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Intervention in School and Clinic 1999; 34; 170
DOI: 10.1177/105345129903400309

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Preparing the Inclusion Classroom for Students with Special Physical and Health Needs

DONNA E. DUGGER WADSWORTH AND DIANE KNIGHT

The Classroom Ecological Preparation Inventory (CEPI) is a vehicle designed to assist the instructional team in gathering critical information for the successful inclusion of students with physical impairments and health needs in the general education classroom. The CEPI focuses on health-related issues and medical concerns, arrangement of the physical environment, assistive equipment, instructional adaptations, and social skills management. Each of these issues is discussed briefly, followed by a case study and a sample of CEPI.

The inclusion movement and the increasing attendance of students with special physical and health needs at neighborhood schools call for a new level of teacher preparation. Classroom teachers need to understand students' specific physical or health impairments and their educational implications which may require accommodations and adaptations to assist students in the learning process.

Within the categories of physical impairments and major health impairments, a wide variety of conditions may be found. For example, the category of physical impairments usually includes neuromotor impairments such as spina bifida, traumatic brain injury, seizure disorders, and cerebral palsy; degenerative diseases such as muscular dystrophy; and orthopedic and musculoskeletal

disorders such as scoliosis, juvenile and rheumatoid arthritis, and arthrogyrosis (Heller, Alberto, Forney, & Schwartzman, 1996). Typical conditions included in the category of major health impairments, on the other hand, are congenital heart defects, hemophilia, sickle cell anemia, diabetes, and childhood cancer and leukemia. A more recent group of students with special needs entering the classroom consists of those who are ventilator-dependent (Wadsworth, Knight, & Balser, 1993) and those with infectious diseases such as AIDs or those who are HIV-positive (Wadsworth & Knight, 1996). Students who have multiple impairments present even more challenges to the classroom teacher.

The characteristics of students with physical, sensory, and health impairments vary significantly. Even for students with the same disability or diagnosis, it would be inappropriate to conclude that their needs and characteristics were identical or similar without first assessing the individual student (Caldwell, Sirvis, Todaro, & Accouloumre, 1991). For example, for a child who is ventilator dependent, the warning signals or symptoms of potential problems are very different from those for a student with severe asthma, muscular dystrophy, or cerebral palsy.

When the classroom teacher is notified by the principal or the special education supervisor of a possible placement of a student who has a unique physical or health impairment, the teacher may be apprehensive

about potential additional responsibilities and the "unknown" factor. If the teacher is fortunate, he or she will have completed an intensive teacher training program or a recent inservice on physical and medical management of students with special needs in the classroom. But more often, the typical special education teacher has been exposed to the general characteristics of physical and major health impairments through only one course, and the specific details of a given condition and its management were not likely covered in this course. Therefore, if the teacher is to plan and manage effectively for these students, additional resources will be needed (Lynch, Lewis, & Murphy, 1993).

This article illustrates the Classroom Ecological Preparation Inventory (CEPI), compiled by the authors from their own experiences and interviews of other teachers (see Figure 1). The CEPI is designed to assist the instructional team in gathering critical information for the successful inclusion of students with physical impairments and health needs in general education. The primary foci of the inventory are (a) health-related issues/medical concerns, (b) arrangement of the physical environment, (c) assistive equipment, (d) instructional adaptation, and (e) social skills and management. Each of these components is discussed briefly, followed by a brief case study and an illustration of how the CEPI may be used.

HEALTH-RELATED ISSUES/MEDICAL CONCERNS

Health and medical concerns include the areas of warning signals, universal precautions, legal issues, emergency care plans, routine treatments, medication, nutrition, and self-help. Both family members and medical personnel should be primary sources of this type of information.

A *warning signal* for a student with respiratory problems, for example, might be a change in color of skin; for a student with a heart condition the signal might be fatigue, and for a student with cerebral palsy it might be pressure sores from braces or ankle/foot orthotic devices.

The area of *universal precautions* is of utmost importance when working with students with special physical and health needs, who may be more susceptible to communicable diseases. All regulations must be adhered to closely to protect both the student and the treatment provider. For example, rubber gloves should always be worn during treatments or when handling body fluids—whether treating open wounds, suctioning, or disposing of fluids.

Legal issues should address who is authorized to perform specific procedures, liability concerns of school personnel (they vary according to state and treatment required), and the need for frequent personnel training updates.

Emergency care plans for students might include acquiring emergency equipment in case of equipment failure, planning for natural physiological breakdowns such as trachea blockage, preparing for natural disasters, and establishing procedures for notifying appropriate local authorities.

Routine treatments that need to be performed during the instructional day must also be determined. With each treatment it is important to determine both who will perform the treatment and when. Instructional schedules for a student with special needs may also require adjustment to accommodate treatments.

