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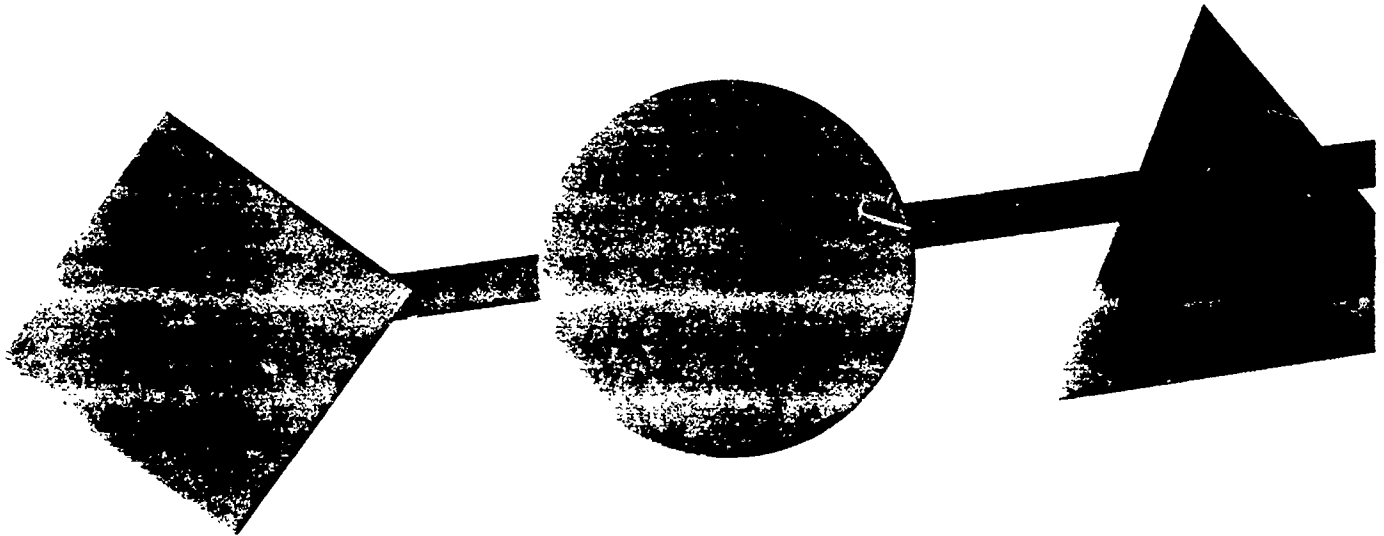
ABSTRACT

As part of its response to the current emphasis on educational reform and accountability, the National Center on Educational Outcomes (NCEO) has been working with federal and state agencies to facilitate and enhance the collection and use of data on educational outcomes for students with disabilities. In doing so, it has taken an inclusive approach, and this document presents a model of early childhood outcomes at age 6 and the indicators of these outcomes for all children, both those identified as having disabilities or developmental delays (or being at risk for developing them) and those without disabilities; that is, all 6-year-old children in educational and day care programs. This report describes: (1) a conceptual model of domains and outcomes; (2) possible indicators for each outcome; and (3) steps toward identifying sources of data for indicators. The conceptual model depicts educational resources (inputs and contexts) influencing learning opportunity and process, which in turn influence eight outcome domains that have a return influence on both the resources and opportunity/process. A breakdown of outcome domains are given in tabular form; they include physical health, responsibility and independence, contribution and citizenship, academic and functional literacy, personal and social adjustment, satisfaction, presence and participation, and family involvement/accommodation and adaptation. Indicators are numbers or other symbolic representations; they are usually presented as percentages or rates on the national and state levels. A tabulation of possible indicators for outcomes at age 6 are given in the next part of this document for each of the eight domains. This is followed by a sample of possible sources of data for 7 of the 10 indicators within the physical health domain. A list of contributors to the development of early childhood outcomes, including the members of the NCEO National Advisory Committee, and an annotated list of six supporting documents concludes the report. (JDD)

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Educational Outcomes and Indicators for Early Childhood (Age 6)



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NATIONAL
CENTER ON
EDUCATIONAL
OUTCOMES

The College of Education
UNIVERSITY OF MINNESOTA

August, 1993

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The National Center on Educational Outcomes (NCEO) was established in October, 1990, to work with state departments of education, national policy-making groups, and others to facilitate and enrich the development and use of indicators of educational outcomes for students with disabilities. It is believed that responsible use of such indicators will enable students with disabilities to achieve better results from their educational experiences. The Center represents a collaborative effort of the University of Minnesota, the National Association of State Directors of Special Education, and St. Cloud State University.

The Center is supported through a Cooperative Agreement with the U.S. Department of Education, Office of Special Education Programs (H159C00004). Opinions or points of view do not necessarily represent those of the U.S. Department of Education or offices within it.

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In addition to numerous stakeholders and other contributors, many individuals helped to develop the concept of a model of outcomes and indicators of the outcomes. While all involved are too numerous to mention, the following individuals deserve special acknowledgement:

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Table of Contents

Educational Outcomes and Indicators for
Early Childhood (Age 6).....1

Conceptual Model of Domains and Outcomes2

Possible Indicators for Age 6 Outcomes.....7

 Presence and Participation8

 Family Involvement/Accommodation and Adaptation.....9

 Physical Health.....10

 Responsibility and Independence.....11

 Contribution and Citizenship12

 Academic and Functional Literacy13

 Personal and Social Adjustment.....14

 Satisfaction.....15

Steps Toward Identifying Sources of Data for Indicators.....17

Identifying and Defining the Important Outcomes of Education19

Contributors to the Development of Age 6 Outcomes.....21

Supporting Documents.....25

Educational Outcomes and Indicators for Early Childhood (Age 6)

The current emphasis on educational reform and accountability reflects the public's desire to know the results of education for all of America's students. There is great interest in identifying the important outcomes of education and the best indicators of those outcomes.

