Title of Protocol
Exploring Early Intervention team models and service delivery approaches impact on child and family outcomes: A Scoping Review

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Rationale
Early Intervention (EI) programs provide services and supports for infants and toddlers experiencing or at-risk for developmental delay and/or disability and their families through Part C of IDEA. Individual states define and implement team models and/or service delivery approaches for the EI program in their state. A scoping review was chosen to describe the current landscape of evidence and identify gaps in the current literature related to team models and service delivery approaches and the impact on broad-level child and family outcomes in EI.

This scoping review focuses on identifying evidence based team models and service delivery approaches being used within EI; how these team models and service delivery approaches impact broad-level child and family outcome measures within EI; and the formulation of considerations for EI service delivery.

Objectives

Determine the state of evidence of the current literature regarding team models and service delivery approaches in Early Intervention. This scoping review will include:

- identifying evidence-based team models and service delivery approaches being used within Early Intervention
- identifying the impact of team models and service delivery approaches on a variety of broad-level child and family outcomes
- the formulation of considerations for Early Intervention service delivery

Eligibility criteria

Inclusion Criteria:

- English Publications
- Research completed in the USA
- Published between 2010-2021
- Published in a peer reviewed journal
- Includes children who participated in Early Intervention IDEA Part C
- Article includes team models and/or service delivery approaches
- Article includes child and/or family outcomes

Exclusion Criteria:

- Non-English language publications
- Research completed outside of the USA
- Article was published before 2010
- Published in a non-peer reviewed journal, including dissertations
- Articles does not include children who participated in Early Intervention IDEA Part C
- Article does not include team models and/or service delivery approaches
- Article does not include child and/or family outcomes

Information sources

- Medline (Ovid)
- The Cochrane Library (Wiley)
- Scopus (Elsevier)
- CINAHL Plus with Full Text (Ebsco)
- PsychInfo (Ebsco)
- Eric (Ebsco)
- Academic Search Complete (Ebsco)

Search Strategy

The review team will work with a research librarian to develop a comprehensive search strategy. The search strategy will combine keywords and controlled vocabulary terms for the following concepts: Early Intervention, team models, service delivery approaches, child, family, and Part C/IDEA. We will also include a search string of EI programs derived from the Early Intervention Contact Information by State produced by the CDC [https://www.cdc.gov/ncbddd/actearly/parents/state-text.html].We will adapt the search to each database. Searches will be limited to studies published between 2010 and the present. Modifications to the search strategy will be documented.

Selection of sources of evidence

The screening tool, Rayyan, will be utilized in both Rounds 1 and 2.

Round 1: In the first round, two reviewers will independently screen all returned titles and abstracts, in order to identify articles that meet the inclusion criteria and warrant retrieval of the full text. Inclusion or exclusion of articles will be documented in Rayyan and reviewers will be blinded to the other reviewer's recommendations until the completion of the screening. If discrepancies exist, the reviewers will discuss their reasoning until a consensus can be reached. If a consensus is not reached, a third reviewer will review the title and abstract and will determine whether or not the article is included.

Round 2: The second round will include review of the full-text of all literature returned from the previous round. Here, five reviewers will independently read all articles and documentation of inclusion or exclusion of an article will be performed in Rayyan. If there are discrepancies, the same procedure detailed for Round 1 will be used to determine the final articles included in the scoping review. Documentation to describe rationale behind inclusion/exclusion of specific articles will be performed for both titles/abstract (Round 1) and full text (Round 2).

Data charting process

A narrative charting of the literature will be performed.

Data items

- Year
- Author
- Title
- Aim of Study
- Study design
- Setting (home, daycare, other)
- Age of children
- Socioeconomic status of children and families
- Geography of participants
- Diagnosis of child/children
- Types of services received
- Number of services received
- Number of participants
- Objective outcomes performed
- Subjective outcomes performed
- Team model utilized
- Service delivery approach utilized
- Length of time child/family had received EI services
- Length of time child/family was followed (long term follow up)
- Key findings
- Data Collection methods (survey, interview, etc)
- Data analysis process
- Conclusions

Critical appraisal of individual sources of evidence

Determined critical appraisal of individual sources of evidence was not appropriate for this scooping review.

Synthesis of Results

A qualitative synthesis of the evidence will be provided by the authors. Level of evidence will be assigned based on the Oxford 2011 levels of evidence. The strength of the thematic evidence will be evaluated using the Grade Definitions (US Preventive Task Force, 2016).

