

Triage Decisions in Child Care for Sick Children

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• Child-care centers for children with mild, acute communicable, and noncommunicable illnesses are beginning to evolve. Few states have enacted regulations concerning the policies and procedures under which child-care centers for sick children operate. These centers should have policies regarding the triage and care of ill children that promote the safety of all children and staff at the center. As part of the establishment of regulations for the Michigan Department of Social Services, Lansing, a triage model has been developed that provides a means of standardizing the screening process used to admit mildly ill children to such centers. We present pilot guidelines for use by center personnel, discuss considerations inherent in formulating triage policy for child-care centers for sick children, and provide a starting point for those attempting to standardize regulations governing child-care centers for sick children. (AJDC. 1990;144:190-196)

The provision of adequate child care for children is an issue of increasing importance to parents, physicians, and social scientists. Interest in one aspect of this question, the provision of child care for children with mild acute illnesses, has become heightened. Proposals to create such centers in various states have made evident the need for the development of rules and regulations for the operation of such centers. We present guidelines suitable for use by sick child-care centers to determine which children may be admitted to or excluded

from such centers.

In 1987, approximately 50% of married mothers of children less than 1 year old and 60% of all mothers of children between 3 and 5 years of age were in the work force.^{1,2} Seventeen percent of children under 3 years old and 60% of children between 3 and 6 years of age received care outside the home.³ While the debate regarding the benefits and risks of the placement of young children in child care continues, many families choose to use child care for a variety of reasons. Child care is now being considered both as an employment benefit and an important component of government-sponsored employment programs.

Even the most stable child-care arrangements can be altered when the child becomes acutely ill. In the first 3 years of life, children may have 7 to 10 acute respiratory illnesses per year alone, and child-care centers often exclude sick children for part or all of each illness.^{3,4} Parents are then forced to choose other, possibly less satisfactory, arrangements for child care or to be absent from work. Even the most tolerant employer may find a series of unpredictable employee absences difficult to accept. One 1980 study found that 61% of employee absenteeism was due to unmet child-care needs, particularly those of sick children.⁵ In more restrictive job situations, the parent who frequently misses work because of the need to care for a mildly ill child may forfeit his or her job. Nationally, the total estimated cost of absenteeism and unemployment from this source alone is a major concern to employers.⁴ Few statistics concerning employers' policies and procedures regarding employee absence to care for sick children are available. In one survey, smaller companies were found to

be more flexible with their employees' absences than were larger companies.⁶

Whether a parent should remain with the sick child, particularly for the first 1 or 2 days of illness, is an issue on which opinions vary. Nevertheless, when a child is excluded from usual child care because of illness, parents who feel they cannot be absent from work will seek another source of care. The nature and quality of these arrangements have been reviewed, and those that occur outside of established centers are not subject to the usual rules and regulations designed for the protection of children.⁶

The issues surrounding the provision of child care for children with chronic health problems, including those who are dependent on technological support, are more complex. These children may require a more sophisticated level of care on a continuing basis, or they may be in regular child care but be excluded during an acute illness or exacerbation of their chronic condition. Parents of such children may have a greater need for the availability of child care because without it they may miss a significant amount of work or be unable to work at all. Centers designed to serve children with special health care needs have unique staffing, equipment, and physical plant requirements and therefore may need additional policies and procedures.

CHILD CARE FOR SICK CHILDREN

Child-care centers for children with mild acute communicable and noncommunicable illnesses are beginning to evolve.⁶ For sick children who cannot be at home, these centers presumably provide a safe environment conducive to the child's recovery. To date, few studies have examined the question of cross-

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contamination in such centers. In one such study, the relative risk of acquiring an upper-respiratory illness, a gastrointestinal illness, or varicella from children attending a sick child-care center was not significantly increased when compared with that of matched unexposed children.⁷ Child-care centers for sick children may serve also to protect some of the child's usual child-care companions from exposure to certain contagious illnesses. It should be noted, however, that the majority of childhood infections are caused by viruses and, with most viral infections, the period of contagion begins before actual symptoms of active illness.