The **National Center on Educational Outcomes** (NCEO) is working with federal and state agencies to facilitate and enhance the collection and use of data on educational outcomes for students with disabilities. In doing so, it has taken an inclusive approach, identifying a conceptual model of outcomes that applies to all students, not just to students with disabilities. Hundreds of educators, administrators, policymakers, and parents have participated in a consensus-building process using this model as a framework to identify key indicators of important educational outcomes for all students.

The purpose of this document is to present the model of early childhood outcomes at age 6 and the indicators of these outcomes for all children.

This includes children identified as having disabilities or developmental delays (or being at risk for developing them) as well as all 6-year-old children in educational and day-care programs. In the pages that follow, you will find:

- A conceptual model of domains and outcomes
- Possible indicators for each outcome
- Steps toward identifying sources of data for indicators

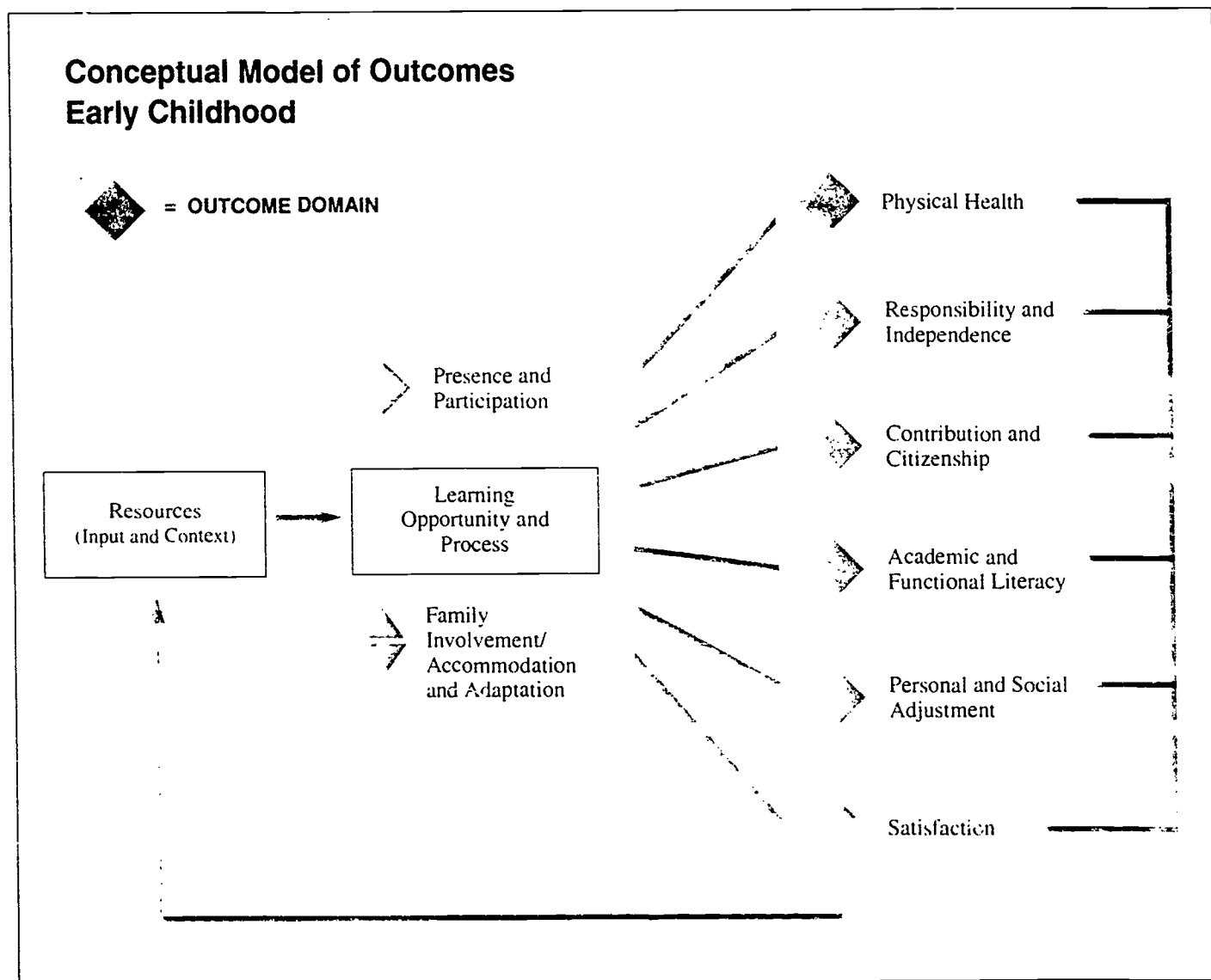
We at the National Center on Educational Outcomes are indebted to many groups and individuals who provided feedback to us (see Contributors listed at the end of this document). We believe that the model and indicators for early childhood outcomes presented here will serve as a point from which to extend discussion as policymakers, states, and local school districts identify the important outcomes of education.

Conceptual Model of Domains and Outcomes

The conceptual model depicted below shows the complete educational model, with Educational Resources (Inputs and Contexts) influencing Learning Opportunity and Process. These in turn, influence the Outcome Domains (the shaded areas), which have a return influence on both the resources and opportunity/ process. Two of the shaded domains, Presence

and Participation, and Family Involvement/Accommodation and Adaptation, are placed next to Learning Opportunity and Process. This placement results from the belief that these domains may be part of the process but still need to be measured. All domains (indicated by ♦) are treated equally as outcome domains.

Family Involvement is added to Accommodation and Adaptation in the conceptual model at the early childhood level. This reflects an increased need to focus on outcomes related to the involvement and support of the family and community.



The conceptual model is extended by identifying outcomes, indicators of the outcomes, and finally, sources of data for the indicators.

“Outcomes” are the results of learning experiences or interactions between children and the educational process.