Level	Type of evidence
1A	Systematic review of homogeneous RCTs (similar population, intervention, etc.)- with or without meta-analysis
1B	Well-designed individual RCT (Not a pilot or feasibility study with a small sample size)
2A	Systematic review of cohort studies
2B	Individual prospective cohort study, low quality RCT (e.g. <80% follow-up or low number of participants, pilot and feasibility studies), ecological studies and two group nonrandomized studies
3A	Systematic review of case-control studies
3B	Individual retrospective Case-control study, one group nonrandomized pre-posttest study, cohort studies
4	Case series (and low quality cohort and case-control study)
5	Expert opinion without explicit critical appraisal

OCEBM Levels of Evidence Working Group*. "The Oxford 2011 Levels of Evidence".
Oxford Centre for Evidence-Based Medicine. http://www.cebm.net/index.aspx?o=5653
* OCEBM Table of Evidence Working Group = Jeremy Howick, Iain Chalmers (James Lind Library), Paul Glasziou, Trish Greenhalgh, Carl Heneghan, Alessandro Liberati, Ivan Moschetti, Bob Phillips, Hazel Thornton, Olive Goddard and Mary Hodgkinson

Appexdix 1: Medline Seach

1   exp Early Intervention, Educational/
2   ("early intervention" or "early childhood intervention" or "EI" or RBEI).ti,ab.
3   1 or 2
4   exp Patient Care Team/
5   exp Allied Health Occupations/
6   exp Pediatricians/
7   exp *Health Personnel/
8   exp *Nurses/
9   exp Case Managers/
10   (advocate* or attendant* or audiologist* or collaboration* or collaborative or collaborator* or doctor* or educator* or "evaluation group*" or evaluator* or interdisciplinary or interprofessional or member* or multidisciplinary or nurse* or nutritionist* or others or partner or partners* or pediatrician or physician* or professional or professionals or provider* or "service coordinator*" or social worker* or specialist* or "speech-language pathologist*" or teacher* or team* or therapist* or transdisciplinary).ti,ab.
11   exp Physical Therapy Modalities/
12   exp Counseling/
13   exp Education/
14   *Health Services/
15   exp Health Services for Persons with Disabilities/
16   exp Self-Help Devices/
17   exp Transportation/
18   ("assistive technolog*" or coaching or counseling or device* or education or "home visit*" or intervention* or model or models or neurophysiotherap* or physiotherap* or program* or service or services or therap* or transportation).ti,ab.
19   or/4-18

20	exp Child/
21	exp Infant/
22	(babies or baby or boy* or child* or girl* or infan* or juvenil* or kid* or minors* or "month old" or "months old" or "months after birth" or neonat* or "neo nat*" or newborn* or new-born* or paediatric* or peadiatric* or pediatric* or perinat* or preschool* or toddler* or underage* or "under age*" or youth or youths or "one year old*" or "two year old*" or "three year old*" or "four year old*" or "five year old*" or "1-year old*" or "2-year old*" or "3-year old*" or "4-year old*" or "5-year old*").ti,ab.
23	(age adj1 ("1" or "2" or "3" or "4" or "5" or "one" or "two" or "three" or "four" or "five")).ti,ab.
24	exp Family/
25	(caregiver* or family or father* or guardian* or mother* or parent* or relatives or stepfamily).ti,ab.
26	or/20-25
27	exp Federal Government/
28	exp Government Programs/
29	("individuals with disabilities education act" or "part c" or federal* or government*).ti,ab.
30	(state adj1 (finance or financed or fund* or program* or support* or sponsored or subsidize*)).ti,ab.
31	(state or idea).ti.
32	or/27-31
33	3 and 19 and 26 and 32
34	(babynet or "birth to 3 program" or "birth to three program" or "child developmental services" or "early development network" or "early intervention and early childhood special ed" or "early intervention and education program unit" or "early support for infants and toddlers" or "family centered early supports & services" or "family centered early supports and services" or "family infant toddler program" or "help me grow" or soonerstart or "the infants and toddlers program").ti,ab.
35	("american samoa*" adj3 "helping hands").ti,ab.
36	(("commonwealth of the northern marianna islands*" or nevada*) adj3 "early intervention services").ti,ab.
37	(("district of columbia*" or "dc*") adj3 "strong start").ti,ab.
38	(("new jersey*" or tennessee*) adj3 "early intervention system").ti,ab.
39	((delaware* or "south dakota*" or "west virginia*") adj3 "birth to three").ti,ab.
40	((florida* or louisiana*) adj3 "early steps").ti,ab.
41	((illinois* or montana* or "new york state*" or "north dakota*" or "rhode island*") adj3 "early intervention program").ti,ab.
42	((indiana* or kentucky* or mississippi* or missouri*) and "first steps").ti,ab.
43	((kansas* or idaho* or north carolina*) adj3 "infant toddler program").ti,ab.
44	((colorado* or pennsylvania* or "puerto rico*") adj3 "early intervention").ti,ab.
45	(arkansas* adj3 "first connections").ti,ab.
46	(california* adj3 "early start").ti,ab.
47	(guam* adj3 "early intervention system").ti,ab.
48	(hawaii* adj3 "early intervention section").ti,ab.
49	(iowa* adj3 "early access").ti,ab.
50	(maryland* adj3 "infants and toddlers program").ti,ab.
51	(massachusetts* adj3 "family ties").ti,ab.
52	(michigan* adj3 "early on").ti,ab.
53	(nebraska* adj3 "early development network").ti,ab.
54	(texas* adj3 "early childhood intervention ").ti,ab.
55	(utah* adj3 "baby watch").ti,ab.
56	(vermont* adj3 "early intervention services for infants and toddlers").ti,ab.
57	(virginia* adj3 "infant toddler connection").ti,ab.
58	or/34-57
59	33 or 58
60	limit 59 to yr="2010 -Current"