Several different examples currently exist for the provision of child care for sick children. Care for mildly ill children may be provided in a separate section of a well child-care center that cares only for its own enrollees when they become sick. Some centers have developed arrangements to admit sick children from one or more other well child-care centers.⁸ Free-standing centers designed solely as a temporary child-care source for sick children exist.⁹ Some child care for sick children is also being performed in hospitals, sometimes on an existing pediatric ward. In 1986, it was estimated that more than 30 child-care centers for sick children were or had been in operation.⁶ According to the National Association for Sick Child Daycare, although the exact figure is not entirely known, the number of such centers nationwide now exceeds 50 (personal communication, Gayle Gonzales, vice president, National Association for Sick Child Daycare, Foster City, Calif, January 1989). The American Academy of Pediatrics and the American Public Health Association have recently convened a series of expert panels to develop proposed national performance standards for out-of-home child-care programs.⁹ To date, however, few states have enacted regulations concerning the policies and procedures under which child-care centers that care for sick children should operate.

TRIAGE DECISIONS IN SICK CHILD CARE

In anticipation of requests to establish and operate child-care centers for sick children, the Michigan Department

of Social Services has been developing rules and regulations for such centers (Task Force for the Care of Mildly Ill Children in Child Care Centers, Division of Child Day Care Licensing, Michigan Department of Social Services). The process of developing these rules and regulations has made evident the need for a method of triage to decide what types of childhood illnesses can be admitted to sick child-care centers. The method of triage involves developing criteria that provide a means of standardizing the screening process in a way that promotes the safety of all individuals concerned.

The triage of children seeking admission to sick child-care centers has several inherent considerations. The most apparent questions are when, who, and what: when will the triage decision be made, who will make it, and what admission criteria will be used?

The time when the decision is made about admission to a sick child-care center is complicated by several factors. If a child has been at home for 1 or more days, arrangements may be made with a center in advance of the day of admission. This allows a careful consideration of the child's situation. When the onset of illness is sudden, however, the parent may call in the morning or during the day seeking immediate admission. In this case, the need of the parent to arrive at work as soon as possible must be balanced with the safety of the sick child and the safety of others in the center. Policies and procedures regarding advance vs same-day admission should receive careful consideration by each center. Preregistration of the child at the sick child-care center may simplify this task.

Who will make the triage decision is the second important issue. Theoretically, the highest degree of safety could be produced by physician evaluation in each case. The on-site availability of a physician for this purpose would be efficient for parents but would be a significant expense for the centers and, ultimately, the consumer. At the opposite end of the spectrum, a policy of blanket admittance of all children or the use of untrained and inexperienced personnel for screening would fail to protect the child as well as other adults and children in that center. The on-site availability of

a licensed nursing professional experienced in children's illnesses to make triage decisions is a medically appropriate solution. This plan is also financially feasible since one or more such trained individuals should be directly involved in the provision of sick care in the center. The success of such a plan is highly dependent on the integrity and skill of both the parents and the individual who evaluates the information about the child's condition.

Contact with a physician, preferably the child's physician, either by telephone or in person before admission to a child-care center for sick children would seem to be a reasonable expectation for all but the mildest of illnesses. Physicians who feel uncomfortable making this decision on the basis of a telephone contact may elect not to render an opinion unless the child is examined. Children with certain potentially serious conditions should be seen by the physician and, if judged to have a serious illness, not admitted to a child-care facility. This policy of excluding seriously ill children from child care is consistent with the position of the American Academy of Pediatrics, Committee on Day Care.¹⁰

What format will be used to make decisions regarding admission to or exclusion from the sick child-care center? If nonphysician center personnel are to assume the initial triage role, they must have available to them criteria that are clear, comprehensive, reasonable, and efficient. The guidelines presented below represent a model for making determinations of this nature.

THE TRIAGE GUIDELINES

The triage guidelines presented in Tables 1 and 2 were developed by us as part of the development of rules and regulations that are currently being used in a pilot sick child-care center program in Kalamazoo, Mich. Certain illnesses listed in these tables do not necessarily require exclusion from regular child-care centers for medical reasons. However, since grounds for the exclusion of ill children vary among well child-care centers, a comprehensive list was developed.