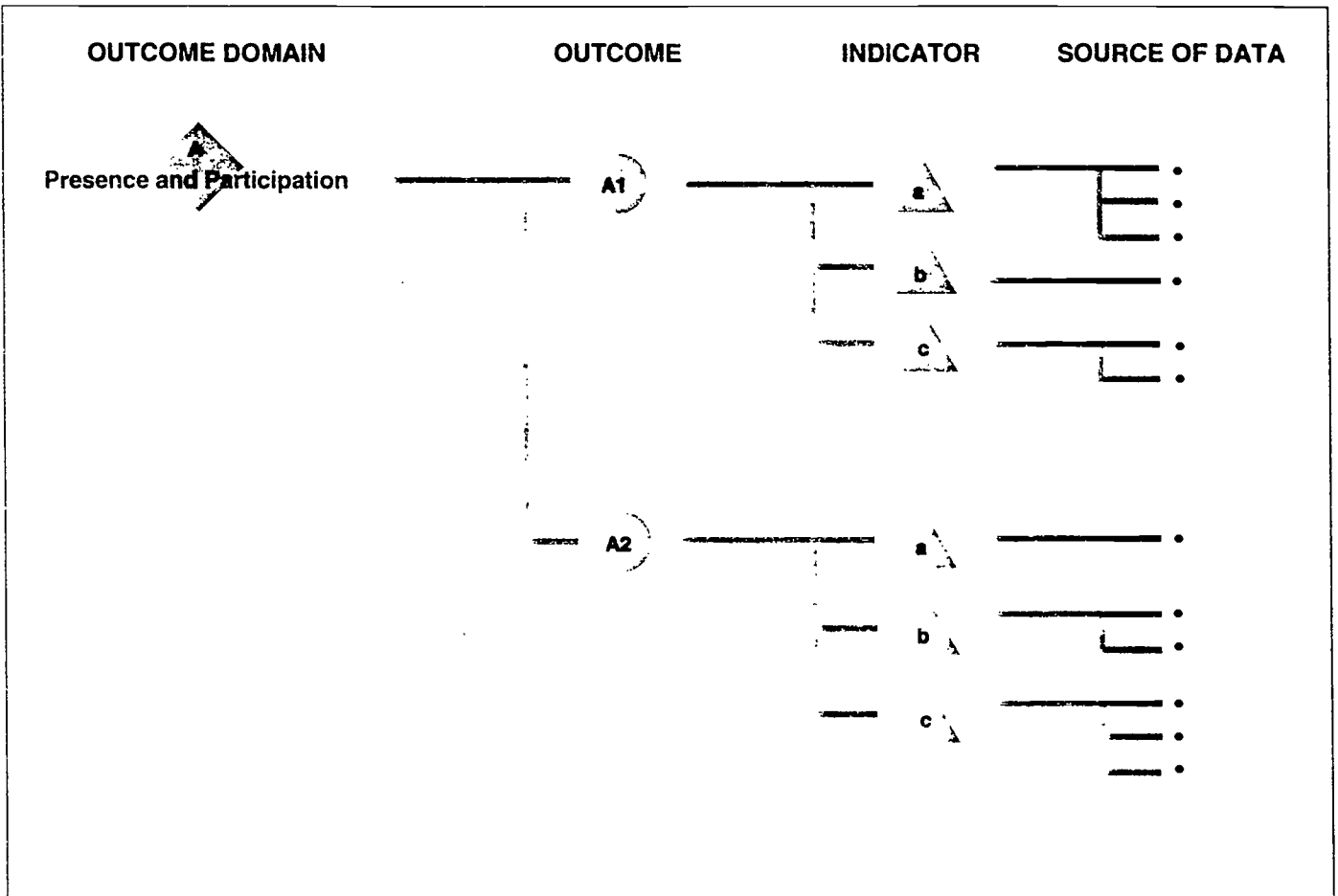
“Indicators” are numbers or other symbolic representations that can be used to determine whether desired outcomes are achieved.

The relationships among these components are shown below for the Presence and Participation domain. Throughout this document outcome domains are represented by shaded diamonds, outcomes are represented by shaded circles, and indicators are represented by shaded triangles. Sources of data, represented below as small dots, are not fully developed for the eight domains in this document.

Outcomes for the eight domains are presented on pages 4 and 5. Indicators

are listed for each outcome within outcome domains on pages 8-15. Sample sources of data for the Physical Health outcome domain are presented on page 17.

Within this document, outcome domains, outcomes, and indicators are assigned letters and numbers to help in referencing them. These letters and numbers do not imply a hierarchical order of any kind.



OUTCOME DOMAIN

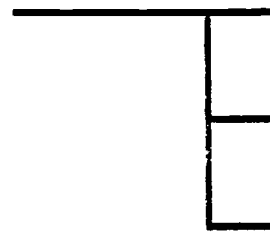
OUTCOME

Presence and Participation



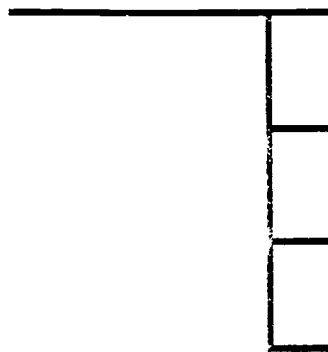
- A1** Is present in school
- A2** Participates in group activities

**Family Involvement/
Accommodation and
Adaptation**



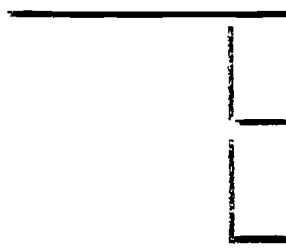
- B1** Demonstrates involvement and support for child's needs
- B2** Has access to resources to support child
- B3** Makes adaptations, accommodations, or compensations necessary to achieve outcomes in each of the major domains

Physical Health



- C1** Demonstrates normal physical development
- C2** Has access to basic health care
- C3** Is aware of basic safety and health care needs
- C4** Is physically fit

**Responsibility and
Independence**

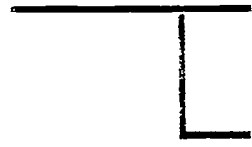


- D1** Demonstrates age-appropriate independence
- D2** Gets about in the environment
- D3** Is responsible for self

