A systematic review of knowledge translation strategies used to promote the uptake of research in child health settings

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Background
Effective strategies that assist evidence-based decision-making for health care professionals are crucial to ensure high quality patient care and outcomes. Previous systematic reviews have explored knowledge translation (KT) strategies of various professional groups. A systematic review of KT strategies specific to child health settings has not been done.

Objective
The goal of this systematic review is to identify and synthesize the evidence on interventions aimed at putting research into child health practice.

Methods
Data Collection
• A comprehensive search of thirteen major electronic databases was conducted limiting to publication from 1985 to May 2008 and restricted to English language.
• Reports were included if:
  1) they were primary research studies using either RCT (Randomized Controlled Trials), CCT (Controlled Clinical Trials) and CBA (Controlled Before-and-After design),
  2) the target population was qualified health care professionals working in child health settings,
  3) the interventions had a primary purpose of implementing research into pediatric practice, and
  4) the outcomes measured the change at the provider, patient or system level.
• Methodological quality of included studies was assessed using design-specific validated checklists.

Data Analysis
• Study data was aggregated and analyzed according to the type of knowledge translation strategies based upon the Cochrane Effective Practice and Organisation of Care Group (EPOC) intervention framework.

Findings
18 studies were included: 10 RCT, 2 CCT, 6 CBA

KT Interventions in RCTs
6 studies had multifaceted KT interventions:
• Combination of professional interventions (n=2)
  • Audit & feedback, local opinion leaders, educational meetings, distribution of educational material (n=1)
  • Reminders, educational meetings, distribution of educational materials (n=1)
  • Combination of professional interventions & financial interventions (n=1)
  • Audit & feedback, provider capitation (n=1)
  • Combination of professional interventions & organizational interventions (n=1)
  • Audit & feedback, educational meetings, communication and case discussion between distant health professionals (n=1)
• Local opinion leaders, educational meetings, distribution of educational materials, educational outreach visits, communication and case discussion between distant health professionals (n=1)
• Local opinion leaders, local consensus process, educational meetings, distribution of educational materials, continuity of care (n=1)

4 studies had a single KT intervention:
• Professional intervention (n=3)
  • Reminders (n=2)
  • Educational meeting (n=1)
• Organizational intervention (n=1)
  • Formal integration of services (n=1)

KT Interventions in CCTs
1 study had multifaceted KT interventions:
• Combination of professional interventions (n=1)
  • Educational meetings, distribution of educational material, educational outreach visits (n=1)

1 study had a single KT intervention:
• Organizational intervention (n=1)
  • Changes in medical record systems (n=1)

KT Interventions in CBAs
All 6 studies had multifaceted KT interventions:
• Combination of professional interventions (n=4)
  • Educational meetings, distribution of educational material (n=2)
  • Reminders, educational meetings, distribution of educational materials (n=1)
  • Distribution of educational material, educational outreach visits (n=1)
  • Educational meetings, distribution of educational material, educational outreach visits (n=1)
• Combination of professional interventions & organizational interventions (n=1)
  • Educational meetings, distribution of educational material, educational outreach visits, formal integration of services, communication and case discussion between distant professionals (n=1)

Effect of the Interventions
Selective outcome reporting was prevalent in the studies included in this systematic review, regardless of research design.

Methodological Quality Assessment
Methodological quality assessment was conducted using design-specific tools developed by EPOC.

Methodological Quality Rating of Included RCTs & CCTs
High (4 out of 8 or less): n=8
Medium (5 or 6 out of 8): n=2
Low (7 or 8 out of 8): n=2

Methodological Quality Rating of Included CBAs
High (4 out of 8 or less): n=1
Medium (5 or 6 out of 8): n=4
Low (7 or 8 out of 8): n=1

Significance
This review represents a broad overview of KT strategies used in child health settings. The majority of studies used multifaceted KT interventions to influence physician behaviour. However, better methods of reporting KT interventions and their outcomes are needed in order to determine which KT interventions are the most successful in changing behaviour. Additionally, only 6 studies reported on the sustainability of their intervention(s); this is an important part of understanding behaviour change interventions and we recommend that future research includes this.

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