Original *medical orders* must be obtained for school personnel. Information about medication the student may need during the instructional day or in emergency situations—including administration directions—also needs to be gathered along with indications of possible side effects.

Nutritional needs may be of concern. Several modifications may be required, including arranging with the school cafeteria for special diets for the student with cystic fibrosis or diabetes, eliminating foods to which the student is allergic, or following special feeding instructions for the student fed via a gastrostomy tube or intravenously.

Finally, information needs to be gathered on the level of *self-help proficiency* or participation the student should be encouraged to acquire in treatment activities. This information should be included on the student's Individualized Education Program (IEP).

PHYSICAL ENVIRONMENT

The second focus of the CEPI, the physical environment, includes consideration of building accessibility, classroom design, lighting, electrical outlets, water access, room temperature, and special transportation.

Although both the Americans with Disabilities Act (1990) and the Vocational Rehabilitation Act (1973) call for *building accessibility* for individuals with disabilities, not all facilities are in compliance. The physical therapist or occupational therapist might be included in an assessment of the school to determine needs such as ramps, handrails, widening of sidewalks and doors, and adjustment of equipment heights.

Classroom design should address whether the student with special needs can access all centers and materials available to other students and assess what adjustments might be needed. For example, more intense lighting may be needed in the classroom to monitor gauges on equipment. Additional electrical outlets may need to be added to a classroom to permit operation of a student's health equipment in order for the student to participate in all activities. Other student health needs may require that the classroom have immediate access to water for

Classroom Ecological Preparation Inventory

STUDENT: _____ DATE OF BIRTH: _____
 SCHOOL: _____ AGE: _____ GRADE: _____
 DIAGNOSIS: _____
 PARENTS: _____ PHONE-HOME: _____ WORK: _____
 TEACHERS: _____ RELATED SERVICE/SUPPORT PERSONNEL _____

 EMERGENCY PHONE NUMBERS: _____
 PHYSICIANS: _____

Directions: In the first column after each item place a check mark if it will require attention. Column two indicates the person responsible for addressing this area. The final column is for specific questions or information related to the area.

I. MEDICAL CONCERNS:			
	Requires Attention	Person Responsible	Questions/Information
A. Warning Signals			
B. Universal Precautions			
C. Legal Issues			
D. Emergency Care Plans			
E. Routine Treatments			
F. Medication			
G. Nutrition			
H. Self-Help Proficiency			
Additional Comments: _____			

II. PHYSICAL ENVIRONMENT:			
	Requires Attention	Person Responsible	Questions/Information
A. Building Accessibility			
B. Classroom Design			
-Lighting			
-Electrical outlets			
-Water			
-Classroom Temperature			
C. Transportation			
Additional Comments: _____			

III. ASSISTIVE EQUIPMENT:			
	Requires Attention	Person Responsible	Questions/Information
A. Communication Devices			
B. Health Care Machines			
C. Vendor Availability			
D. Mobility Equipment			
E. Positioning Aids			
F. Adaptive Living Tools			
Additional Comments: _____			

IV. INSTRUCTIONAL ADAPTATION:			
	Requires Attention	Person Responsible	Questions/Information
A. Scheduling			
B. Seating Arrangements			
C. Specialized Materials			
D. Response Mode			
E. Assignment Completion			
F. Test Modifications			
G. Home Learning			
Additional Comments: _____			

V. SOCIAL SKILLS & MANAGEMENT			
	Requires Attention	Person Responsible	Questions/Information
A. Peer Interaction			
B. Extracurricular Activities			
C. Discipline Plan			
D. Counseling			
Additional Comments: _____			

Figure 1. Classroom Ecological Preparation Inventory.

operation and rinsing of equipment. Even the classroom temperature may need to be adjusted to accommodate a student's health needs. If the school system has a set policy on thermostat settings or the thermostat is computer controlled from a central office, modifications may need to be made.

Also included in the physical environment category are *transportation* needs. These might include consideration of a child-specific assistant on the bus, a special van with air conditioning, or the availability of a 12-volt power source to operate equipment.

ASSISTIVE EQUIPMENT

The third category of focus of the CEPI, assistive equipment, encompasses any device that helps to increase student independence in positioning, mobility, communication, or daily living. This category includes consideration of augmentative communication devices, understanding of how to operate health care machines, vendor availability, mobility supports required by the student, positioning aids, and adaptive living tools.

Understanding how the student communicates and, in particular, understanding any augmentative *communication devices* used by the student is critical to successful inclusion of the student with special physical and health needs. *Health care machines* required by students during the instructional day might include nebulizers, glucometers, or suctioning machines. Inservices may need to be arranged to demonstrate proper operation of these machines. Transporting the equipment between home and school also needs to be discussed unless duplicate equipment is available. Information about health care machine *vendor availability* may be beneficial, also. Families can frequently provide the names and telephone numbers of vendors and other resources who can diagnose equipment malfunctions, provide repairs, train school personnel on proper operation of equipment, or even provide emergency backups.