...OUTCOME DOMAIN

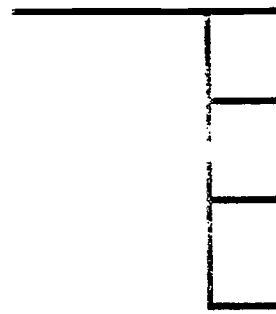
OUTCOME

E
Contribution and Citizenship



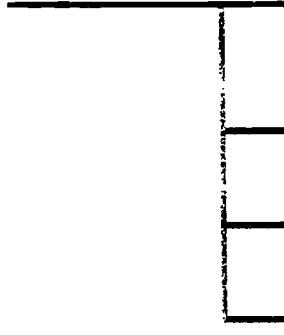
- E1** Complies with rules, limits, and routines
- E2** Accepts responsibility for age-appropriate tasks at home and school

F
Academic and Functional Literacy



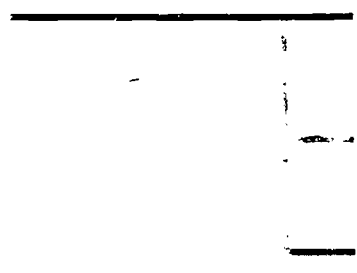
- F1** Demonstrates competence in communication
- F2** Demonstrates competence in problem solving
- F3** Demonstrates competence in pre-academic and academic skills
- F4** Demonstrates competence in using technology

G
Personal and Social Adjustment



- G1** Copes effectively with personal challenges, frustrations, and stressors
- G2** Has a good self image
- G3** Respects cultural and individual differences
- G4** Gets along with other people

H
Satisfaction



- H1** Parent/guardian satisfaction with the educational services that children receive
- H2** Community satisfaction with the educational services that children receive
- H3** Child satisfaction with educational experience

Possible Indicators for Age 6 Outcomes

Indicators are numbers or other symbolic representations of outcomes. They can be viewed over time to gather information on trends. At the national and state levels, indicators usually are presented as percentages or rates.

State and local district personnel who are interested in specific students can easily translate the indicators presented here into individually-based indicators. A guide to these translations is included in the supporting document entitled

Self-Study Guide to the Development of Educational Outcomes and Indicators (see p. 25).

Lists of possible indicators for early childhood outcomes at age 6, which were identified through the consensus-building process, are presented on the following pages. It is important to think of these as a framework within which outcomes, indicators, and sources of data can be generated.

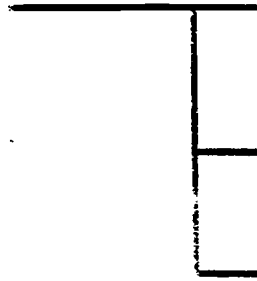
○ = OUTCOME

▲ = INDICATOR



Presence and Participation

A1 Is present in school



Percent of children enrolled in education programs (differentiated by type of program and enrollment of children with and without disabilities)

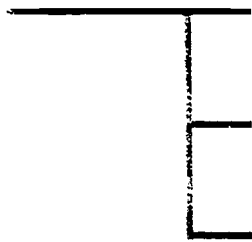


Percent of children excluded or terminated from programs for typically developing children



Absenteeism rate from educational programs (differentiated for reasons of medical/health, family-related moves, etc.)

A2 Participates in group activities



Percent of children who participate in family activities



Percent of children participating in community activities (differentiated by family activities and peer activities)



Percent of children actively engaged in classroom activities

= OUTCOME

= INDICATOR

Family Involvement/ Accommodation and Adaptation

DOMAIN



Demonstrates involvement and support for child's needs



Percent of families with appropriate support to meet their child's needs



Percent of families providing environments supportive of their child's education and learning



Percent of family members who attend or participate in school/community-based programs in which their child is enrolled



Percent of children whose family system positively supports their development



Has access to resources to support child



Percent of families knowledgeable about community resources and programs needed by their child



Percent of families who are connected to appropriate service providers/agencies



Percent of families with adequate social and economic resources to appropriately parent children



Percent of families with appropriate parenting skills to anticipate and meet developmental needs of children



Percent of families living in safe environments (free of community and family violence, and substance abuse)



Makes adaptations, accommodations, or compensations necessary to achieve outcomes in each of the major domains



Percent of children needing adaptive devices or skills who use them to participate in activities in home, school, and community environments

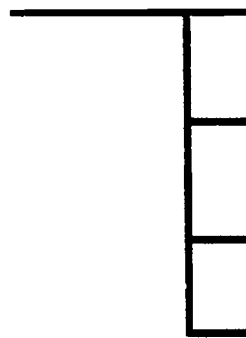
 = OUTCOME

 = INDICATOR

Physical Health



Demonstrates normal physical development



Percent of children who are in expected range of growth and physical development



Percent of children with appropriate nutrition (e.g., not obese or undernourished)



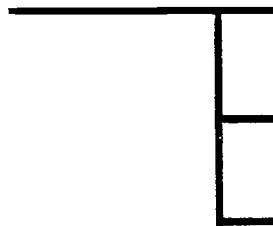
Percent of children who have been abused or neglected



Percent of children who have had serious injuries that require medical attention



Has access to basic health care



Percent of children who are fully immunized



Percent of children who receive care supervision including education, diagnosis, and treatment services



Percent of children who have had dental exams and appropriate treatment



Is aware of basic safety and health care needs



Percent of children who are aware of the dangers of abuse of drugs, alcohol, poisons, and medicine




