical advantages. Firstly, it can be delivered at any time as long as materials are present. Secondly, the self-study training requires fewer resources to implement as compared to instructor-led trainings making it more efficient when compared to instructor-led trainings. The experienced employees do not have to use time in their day to conduct training which allows them to focus on their other responsibilities. Employers also save money since they do not have to pay an instructor for each time the training session is conducted. Finally, when small numbers of employees are involved, it may be more cost-efficient for a company to use a self-training packet rather than to hire an instructor.

This study demonstrated the effectiveness of a self-study training packet to teach the required skills to complete a PM CIR. Furthermore, the use of self-study packages may save time and money as it frees the instructor for other tasks.

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Appendix A

Blank PM CIR Front

NEW ENGLAND CENTER FOR CHILDREN																																																
PROTECTIVE MEASURES CRITICAL INCIDENT REPORT		Protective Hold was used during this episode: YES NO																																														
STUDENT NAME:		TEAM: NECC																																														
Date _____ When did the PM/PH/T/O/PE begin? Episode start time _____ AM PM Episode end time _____ AM PM (End time of last protective measure) Location/Activity _____ ENVIRONMENTAL CONDITIONS Please circle appropriate conditions Alone Demand Denied Access Transition Other: _____	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: center;">STAFF INVOLVED</th> </tr> <tr> <th colspan="4" style="text-align: center;">+ INDICATES SUPERVISOR/PROCEDURE LEADER</th> </tr> <tr> <th style="text-align: center;">Staff Initials</th> <th style="text-align: center;">Position</th> <th style="text-align: center;">Signature</th> <th style="text-align: center;">follow-up</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1.</td> <td style="text-align: center;">T / SM / C / ON / O:</td> <td>_____</td> <td>_____</td> </tr> <tr> <td style="text-align: center;">2.</td> <td style="text-align: center;">T / SM / C / ON / O:</td> <td>_____</td> <td>_____</td> </tr> <tr> <td style="text-align: center;">3.</td> <td style="text-align: center;">T / SM / C / ON / O:</td> <td>_____</td> <td>_____</td> </tr> <tr> <td style="text-align: center;">4.</td> <td style="text-align: center;">T / SM / C / ON / O:</td> <td>_____</td> <td>_____</td> </tr> <tr> <td style="text-align: center;">5.</td> <td style="text-align: center;">T / SM / C / ON / O:</td> <td>_____</td> <td>_____</td> </tr> <tr> <td style="text-align: center;">6.</td> <td style="text-align: center;">T / SM / C / ON / O:</td> <td>_____</td> <td>_____</td> </tr> <tr> <td style="text-align: center;">7.</td> <td style="text-align: center;">T / SM / C / ON / O:</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table> <p>T=Teacher, SM=Shift Manager, C=Coordinator, ON=Overnight Professional, O=Other (describe).</p>	STAFF INVOLVED				+ INDICATES SUPERVISOR/PROCEDURE LEADER				Staff Initials	Position	Signature	follow-up	1.	T / SM / C / ON / O:	_____	_____	2.	T / SM / C / ON / O:	_____	_____	3.	T / SM / C / ON / O:	_____	_____	4.	T / SM / C / ON / O:	_____	_____	5.	T / SM / C / ON / O:	_____	_____	6.	T / SM / C / ON / O:	_____	_____	7.	T / SM / C / ON / O:	_____	_____	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Notification for Protective Hold</th> </tr> </thead> <tbody> <tr> <td>Immediate Notification of Shift Manager (Residential) or Lead Teacher (Day School) Staff Reporting _____ Shift Manager _____</td> </tr> <tr> <td>5 Minute Notification of Hold to Supervisor/Residential Staff Reporting _____ Supervisor _____</td> </tr> <tr> <td>Approval for Continuation of Protective Hold 20 Minutes Staff requesting _____ Approved By _____</td> </tr> <tr> <td>Approval for Continuation of time-out 20 Minutes Staff requesting _____ Approved By _____</td> </tr> <tr> <td>Approval for Continuation of time-out 40 Minutes Staff requesting _____ Approved By _____</td> </tr> </tbody> </table>	Notification for Protective Hold	Immediate Notification of Shift Manager (Residential) or Lead Teacher (Day School) Staff Reporting _____ Shift Manager _____	5 Minute Notification of Hold to Supervisor/Residential Staff Reporting _____ Supervisor _____	Approval for Continuation of Protective Hold 20 Minutes Staff requesting _____ Approved By _____	Approval for Continuation of time-out 20 Minutes Staff requesting _____ Approved By _____	Approval for Continuation of time-out 40 Minutes Staff requesting _____ Approved By _____
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EPISODE: An episode begins when any protective measure begins. An episode ends when the student has been free from protective measures for 10 minutes. This is a protective measure episode, not a behavioral episode.