In the area of *mobility equipment*, questions to be asked may include, Does the student use any special equipment for mobility, such as a wheelchair or rollator walker, and what level of assistance does the student require to use the same? The care of braces or ankle/foot orthoses (AFOs) to ensure proper fit may be considered under either mobility equipment or *positioning aids*. Some students may require special chairs with abductors or adductors, standing boxes or prone standers, or wedges to maximize their learning opportunities. Although physical or occupational therapists typically address acquisition of appropriate positioning equipment, the classroom teacher and other members of the instructional team will need to know when and how such equipment should be used throughout the instructional day.

Finally, *adaptive living tools* include any special tools a student might need to facilitate independent functioning

in the school setting. Bent eating utensils, specially designed cups, pencil adaptors, and adjustable lap tables are but a few items that might fall into this category.

INSTRUCTIONAL ADAPTATION

The fourth category on the CEPI is instructional adaptation. Areas of concern here include scheduling, seating arrangements, specialized materials, response mode, assignment completion, test modifications, and home learning.

Scheduling of instructional times is often complicated by issues identified in the medical concerns category. For example, a particular subject may need to be presented individually to the student because he or she needs to receive a treatment during the regular instructional period.

Seating arrangements should take into consideration assistive equipment used by the student along with opportunities to access all areas of the classroom and maximize student potential. At the same time, seating arrangements must minimize disruptions to other students when the student with special physical and health needs might need to leave for a treatment.

Specialized materials are used to present information in a different format, such as enlarged, in contrasting colors, on the computer, or on audiotape. Even if the student does not use an augmentative communication device, he or she might have a unique response mode to individual assignments or when called upon in class. For example, the student might be capable only of typing responses or responding orally. Adaptations in instructional materials might also affect assignment completion or require *test modifications*. To improve assignment completion rates, the teacher might give students extended time to fulfill the requirements or break the task into smaller components. Test modifications include permitting the student to respond orally or by computer to test questions, reducing the number of items on the test, and giving the test in sections. Factors such as fatigue might also affect a student's ability to complete a typical assignment or require modification of *home learning* activities. The teacher will also want to consider whether the necessary technological equipment for the student to complete the task is available in the home.

SOCIAL SKILLS AND MANAGEMENT

The fifth CEPI category is social skills and management, which includes consideration of peer interactions, extracurricular activities, a discipline plan, and counseling. Students with and without physical and health impairments frequently need guidance and facilitation of *peer interaction* experiences. This may involve having the teacher and the student with a disability orient other stu-

dents about the student's disability and any assistive equipment he or she uses. This type of orientation often increases the comfort level of all students.

Information gathered through interviews with both the student and the family will help in determining which *extracurricular activities* to encourage. The student's special interests, the type of support needed for the student to participate, and sometimes the availability of the family to assist with transportation may all affect the decisions about extracurricular activities. For example, the student interested in learning to play a musical instrument in the band might be encouraged to join the concert band or orchestra rather than the marching band because of both physical limitations and the availability of transportation after concert band practice.

The classroom *discipline plan* does not require modification for most students with physical or health impairments because behavioral expectations are often the same as for all other students. To avoid possible misunderstandings, however, the teacher should discuss the classroom discipline plan with the family and make note of any potential problems.

Finally, some students may be in private therapy or require *counseling* services as they move through particular stages or crises associated either with their physical or health impairment or with their self-perceptions surrounding their special needs. Families should be invited to share this type of information in confidence both at the time of placement and throughout the school year.

The description of one student illustrates how the CEPI may be used to gather and organize information prior to placement of a student with physical or health impairments in the general education classroom (see Figures 2 and 3).

SUMMARY

The successful inclusion of students with physical impairments or health needs in a general education classroom requires careful planning by the family and the instructional team. The primary foci of the CEPI—medical concerns, physical environment, assistive equipment, instructional adaptation, and social skills and management—provide a framework to develop an appropriate educational program for all children.

ABOUT THE AUTHORS

Donna E. Dugger Wadsworth, PhD, is an assistant professor of special education in the Department of Curriculum and Instruction at the University of Southwestern Louisiana. **Diane Knight**, EdD, is a coordinator/educational diagnostician for Special School District 1, Baton Rouge, Louisiana. Address: Donna E. Dugger Wadsworth, USL Box 42051, Lafayette, LA 70504.