Is physically fit



Percent of children who are in their expected range of physical fitness

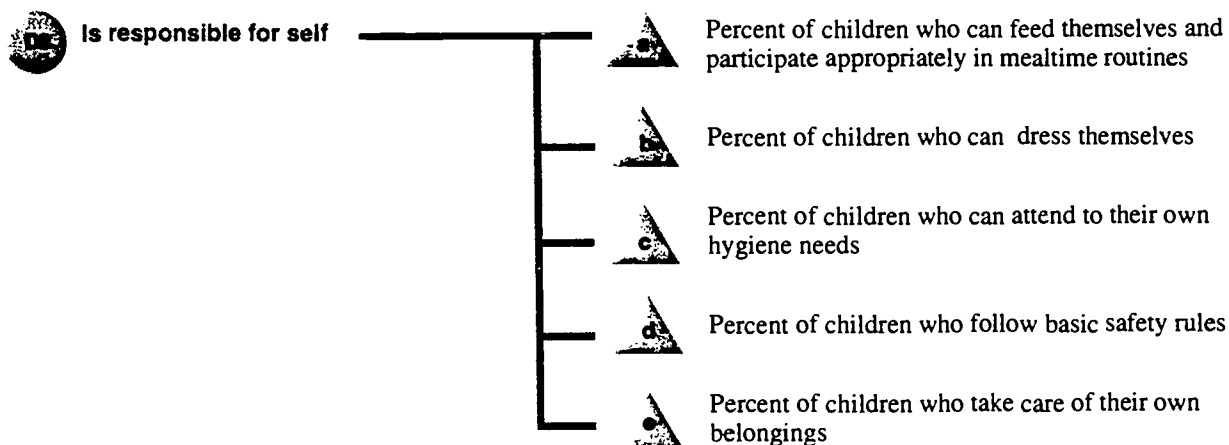
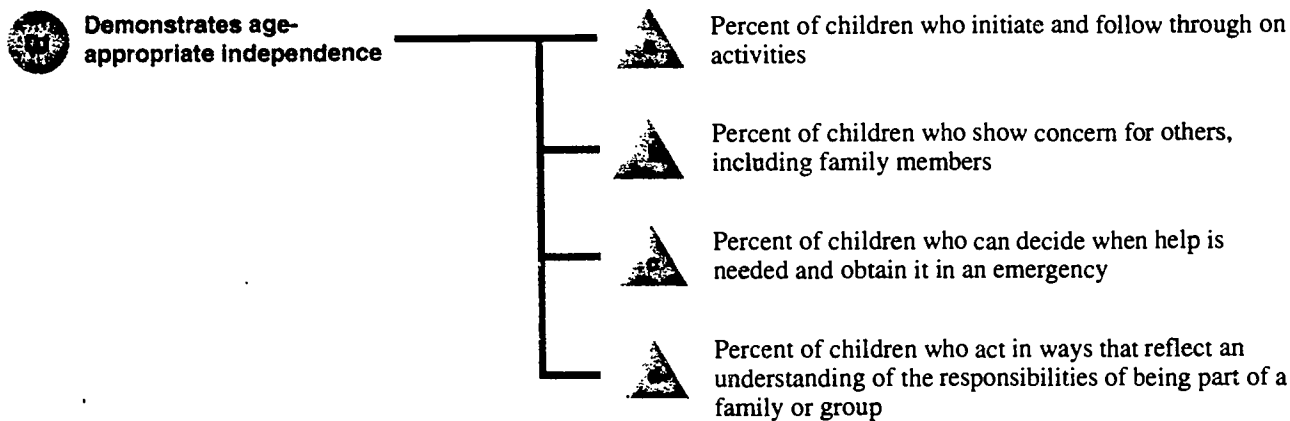


Percent of children who actively engage in developmentally appropriate large motor play activities