- NOTIFICATION:**
- 1) Notify the shift manager immediately upon initiation of a protective hold.
 - 2) Notify a supervisor/deeper when the first 5 cumulative minutes of holding has occurred during this episode OR when 5 consecutive minutes of a single hold has occurred.

CONTINUATION: A supervisor must approve continuation for a protective holding procedure when a 20 consecutive minutes of holding has occurred during this episode. **The time limit for protective holding procedures is 40 minutes.** A supervisor must approve continuation for a time out procedure when a 20 consecutive minutes of time-out has occurred. A supervisor must also approve continuation for a time-out procedure when a 40 consecutive minutes of time out has occurred. **The time limit for time out procedures is 59 minutes.**

- Protective Hold Student Processing**
Conducted by:
[Processing Information MANDATORY for Protective Holds only]
 The function of processing is to re-establish communication and therapeutic rapport with the student after the protective hold. Listed below are some options for processing. Please check options used with the student.
- Reentry Task
 - Instructional fading
 - Reviewing or modify hourly or daily schedules
 - Reviewing student specific behavior contracts
 - Establishing new behavior contracts
 - Review or practice FCR response
 - Review or practice problem solving strategies
 - Return student to scheduled activities and reinforcement programs
- Other (explain) _____
- Comment form offered to student:
- Yes, comments attached
 - Offered but student declined
 - Not applicable

Blank PM CIR Back

Student Name: _____ Team: NECC

Complete for all Protective Measures													Complete for Protective Hold Only												
PM Information				Antecedent De-escalation Strategies					Alternatives to Pro. Measure				Release of Protective Hold												
Behavior/Resulting Inj. / Justification for PM	Procedure Code	Position (Std, Sit, Pr)	Duration of Procedure	Instructional Easing	Pro/impl/FCK	CALMAY interaction	Problem solving	Contingency Review	Redirection	Severity prevents	Other	Evasion	Deflection	Redirection	Environmental Mod.	Evacuation of others	Severity prevents	Other	Student speaks to others	Psychological distress	Time limitation used	Unable to safely implement	Supervisor instruction	Other	
1																									
2																									
3																									
4																									
5																									
6																									
7																									
8																									
9																									
10																									
Behavior Codes S: Self-Injury – Actual or Risk of Injury to Self A: Aggression – Actual or Risk of Injury to Others PD: Property Destruction RM: Dangerous Refusal to Move O: Other _____								Complete descriptions of all procedures can be found in the NECC Calm Physical Curriculum Manual <input type="checkbox"/> Implementation per NECC Calm Physical Curriculum <input type="checkbox"/> Emergency Modification (see attached critical incident report)										Monitoring of Protective Hold Staff: _____ <input type="checkbox"/> Correct Body Position <input type="checkbox"/> Respiration <input type="checkbox"/> Skin Color							

Procedure Codes
Holds
PH 1. One-person basket
PH 2. Two-person basket
PH 3p/s. One person prone/supine
PH 4p/s/st. Two-pers. prone/supine/standing
PH 5p/s. Three-person prone/supine
PH 6. Van protective hold
PH 7. Calm II approved student specific PM
PH 8. Multiple person Carry Movement
PM 1. One person wrap
PM 2. Two-person wrap
PM 3. Two-person extended arm
PM 4. Two-person scooped arm
Time Out
TO 1. Room
TO 2. Partition
TO 3. Other - explain.
Protective Equipment
PE 1: Contingent PE (helmet)
PE 2: Contingent PE (other than helmet)
PE 3: Noncontingent PE