Denise is a 7-year-old girl with a diagnosis of severe spastic quadriplegic cerebral palsy and chronic asthma. She has normal intellectual functioning. Her family has recently moved into the community. She is a year behind in school according to her chronological age because of 2 difficult years involving repeated hospitalizations for surgery and asthmatic crises. Denise receives specialized instruction in math from a resource room teacher who is certified in orthopedic impairments, and the rest of her academic instruction is provided in a first-grade general education classroom. Her special health needs typically include breathing treatments with a nebulizer twice a day, more frequently when respiratory problems dictate. She is able to feed herself pureed food with moderate assistance when she is properly positioned and has an adapted bowl and spoon. She also receives services from physical and occupational therapists, a speech and language pathologist, and an adapted physical education teacher.

Denise uses an electric wheelchair for mobility and is proficient in its use. She uses an augmentative communication board controlled by eye gaze and is beginning to learn how to use an adapted keyboard on the computer for her schoolwork. It will be important for both her teachers and related-service personnel to become familiar with her adaptations, equipment, and lifting and handling routines. Denise's physician has released her to return to school after a recent hospitalization due to pneumonia, but has noted that Denise should not be required to participate in all activities until her stamina is fully restored.

Figure 2. Denise: A sample case description.

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STUDENT: Denise Bradley DATE OF BIRTH: 10-16-89
 SCHOOL: Green Elementary AGE: 7 yrs. GRADE: 1st
 DIAGNOSIS: chronic asthma + cerebral palsy
 PARENTS: Bill + Becky Bradley PHONE-HOME: 298-1139 WORK: 298-7462
 TEACHERS: Ms. Jane Torrance - GE RELATED SERVICE/SUPPORT PERSONNEL
Ms. Sue Jones - SE PT - Janet Fisher SLP - Frances Smith
Nurse - Ms. Barbara White APF - Debbie Parks OT - Renee Brown
 EMERGENCY PHONE NUMBERS: Grandmother - Mrs. Patrice Bradley 874-6275
 PHYSICIANS: Dr. Garrett Michaels 875-6143

Directions: In the first column after each item place a check mark if it will require attention. Column two indicates the person responsible for addressing this area. The final column is for specific questions or information related to the area.

I. MEDICAL CONCERNS:			
	Requires Attention	Person Responsible	Questions/Information
A. Warning Signals	NA		
B. Universal Precautions	NA		
C. Legal Issues	NA		
D. Emergency Care Plans	✓	SE Teacher, Nurse	Hospital + Ambulance preference, Asthma attack?
E. Routine Treatments	✓	SE + GE Teachers, Nurse	Breathing
F. Medication	✓	Nurse	Ask if any regular meds
G. Nutrition	✓	Teachers, Nurse	Allergies, Preferences?
H. Self-Help Proficiency	✓	Teachers, OT	Equipment Needed?
Additional Comments: <u>Parent would be primary information source. Obtain physician orders for treatment and medication.</u>			

II. PHYSICAL ENVIRONMENT:			
	Requires Attention	Person Responsible	Questions/Information
A. Building Accessibility	✓	PT	Needs to check entire bldg
B. Classroom Design	✓	PT + Teachers	Space to access wheelchair
-Lighting	NA		
-Electrical outlets	✓	Teachers + Nurse	Outlets in convenient locations
-Water	NA		
-Classroom Temperature	NA		
C. Transportation	✓	Teachers (SB + GB)	Bus will require lift
Additional Comments:			

III. ASSISTIVE EQUIPMENT:			
	Requires Attention	Person Responsible	Questions/Information
A. Communication Devices	✓	SLP + Parent	use of communication board with eye gaze?
B. Health Care Machines	✓	Nurse + Parent	nebulizer - how often?
C. Vendor Availability	✓	Nurse, Teacher, PT	Contact name + number
D. Mobility Equipment	✓	PT / Parent	Accessing wheelchair
E. Positioning Aids	✓	OT, PT, Parent	? Position for various activities
F. Adaptive Living Tools	✓	OT, Parent	What does she need to feed herself?
Additional Comments: <u>How can new vocabulary be added to the communication board?</u>			

IV. INSTRUCTIONAL ADAPTATION:			
	Requires Attention	Person Responsible	Questions/Information
A. Scheduling	✓	Teachers + Nurse	Breathing Treatments when?
B. Seating Arrangements	✓	PT, Teachers	Easy access
C. Specialized Materials	✓	OT, Teachers	Explanation adapted keyboard
D. Response Mode	✓	SLP, Teachers	Explain communication bd.
E. Assignment Completion	NA		
F. Test Modifications	✓	Teachers, Therapist	Evaluate
G. Home Learning	NA		
Additional Comments: <u>Ask parents how Denise used adapted keyboard.</u>			

V. SOCIAL SKILLS & MANAGEMENT			
	Requires Attention	Person Responsible	Questions/Information
A. Peer Interaction	✓	Teachers	Explanation to students
B. Extracurricular Activities	✓	Nurse, Parent	Information when restrictions eliminated
C. Discipline Plan	NA		
D. Counseling	NA		
Additional Comments:			

Figure 3. Sample filled-out Classroom Ecological Preparation Inventory.