 = OUTCOME

 = INDICATOR

Responsibility and Independence



 = OUTCOME

 = INDICATOR



Contribution and Citizenship

E1 Complies with rules, limits, and routines

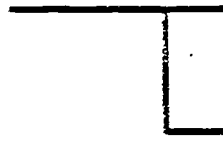


Percent of children who participate in routines in familiar environments



Percent of children who follow rules/limits


E2 Accepts responsibility for age-appropriate tasks at home and school



Percent of children who perform their assigned classroom duties at school

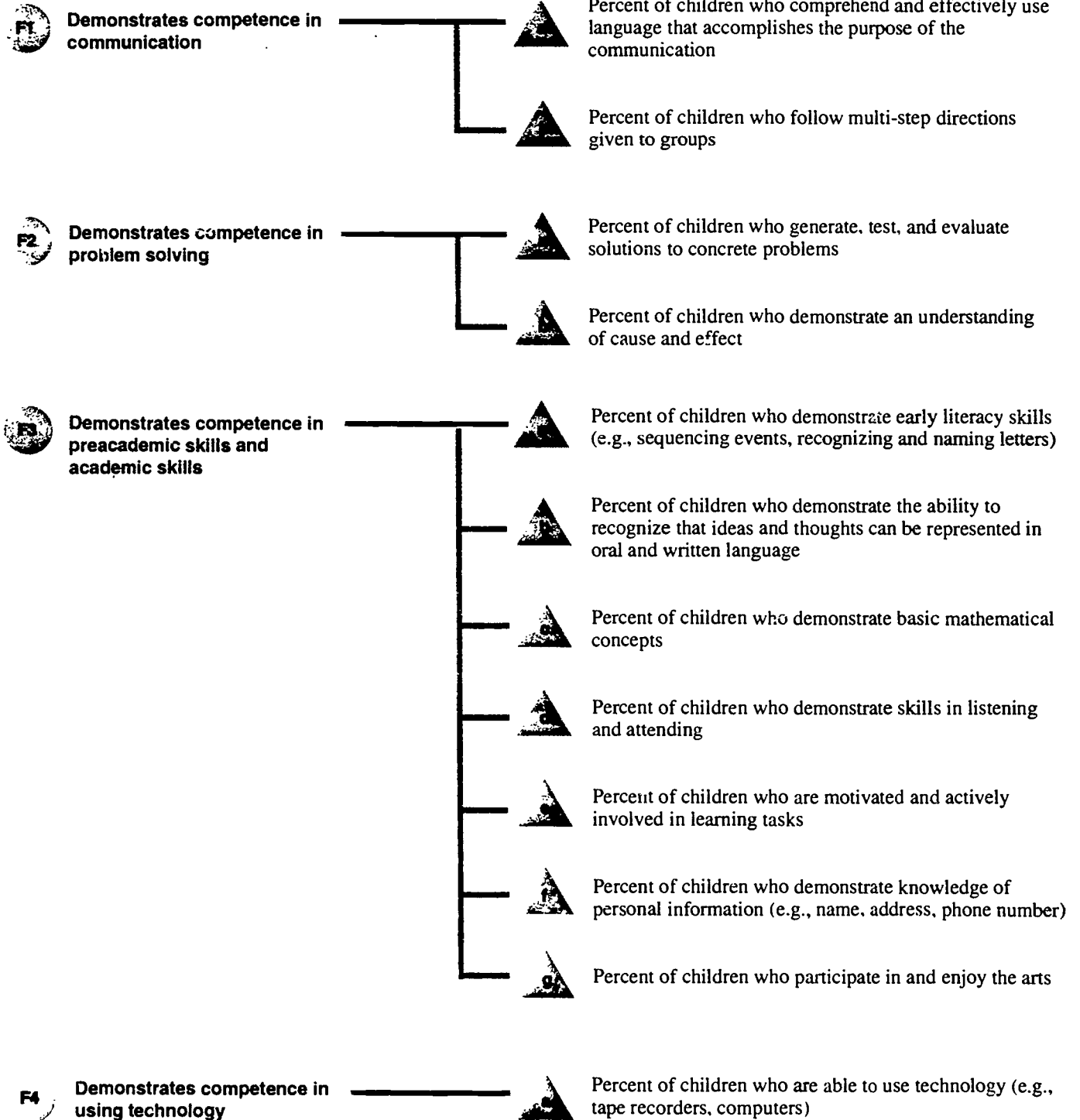


Percent of children who are considerate of others and engage in helping behaviors