Student injury during procedure: NONE minor routine first aid serious ER/hospital Staff injury during procedure: NONE minor routine first aid serious ER/hospital
Description of medical care provided: _____

Was Protective Equipment checked for damage? Yes No N/A (PE not used)

Staff Follow Up

The function of staff follow up is to review the protective hold incident with all staff involved. This is an opportunity to review student behavior programs, answer questions regarding de-escalation strategies, alternatives to use of protective hold and the protective hold. Supervisors should place their initials next to the names of staff involved in protective hold (listed on front) after follow up.

- Reviewed with staff. No additional follow up required at this time.
- No protective hold was conducted. No additional information required at this time.
- Comment on issues requiring additional follow up.

Appendix B

Pretest/Posttest Scenario

Directions: Read the scenario and use the information to fill out the Protective Measure Critical Incident Report (PMCIR)

(NOTE: Fill out signatures legibly and as if staff were present)

PMCIR Scenario

On Friday, November 4th 2007, a student at NECC, Doug Dee, was playing on the playground at the residence at 4:00pm. Time was up and Doug's teacher, Ann Apple, told Doug it was time to go inside. Doug asked for more time but Ann denied his request (denied access). Doug began to exhibit antecedents (yell and cry) so Ann reviewed Doug's contingencies with him and tried to redirect him to the next activity. Doug began to aggress as Ann evaded and deflected. Eventually, Doug met his criteria to be taken to time out (TO). Paul Pear, a teacher on the team and Karla Kiwi, the shift manager helped Ann bring Doug to the time-out room with the use of a standing PM3 for a duration of 1 minute. Doug spent 5 minutes sitting on the floor in TO and then began to exhibit SIB. Due to severity of the behavior, Ann told the shift manager, Karla Kiwi that they needed to implement a PH4 (hold) and PE1(helmet) on the floor as prescribed in Doug's guidelines. During the procedure Ann Apple monitored Doug's body position, breathing, and skin color. Karla Kiwi received approval from Greg Grape, the residential supervisor to continue the hold beyond 5 minutes. After 7 minutes of the hold Doug met his student specific release criteria and was brought to a desk. Ann began doing reentry tasks and reviewed FCR responses with Doug. Karla Kiwi inspected the helmet for damage. Paul Pear received a minor cut as a result of the protective measure and washed it out with soap; Doug sustained no injury. The Episode ended at 4:14pm. All procedures were conducted following NECC Calm Curriculum. Doug could not write so a comment form was not given.

Appendix C

Acceptability Scale

	Strongly disagree			Strongly agree	
1. I enjoyed this training.	1	2	3	4	5
2. This training was clear and organized.	1	2	3	4	5
3. I feel comfortable with the material presented.	1	2	3	4	5
4. This method of training was useful to teach this material.	1	2	3	4	5
5. If given a choice, I would choose this method of training again.	1	2	3	4	5

Comments:

Appendix D

Front PM CIR Answer Key

NEW ENGLAND CENTER FOR CHILDREN		Protective Hold was used during this episode: <u>YES</u> NO	
PROTECTIVE MEASURES CRITICAL INCIDENT REPORT		STUDENT NAME: _____	
TEAM: NECC		STAFF INVOLVED	
Date <u>11/4/2007</u> When did the PM/PH/IO/PE begin? Episode start time <u>4:00</u> AM <u>PM</u> Episode end time <u>4:14</u> AM <u>PM</u> (End time of last protective measure) Location/Activity <u>Residence/Playground</u> ENVIRONMENTAL CONDITIONS Please circle appropriate conditions Alone Demand <u>Denied Access</u> Transition Other:	* INDICATES SUPERVISOR/PROCEDURE LEADER Staff Initials Position Signature Follow-up 1. <u>AA</u> (T) SM / C / ON / O <u>Ann Apple</u> 2. <u>KK</u> (T) SM / C / ON / O <u>Karla Kiwi</u> 3. <u>PP</u> (T) SM / C / ON / O <u>Paul Pear</u> 4. _____ T / SM / C / ON / O 5. _____ T / SM / C / ON / O 6. _____ T / SM / C / ON / O 7. _____ T / SM / C / ON / O T-Teacher; SM-Shift Manager; C-Coordinator; ON-Overnight Professional; O-Other (describe):	Notification for Protective Hold Immediate Notification of Shift Manager (Residential) or Lead Teacher (Day School) Staff Reporting <u>Ann Apple</u> Shift Manager <u>Karla Kiwi</u> 5 Minute Notification of Hold to Supervisor Residential Staff Reporting <u>Karla Kiwi</u> Supervisor <u>Paul Pear</u> Approval for Continuation of Protective Hold 20 Minutes Staff requesting _____ Approved By _____ Approval for Continuation of time-out 20 Minutes Staff requesting _____ Approved By _____ Approval for Continuation of time-out 40 Minutes Staff requesting _____ Approved By _____	
EPISODE: An episode begins when any protective measure begins. An episode ends when the student has been free from protective measures for 10 minutes. This is a protective measure episode, not a behavioral episode. NOTIFICATION: 1) Notify the shift manager immediately upon initiation of a protective hold 2) Notify a supervisor/keeper when the first 5 cumulative minutes of holding has occurred during this episode OR when 5 consecutive minutes of a single hold has occurred. CONTINUATION: A supervisor must approve continuation for a protective holding procedure when a 20 consecutive minutes of holding has occurred during this episode. The time limit for protective holding procedures is 40 minutes. A supervisor must approve continuation for a time-out procedure when a 20 consecutive minutes of time-out has occurred. A supervisor must also approve continuation for a time-out procedure when a 40 consecutive minutes of time out has occurred. The time limit for time out procedures is 59 minutes.	Protective Hold Student Processing Conducted by: <u>Ann Apple</u> [Processing Information MANDATORY for Protective Holds only] The function of processing is to re-establish communication and therapeutic rapport with the student after the protective hold. Listed below are some options for processing. Please check options used with the student <input checked="" type="checkbox"/> Reentry Tasks <input type="checkbox"/> Instructional fading <input type="checkbox"/> Reviewing or modify hourly or daily schedules <input type="checkbox"/> Reviewing student specific behaviors or contracts <input type="checkbox"/> Establishing new behavior contracts <input checked="" type="checkbox"/> Review or practice FCR response <input type="checkbox"/> Review or practice problem solving strategies <input type="checkbox"/> Return student to scheduled activities and reinforcement programs Other (explain): Comment form offered to student: <input type="checkbox"/> Yes, comments attached <input type="checkbox"/> Offered but student declined <input type="checkbox"/> Not applicable		

Back PM CIR Answer Key

Student Name:

Team: NECC

Complete for all Protective Measures										Complete for Protective Holds Only														
PM Information					Antecedent Data Escalation Strategies					Alternatives to Pro. Measure					Release of Protective Holds									
Behavior Resulting in / Justification for PM	Procedure Code	Post or (Stu, St, PE)	Duration of Measure	Injury or Lading	Property	CALM: V Intervention	Problem solving	Contingency Review	Redirection	Severity prevents	Other	Sequester	Delegation	Redirection	Environmental Mod.	Exclusion of others	Severity prevents	Other	Student specific orders	Psychological distress	Time limitation	Unilateral safety implement	Supervisor instruction	Other
1	A	PM3	Std	1m				X	X			X	X											
2	A	IO	Sit	5m				X	X			X	X											
3	S	PH4	Hr	7m						X							X		X					
4	S	PE1	Hr	7m						X							X							
5																								
6																								
7																								
8																								
9																								
10																								
Behavior Codes S: Self-injury – Actual or Risk of Injury to Self A: Aggression – Actual or Risk of Injury to Others PD: Property Destruction KM: Dangerous Refusal to Move O: Other _____								Complete descriptions of all procedures can be found in the NECC Calm Physical Curriculum Manual X Implementation per NECC Calm Physical Curriculum <input type="checkbox"/> Emergency Modification (<i>see attached critical incident report</i>)								Maintaining of Protective Hold Student: _____ Ann Apple _____ X Correct Body Position X Respirators X Skin Color								