Table 1 contains guidelines for the screening of children who are without an established diagnosis. These guide-

Table 1.—Guidelines for Triage Decisions for Children Without Established Diagnosis*

Signs or Symptoms*	Physician Evaluation Needed†	Later Physician Evaluation Needed If
Burns	Yes	Condition worsens, eg, increasing pain, redness, purulent drainage
Cold (upper-respiratory infection) <3 mo old	Yes	Condition worsens, eg, persistent fever, breathing difficulty
> 3 mo old with/without fever	No	Same
With foul-smelling or purulent nasal discharge	Yes	Same
Cold sores Alone	No	Condition worsens, eg, vomiting, fever, refusal to eat
With vomiting, fever, or refusal to eat	Yes	Existing signs/symptoms worsen
Conjunctivitis or "pink eye" White of eye and inner eyelid become red or pink with/without clear or yellow drainage	Yes	Condition worsens, eg, pain, redness, redness spreads beyond eyelid
Cough Cough alone (in child who seems well)	No	Condition worsens, eg, pain, difficult or fast breathing, blood in sputum, wheezing
<2 y old with fever	Yes	Same, plus persistent fever
>2 y old With fever <48 h only	No	Same
With fever >48 h	Yes	Same
With pain, difficult or fast breathing, blood in sputum, wheezing	Yes	Existing signs/symptoms worsen
Cuts/bruises If admission sought for single or multiple bruises/cuts with/without limitation of activity	Yes	Increasing pain, redness, swelling, drainage
Dental procedures	No; however, dental evaluation needed	Increasing pain, bleeding, fever
Diarrhea If > 48 h	Yes	Condition worsens, eg, vomiting, blood or mucus in stools, dehydration, change in alertness or behavior
If dehydration (sunken eyes, dry mouth, or no voiding in past 8 h)	Yes	Same
If blood or mucus in stool	Yes	Same
If vomiting	Yes	Same
If <48 h with no dehydration, blood or mucus in stools, and without vomiting	No	Same
Difficulty breathing	Yes	Condition worsens, eg, wheezing, increased shortness of breath, cyanosis
Ear pain	Yes	Increasing ear pain, fever, discharge, lethargy, headache
Fever Temperature >38.4°C (>101°F) alone, for >24 h	Yes	Condition worsens, eg, cough, diarrhea, vomiting, change in alertness or behavior, other symptoms/signs
Any rectal temperature >38.4°C in child <3 mo old	Yes	Same
Temperature <38.4°C for <24 h in child >3 mo old	No	Same
Temperature >38.4°C with other signs/symptoms	(see elsewhere on Table 1 under appropriate signs/symptoms, otherwise) Yes	Same
Headache <48 h, no other symptoms	No	Headache ≥48 h, vomiting, fever, change in alertness or behavior
≥ 48 h, no other symptoms	Yes	Vomiting, fever, change in alertness or behavior
If severe with vomiting and/or change in alertness or behavior	Yes	Existing signs/symptoms worsen
Head injury	Yes	New/increasing pain, change in behavior or alertness
Hives	Yes	More rash, problems breathing
Immunizations Pain, fever, limited extremity movement	No	Existing signs/symptoms worsen

Table 1.—Guidelines for Triage Decisions for Children Without Established Diagnosis* (cont)