 = OUTCOME

 = INDICATOR

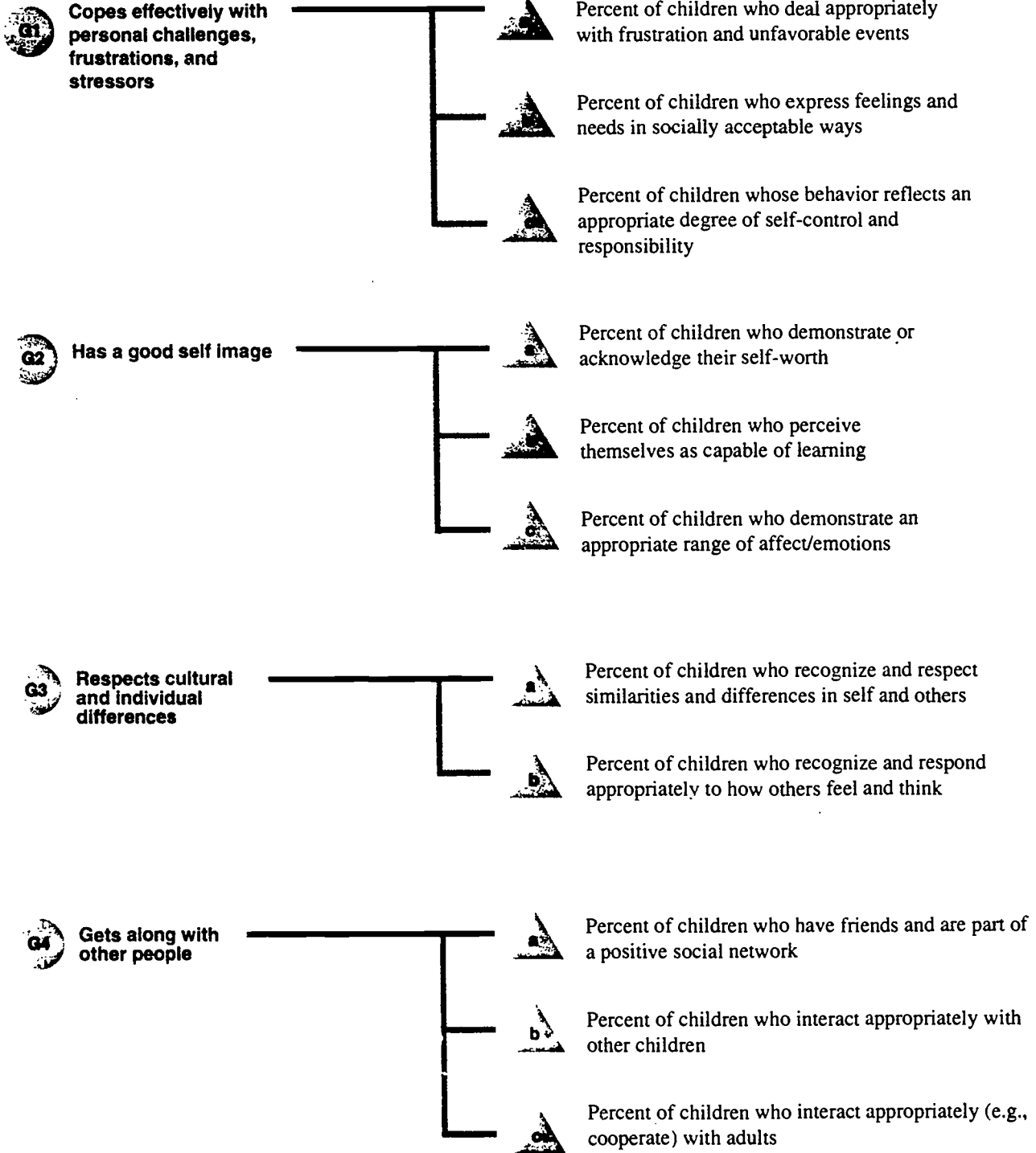
Academic and Functional Literacy



 = OUTCOME

 = INDICATOR

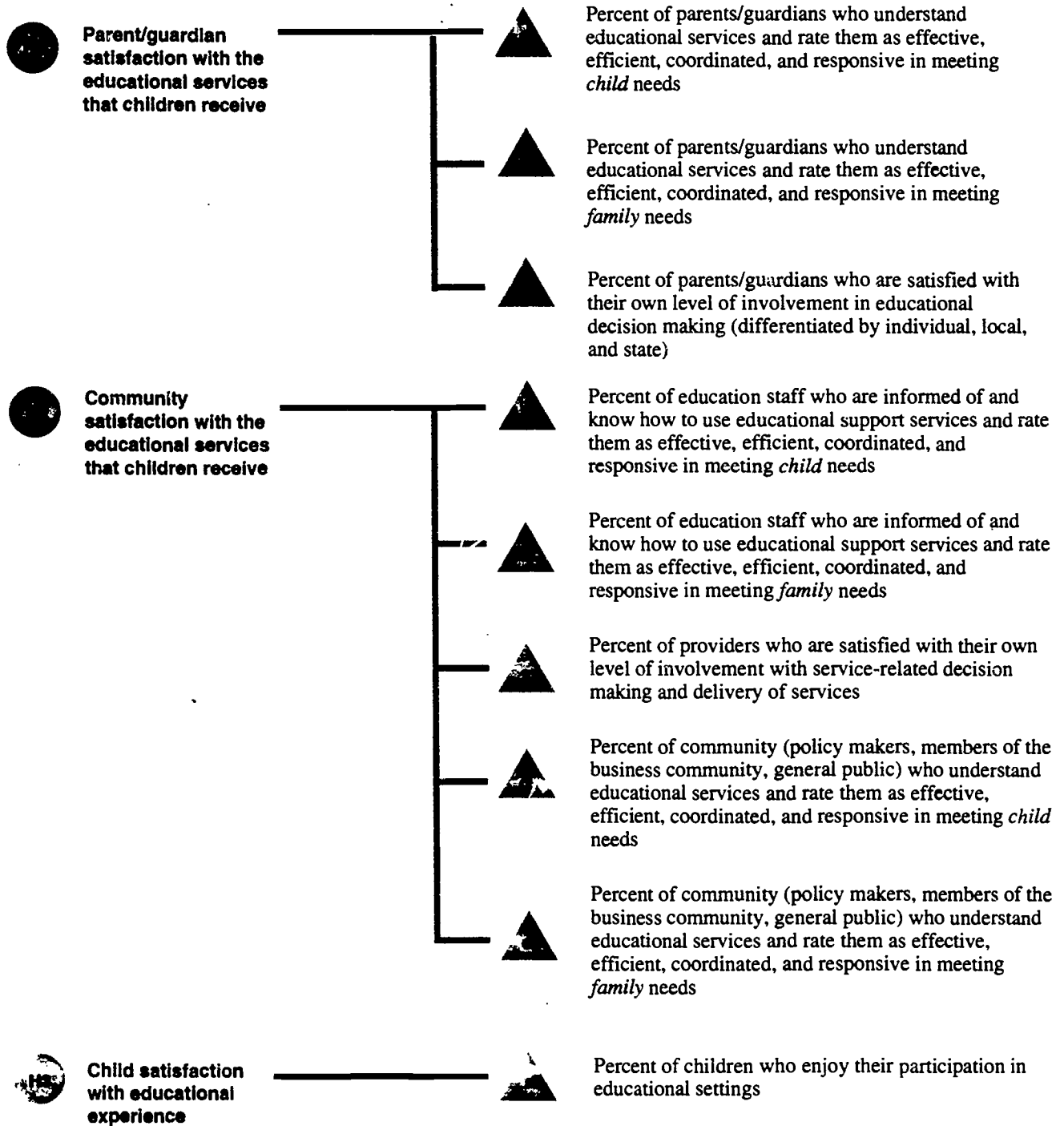
Personal and Social Adjustment



● = OUTCOME

▲ = INDICATOR

Satisfaction



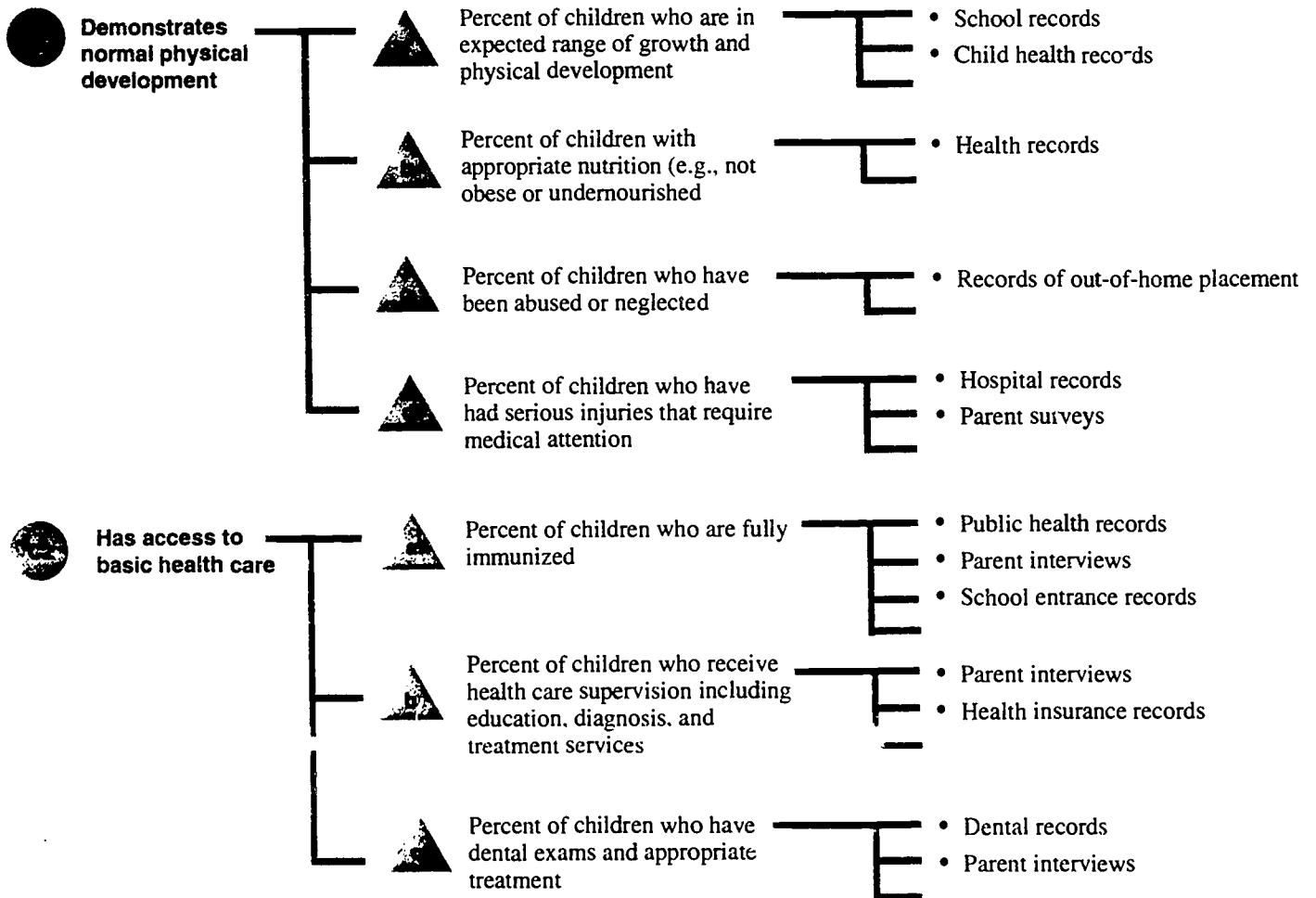
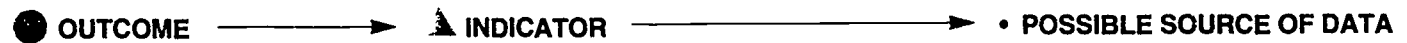
Steps Toward Identifying Sources of Data for Indicators