Procedure Codes
Holds
PH 1. One-person basket
PH 2. Two-person basket
PH 3p/s. One-person prone/supine
PH 4p/sct. Two person prone/supine/standing
PH 5p/s. Three-person prone/supine
PH 6. Van protective hold
PH 7. Calm P approved student specific PM
PH 8. Multiple person Carry Movement
PM 1. One person wrap
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PM 3. Two person extended arm
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Time Out
TO 1. Room
TO 2. Partition
TO 3. Other- explain:
Protective Equipment
PE 1. Contingent PE (helmet)
PE 2. Contingent PE (other than helmet)
PE 3. Noncontingent PE

Student injury during procedure: NONE minor routine first aid serious ER/hospital Staff injury during procedure: NONE minor routine first aid serious ER/hospital
 Description of medical care provided: **Washed with soap**

Was Protective Equipment checked for damage? Yes No N/A (PE not used)

Staff Follow Up
 The function of staff follow up is to review the protective hold incident with all staff involved. This is an opportunity to review student behavior programs, answer questions regarding de-escalation strategies, alternative to use of protective hold and the protective hold. Supervisor should place their initials next to the names of staff involved in protective hold (listed on front) after follow up.

- Reviewed with staff. No additional follow up required at this time.
- No protective hold was conducted. No additional information required at this time.
- Comment on issues requiring additional follow up:

Table 1

PM CIR Sections

Section #	Content	# of Responses
1	Date, time, and protective hold indicator	6
2	Staff involved and position	3
3	Notification/approval of protective measure	4
4	Tasks conducted following protective hold	3
5	Standard procedure and monitoring of safety	5
6	Staff/student injury and equipment check	4
7	Duration, position and reason of all conducted procedures	16
8	Attempts to deescalate the situation	6
9	Alternatives movements attempted prior to procedure	6
10	Type of release of a protective hold	1

Table 2

Interobserver Agreement

	Participant	Total Correct		Participant	Total Correct
Self-Study	Merideth	13		Instructor Led	Jaclyn 14
Pretests	Lucy	6		Pretests	Delna 18
	Mary	34			Carissa 22
Total=219	Katelin	18		Total Correct=223	Kevin 34
	Sarah	39			Ashly 30
	Anne	47			Christie 34
	Rachel	30			Emilee 39
	Vicky	32			Julie 32
Self-Study	Merideth	48		Instructor Led	Ashly 37
Posttests	Rick	40		Posttests	Kate 28
	Lucy	53			Sarah 40
Total=377	Trevor	48		Total=330	Tiffany 53
	Elizabeth	52			Megan 36
	Courtney	46			Stephany 50
	Cassie	44			Kady 49
	Amy	46			Jennifer 37

IOA

	Participant	Total Score		Participant	Total Score
Self-Study	Merideth	12		Instructor Led	Jaclyn 8
Pretests	Lucy	6		Pretests	Delna 16
	Mary	33			Carissa 23
Total=210	Katelin	17		Total=217	Kevin 35
	Sarah	39			Ashly 31
	Anne	43			Christie 35
	Rachel	30			Emilee 39
	Vicky	30			Julie 30
Self-Study	Merideth	48		Instructor Led	Ashly 37
Posttests	Rick	40		Posttests	Kate 28
	Lucy	53			Sarah 43
Total=372	Trevor	46		Total=336	Tiffany 52
	Elizabeth	48			Megan 34
	Courtney	45			Stephany 49
	Cassie	44			Kady 49
	Amy	48			Jennifer 44

	Collected	IOA
Pretest totals	442	427
Posttest totals	707	708
Total Correct	1149	1135
Total Agreement = 98.8%		

Figure Captions

Figure 1. The average correct number of responses for each training group.

Figure 2. The average number of errors on front sections of the PMCIR for each group.

Figure 3. The average number of errors on back sections of the PMCIR for each group.

Figure 4. Individual correct responses for each group.

Figure 5. Average acceptability scale question responses.