Signs or Symptoms*	Physician Evaluation Needed†	Later Physician Evaluation Needed If
Jaundice Yellow skin or eyes	Yes	Condition worsens, eg, vomiting, diarrhea, fever, change in alertness or behavior
Lice	Yes	...
Nausea/vomiting <24 h without diarrhea or dehydration in child >6 mo old	No	Condition worsens, eg, continuous vomiting, dehydration, blood or bile in vomitus, change in alertness or behavior
<24 h with diarrhea	Yes	See diarrhea (above)
>24 h	Yes	Condition worsens (as above)
With head injury	Yes	Same
With change in consciousness	Yes	Same
Continuous vomiting, dehydration, blood or bile in vomitus, change in alertness or behavior, or child <6 mo old	Yes	Existing signs/symptoms worsen
Oral lesions Canker sores, thrush, cold sores (alone)	No	Condition worsens, eg, refusal to eat, vomiting, or fever
All oral lesions with refusal to eat, vomiting, or fever	Yes	Existing signs/symptoms worsen
Pain, swelling, or lack of movement in extremity	Yes	Existing signs/symptoms worsen
Painful urination	Yes	Worsening/persistent fever, discomfort, blood in urine
Pinworms	Yes	...
Rash With fever	Yes	Condition worsens, eg, rash spreading, difficult breathing, vomiting, change in alertness or behavior
Without fever	Yes	Same
Diaper rash	No	Pain, bleeding, change in character of rash (pustules)
Chronic or recurring rash without fever	No	Worsening of rash
Seizures Undiagnosed	Yes	Condition worsens, eg, increased seizure activity, change in alertness or behavior
Skin infection Any	Yes	Condition worsens, eg, purulent discharge, spreading lesions, redness, or pain
Sore throat <2 y, without fever	No	Development of fever, pain, refusal to eat
>2 y, without fever	Yes	Same
With fever	Yes	Increasing fever, pain, refusal to eat
Teething	No	...
Wheezing	Yes	Condition worsens, eg, increased wheezing, breathing difficulty, cyanosis
Recovery from major surgery/major illness	Advanced-level care with explicit physician instruction and ongoing supervision; facility must be able to provide appropriate care	
Technological dependence (Ventilator dependence, peritoneal dialysis, tracheostomy, etc)	Advanced-level care with explicit physician instruction and ongoing supervision; facility must be able to provide appropriate care	
Immune system deficiencies	Children with primary or acquired deficiencies of the immune system (AIDS, children taking immunosuppressive medication, hypogammaglobulinemia) may be at increased risk if placed in child-care center for sick children; child's parents and center personnel should be fully aware of this risk, and physician approval must be sought for placement in facility	

*In these guidelines, fever refers to an oral or rectal temperature above 38.4°C. Axillary temperatures may be lower than rectal temperatures by 0.28°C.¹³ AIDS indicates acquired immunodeficiency syndrome.

†Type of evaluation at physician's discretion.

lines are organized by signs, symptoms, or major complaints as they would be presented by the parent. For certain conditions, those judged to be more serious, some type of physician evaluation

is suggested, and Table 1 provides guidelines to determine if a child needs to be evaluated or reevaluated by his or her physician. Table 2 contains guidelines for admission, exclusion, and

reevaluation of children for whom a diagnosis has been established. The guidelines are designed for use by nursing professionals in the context of each center's staff and physical resources.

Table 2.—Guidelines for Triage Decisions for Children With Established Diagnosis*

Diagnosis/Evaluation (With or Without Treatment)	Exclusion or Admission†	Reevaluation After Admission If
Asthma	Admit with A	Wheezing worsens, breathing difficulty, cyanosis
Conjunctivitis (pink eye)	Admit after treatment is initiated with A and B	Pain, redness extends beyond eyelid, increasing discharge
Dental procedures	Admit with instructions provided by dentist	Increasing pain, fever, bleeding
Diarrhea		
Acute gastroenteritis (presumed viral)	Admit with A	Diarrhea >48 h, dehydration, blood or mucus in stool
<i>Campylobacter</i>	Admit after treatment is initiated for 2 d or diarrhea has subsided and A and B; then attempt to return to usual child care	Diarrhea worsens or resumes, vomiting, dehydration
Giardiasis	Admit after treatment is initiated and A and B; once child is asymptomatic, attempt to return to usual child care	Same
<i>Salmonella</i>	Exclude until diarrhea resolves, admit if child cannot return to usual child care	Same
<i>Shigella</i>	Exclude until 3 negative stool cultures; then admit if child cannot return to usual care	Same
Other	Admit with A	Same
Ear infection		
Otitis media	Admit with A	Increasing pain, discharge, fever, headache, lethargy
Otitis externa	Admit with A	Increasing pain, discharge, fever
Head injury		
Postconcussion	Admit with written A and B	New/increasing pain, change in alertness or behavior
Skull fracture	Admit with written A and B	Same
Hives		
Allergic reaction	Admit with A	Increasing rash, wheezing, difficulty breathing
Jaundice		
Hepatitis A	Exclude	...
Hepatitis B	Admit with written A and B	Existing signs/symptoms increase
Hepatitis B carrier	Attempt to return to regular child care; if not, admit with written A	Same
Other	Admit with A and B	Same
Limb injury		
Sprain	Admit with A and B	Increasing pain, swelling
Muscle strain	Same	Same
Bone fracture	Same	Same
Other injury	Same	Same
Minor surgery		
Minor skin surgery, ear ventilation tubes, myringotomy	Admit with A and B	Fever, increasing pain, red or swollen ear or surgery site
Nausea/vomiting	See acute gastroenteritis (above)	...
Oral lesions		
Aphthous ulcers (canker sores)	Admit	Existing signs/symptoms worsen, refusal to eat, vomiting
<i>Candida</i> (oral thrush)	Admit with A	Same
Herpes stomatitis	Admit with A	Same
Pinworms	Admit after treatment initiated and with A	...
Rash		
Measles, rubella, mumps, varicella (chickenpox)	Exclude unless center specifically equipped and approved to provide isolation care; otherwise, admit after period of communicability	Change in alertness or behavior, breathing difficulty, vomiting, decreased fluid intake
Lice, scabies, ringworm	Admit after treatment initiated	Worsening rash