NCEO staff and advisors are currently in the process of identifying possible sources of data for each of the indicators that has been identified through the consensus-building

process. Examples of possible sources of data for seven of the ten indicators within the Physical Health domain are provided on this page. These were generated by NCEO staff.

Before listing the possible sources of data for all outcome indicators in the NCEO model, experts will be asked to provide their ideas about the best data sources.

Physical Health











Identifying and Defining the Important Outcomes of Education

The model and lists of domains, outcomes, and indicators that have been presented in this document are viewed as providing a framework and examples. From these examples, states, districts, and schools can begin to identify and define the important outcomes of education for all of their students.

This document is a summary of the results of consensus-building exercises focused on age 6 only. NCEO is using the same consensus-building process to identify outcomes and indicators for the developmental levels indicated in the figure below.

These will be available in the same format as the early childhood (age 6) outcomes and indicators. At the time of this publication, reports are also available for age 3, school completion, and post school.

OUTCOME DOMAIN	DEVELOPMENTAL LEVELS					
	3 Years	6 Years	Grade 4	Grade 8	School Completion	Post School
 Preparation and Participation	●-▲-●	●-▲-●	●-▲-●	●-▲-●	●-▲-●	●-▲-●
 Family Involvement, Accommodation and Adaptation	●-▲-●	●-▲-●	●-▲-●	●-▲-●	●-▲-●	●-▲-●
 Physical Health	●-▲-●	●-▲-●	●-▲-●	●-▲-●	●-▲-●	●-▲-●
 Responsibility and Independence	●-▲-●	●-▲-●	●-▲-●	●-▲-●	●-▲-●	●-▲-●
 Contribution and Citizenship	●-▲-●	●-▲-●	●-▲-●	●-▲-●	●-▲-●	●-▲-●
 Academic and Functional Literacy	●-▲-●	●-▲-●	●-▲-●	●-▲-●	●-▲-●	●-▲-●
 Personal and Social Adjustment	●-▲-●	●-▲-●	●-▲-●	●-▲-●	●-▲-●	●-▲-●
 Satisfaction	●-▲-●	●-▲-●	●-▲-●	●-▲-●	●-▲-●	●-▲-●

Contributors to the Development of Early Childhood Outcomes

Many individuals contributed to the development of the conceptual model, outcomes, and indicators presented here. Stakeholders participated in an intensive process of consensus

building using a computerized multiattribute analysis procedure. Other contributors including NCEO's Advisory Committee members, read and reacted to various working

papers, model prototypes, and questionnaires. With extreme gratitude we recognize and thank these contributors.

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Supporting Documents

The following documents are available for the reader who is interested in additional information on the model and its underlying assumptions, the process through which the current model and indicators were developed, or how states and school districts apply the model to meet their needs.

A Conceptual Model of Educational Outcomes for Children and Youth with Disabilities (Working Paper 1) July, 1991.

This paper discusses terminology and assumptions underlying the development of a model of outcomes for children and youth with disabilities. It presents alternative models, identifies unresolved issues, and represents a preliminary statement of models and issues.

Responses to Working Paper 1: Conceptual Model of Educational Outcomes for Children and Youth with Disabilities (Synthesis Report 3) June, 1992.

This paper is a synthesis of the responses from a large number of individuals who were invited to react to the educational outcomes model and the assumptions, definitions, and unresolved issues presented in Working Paper 1. Patterns in responses to specific issues including support, concerns, suggested refinements, and sample comments are included.

An Evolving Conceptual Model of Educational Outcomes for Children and Youth with Disabilities (Working Paper 2) August, 1992.

This paper is an extension of Working Paper 1, with revised definitions and

assumptions, and an updated model of educational and enabling outcomes for students with disabilities. An initial list of indicators of each outcome domain is included.

Developing a Model of Educational Outcomes (September, 1993).

This paper summarizes the process and stages leading to the development of NCEO's conceptual model, indicators, and sources of data.

Consensus Building: A Process for Developing Educational Outcomes and Indicators (in preparation).

This paper details the consensus process used by NCEO to produce lists of outcomes and indicators.

Self-Study Guide to the Development of Educational Outcomes and Indicators (September 1993).

This guide provides state and district personnel with information on how to use NCEO's model in developing a set of outcomes and indicators.

Information on these materials can be obtained by calling NCEO Publications (612-626-1530) or by writing:

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