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 work B : 27/2/90

Table 2.—Guidelines for Triage Decisions for Children With Established Diagnosis* (cont)

Diagnosis/Evaluation (With or Without Treatment)	Exclusion or Admission†	Reevaluation After Admission If
Fifth disease	Admit, but may wish to exclude for protection of staff	Same
Kawasaki disease	Admit with A and B	Same
Respiratory infection		
Bronchiolitis	Exclude RSV+ children if caring for infants <3 mo or children <2 y old with chronic lung or heart disease; otherwise, admit with A and B	Existing signs/symptoms worsen
Bronchitis	Admit with A and B	Pain, difficult or fast breathing, blood in sputum, wheezing, cyanosis
Croup	Admit with A and B	Existing signs/symptoms worsen
Pertussis	Exclude for 5 d after erythromycin therapy begins; A and B	Pain, difficult or fast breathing, blood in sputum, wheezing, cyanosis
Pneumonia	Exclude for 24 h, then A and B	Same
Tuberculosis	Admit after initiation of treatment (if unable to return to usual child care); written A and B	Same
<i>Salmonella</i> carrier	Attempt to return to usual child care; if not, admit temporarily with A	...
Seizures		
Seizure disorder	Admit with A and B	Increased seizure activity, change in alertness or behavior
Febrile seizures	Admit with A and B	Same
Skin infections		
Impetigo	Admit after treatment initiated and A	Lesions spreading
Other	Same	Purulent discharge, spreading lesions or redness, pain, etc
Sore throat		
Streptococcal pharyngitis	Admit after treatment initiated for 24 h and A	Increasing fever, pain, refusal to eat
Infectious mononucleosis	Admit with A and B	Increasing pain, refusal to eat
Upper-respiratory infections		
Viral	Admit	Persistent fever, difficulty breathing
Purulent rhinitis	Admit after antibiotic treatment initiated and A	Same
Sinusitis	Same	Same
Urinary tract infection	Admit with A	Increasing/new fever, discomfort, blood in urine
Recovery from major surgery/ major illness	Advanced-level care with explicit physician instruction and ongoing supervision; facility must be able to provide appropriate care	
Technological dependence (ventilator dependence, peritoneal dialysis, tracheostomy, etc)	Advanced-level care with explicit physician instruction and ongoing supervision; facility must be able to provide appropriate care	
Immune system deficiencies	Children with primary or acquired deficiencies of the immune system (AIDS, children taking immunosuppressive medication, hypogammaglobulinemia) may be at increased risk if placed in child-care center for sick children; child's parents and center personnel should be fully aware of this risk; and physician approval must be sought for placement in facility	

*In these guidelines, fever refers to an oral or rectal temperature above 38.4°C. Axillary temperatures may be lower than rectal temperatures by 0.28°C.¹³ RSV+ indicates positive for respiratory syncytial virus; AIDS, acquired immunodeficiency syndrome.

†A indicates physician instructions required (may be verbally relayed by parent unless otherwise noted); B, return with physician approval only (may be verbally relayed by parent unless otherwise noted).

Several assumptions were made in the development of these guidelines. The first was that the safety of the sick child and others in the center must supersede the parental need to arrange care for the sick child or the financial needs of such a center. The second as-

sumption was that a child may or may not have had contact with a physician immediately before the time the parent contacts the center for admission. For this reason, guidelines are needed for both situations. The third assumption was that all children admitted to the

center under these guidelines will have been age-appropriately immunized, and routine tuberculin testing will have been conducted in accordance with recommendations by local public health officials.¹¹ Fourth, it was assumed that policies and procedures will exist in each

center to minimize cross-contamination and protect children and staff as outlined in the Report of the Committee on Infectious Diseases of the American Academy of Pediatrics.¹¹ The final assumption was that the medical condition of the children admitted will be appropriate to the level of care and supervision available in the center and that, subsequent to initial screening, continuing observation of the child's condition and decisions about the need for physician assessment are required of child-care center personnel.

GENERAL MEDICAL CONSIDERATIONS

Differentiation is made in these guidelines between noncommunicable and communicable conditions. If children with noncommunicable conditions such as recovery from burns, injuries, or surgery are admitted, the center must have the capacity to provide appropriate care and to limit the risk of acquiring illness from other admitted children. For communicable illnesses, the level of communicability should be considered. The admission of children with highly communicable illnesses such as chickenpox requires special permanent adaptations in the physical structure of the facility and appropriate staffing to provide separate care for these children. Centers that are not suitable for these tasks should automatically exclude children with these type of illnesses. Centers should consider whether they wish to admit children with other illnesses known to spread rapidly through child-care centers such as hepatitis A, respiratory syncytial virus, and *Shigella*. Center administrators should seek the advice of local public health officials where concerns or conflicts arise.

In Table 1, for each sign or symptom, guidelines are provided concerning whether physician advice or evaluation is necessary. The term *evaluation* means that a physician, chosen by the family, is contacted to evaluate the child's illness and the kind of care needed. Whether that evaluation is conducted in person or by telephone is assumed to be at the physician's discretion. In general, these guidelines reflect that the younger the infant or the more serious the sign or symptom is, the more important is it that physician evaluation

be sought. Since temperature response to antipyretics has not been shown to be a useful indicator with which to differentiate the causes of febrile illness in children, careful monitoring of the febrile child's condition is essential.¹² While the majority of children experiencing a cold, cough, diarrhea, fever, nausea, vomiting, rash, or sore throat have self-limited viral illnesses, physician advice or evaluation may serve to assist identification of those children with a more serious infectious process. In children presenting to the center with acute injuries such as burns, fractures, contusions, or lacerations, physician evaluation should normally include a careful consideration of nonaccidental causes.

In Table 2, for those infections for which specific outpatient antimicrobial therapy is available and appropriate, the length of exclusion from child-care centers follows recommendations made by the American Academy of Pediatrics, Committee on Infectious Disease.¹⁰ Table 2 also indicates whether physician approval, specific instructions for care, or both should be required for entry to the child-care center for sick children. In both Tables 1 and 2, examples of reasons for physician evaluation or reevaluation after admission to the center are provided to guide center staff to identify those children who are becoming more ill. These examples are not meant to be all-inclusive since the provision of such a list for each sign, symptom, and diagnosis would be prohibitive.

SPECIAL MEDICAL CONSIDERATIONS

Children with physical handicaps and chronic illnesses represent a special group in child care. The majority of these children are able to function in a usual child-care center, but acute illnesses or acute exacerbations of their chronic illnesses may require care in a center equipped to serve their needs. Children who are medically fragile or who require continuing care and supervision should be placed only in a center prepared to provide such service. The need for such facilities exists, and centers to serve this population are beginning to be developed. The guidelines presented in this article will need to be adapted to meet the needs of this popu-

lation. Children with primary or acquired deficiencies of the immune system (children with acquired immunodeficiency syndrome, hypogammaglobulinemia, or children taking immunosuppressive medication) may be at increased risk if placed in a child-care center for sick children. Parents and center personnel should be fully aware of this risk, and physician approval must be sought before placement of such a child in a sick child-care facility.

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