Outreach strategies for expanding health insurance coverage in children (Protocol)

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## Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Header</td>
<td>1</td>
</tr>
<tr>
<td>Abstract</td>
<td>1</td>
</tr>
<tr>
<td>Background</td>
<td>2</td>
</tr>
<tr>
<td>Objectives</td>
<td>3</td>
</tr>
<tr>
<td>Methods</td>
<td>3</td>
</tr>
<tr>
<td>References</td>
<td>7</td>
</tr>
<tr>
<td>Appendices</td>
<td>8</td>
</tr>
<tr>
<td>History</td>
<td>10</td>
</tr>
<tr>
<td>Contributions of Authors</td>
<td>10</td>
</tr>
<tr>
<td>Declarations of Interest</td>
<td>10</td>
</tr>
<tr>
<td>Sources of Support</td>
<td>10</td>
</tr>
</tbody>
</table>
Outreach strategies for expanding health insurance coverage in children

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ABSTRACT

This is the protocol for a review and there is no abstract. The objectives are as follows:

To assess the effectiveness of outreach strategies for expanding insurance coverage of children who are eligible for health insurance schemes.
BACKGROUND

Description of the condition

Health insurance has the potential to enhance access to health care and improve the quality of life for the insured population while protecting them from financially burdensome health-care expenses. However, for most developing countries and some developed countries (for example the United States) which have not achieved universal coverage of health insurance by a tax-based system or social health insurance, lack of health insurance coverage is still both a social concern and a policy issue. In these countries, the particular groups at risk are children, elderly, women, low-income populations, rural populations, racial/ethnic minorities, and immigrants. In this review, we will limit our focus to children, one of the groups most likely to lack health insurance.

In the United States, for example, the figures indicate that the proportion of children without health insurance rose from 10.8% in 2004 to 11.2% in 2005 (DeNavas-Walt 2006). For children in low-income families or children of immigrants, the situation is worse. There were 20.3% of U.S. children in low-income families (income less than 200% of the Federal Poverty Level (FPL)) without health insurance in 2004, compared with only 3.2% in more wealthy families (400% of FPL and above) (Holahan 2004). Latino children have the highest risk of being uninsured of any racial/ethnic group among US children, with 21% of Latino children being uninsured, compared with 7% of non-Latino white children in 2003 (DeNavas-Walt 2004). A survey in Shanghai, China found that the uninsured rate of migrant children was 65.6% in 2006 compared to 21.2% in permanent-residence children, and for both groups, children in lower income families were more likely to be uninsured (Lu 2008).

Many studies have demonstrated that uninsured children have less access to health care than insured children. For example, one study found that uninsured children in the US were less likely to have a regular source of primary health care, and that they used medical and dental care less often (Institute of Medicine 2002). Studies in Guangxi and Gansu, China and Wisconsin, US revealed that immunization of children was positively associated with coverage of health insurance schemes (Arnold 1992; Zhang 1999). A consequence of low access to, and use of, health care is the poor health status of uninsured children compared with insured children (Holl 1995; Kuehl 2000; Li 2001).

According to the scoping review we conducted in 2008, there are many strategies to expand health insurance coverage (Table 1). The strategies can be divided into two main categories: strategies applied in the design stage and strategies applied in the implementation stage.

Table 1. Strategies to expand health insurance

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Contents</th>
</tr>
</thead>
</table>
| Improving design of health insurance schemes | - Modifying the eligibility criteria  
- Making the premium affordable  
- Improving healthcare delivery |
| Improving implementation of insurance schemes (outreach strategies) | - Increasing awareness of schemes and benefits  
- Modifying enrollment  
- Improving the management and organization of insurance schemes |

The purpose of the first type of strategy is to improve the design of health insurance schemes, by measures such as modifying eligibility criteria to include more children; setting an appropriate premium level or providing subsidies; improving the content, price, and quality of healthcare package. For example, in June 1998, the State Children's Health Insurance Program (SCHIP) in California expanded eligibility for public health insurance from 200% of FPL up to 250% for children under 19 years (Aizer 2002). In the School Health Insurance Program of Egypt, school children need pay only a part of the premium, with a matching contribution by government to lower the burden on low-income families (Nandakumar 2000). The SCHIP in New York State increases its benefits to include emergency, preventive and some routine dental care to attract more children (Andrulis 1999).

The other type of strategy is to improve implementation of existing insurance schemes so as to enroll more eligible populations, by measures such as increasing awareness about insurance or making the application process easier and more user-friendly. For example,
California’s advertising campaign via television, radio, and print in 48 counties was implemented in both English and Spanish to inform more eligible children about insurance schemes (Aizer 2006). Georgia State shortened its application form in 1993, and saw a 42% increase in enrollment among pregnant women and children (Que 1998).

In this review, we will focus on evaluating the second category of interventions. This is because even if a health insurance scheme is well designed, that still cannot ensure that all eligible children will join it. Nearly 8.3 million children in the US without health insurance were already eligible for Medicaid or SCHIP in 2005 (Jacobson 2007). Some researchers have explored the reasons for this low enrollment of eligible children. An interview about children’s enrollment in SCHIP in the US found that some members of indigenous groups did not know about SCHIP or, if they did know, were not aware of their eligibility to enroll or exemption from premiums and cost-sharing requirement (Langwell 2003). Besides lack of awareness of insurance, the complexity of the application process can also be a significant barrier. A survey of parents indicated that although 93.5% had heard of the insurance programs for their children, only 48.1% thought the application processes were easy (Haley 2007).

**Description of the intervention**

Outreach strategies in this review are measures to improve the implementation of existing health insurance to cover its eligible population, which aim to maximize the enrollment rate of health insurance without changing the content of insurance (eligible population, premium, benefit package). These strategies can be mainly grouped into the following categories.

- **Increasing awareness of schemes:** this includes television, radio advertisements, hotline or information distribution through schools or other specific places for raising awareness of insurance programs. For example, many states in the US distributed information about SCHIP in venues where target parents and children tend to congregate, including early childhood centers, schools, hospitals, and religious institutions (Andrulis 1999).

- **Modifying enrollment:** this refers to any methods of improving or simplifying the enrollment procedures, including programs that help families with the paperwork and other aspects of application; outstationing of eligibility workers; authorizing more entities to interview applicants; shared eligibility with other insurance or public programs. For example, the state government of California worked with community-based organizations to provide application assistance to families who were potentially eligible for Healthy Families (California SCHIP) or Medicaid (Buchmueller 2007); Florida’s Healthy Start Program has linked eligibility for Medicaid through the school lunch program are automatically eligible for health insurance (Secretary of Health and Human Services 1998).

- **Improving the management and organization of insurance schemes:** this refers to interventions to improve the capacity of insurers to manage the insurance schemes, including improving information systems and training staff for better and more effective outreach and management. For example, in order to enroll Latino children, many states in the US have supported staff development and training in cultural competency to include appropriate family members (Zambrana 2004).

**Why it is important to do this review**

Many outreach strategies having been implemented and evaluated. A critical evaluation and systematic summary of the effectiveness of these interventions would help to inform decisions by policymakers regarding interventions to expand health insurance coverage.

**OBJECTIVES**

To assess the effectiveness of outreach strategies for expanding insurance coverage of children who are eligible for health insurance schemes.

**METHODS**

**Criteria for considering studies for this review**

**Types of studies**

- Randomized controlled trials (RCTs) including cluster randomized trials
- Controlled clinical trials (CCTs)
- Controlled before-after (CBA) studies provided that:
  - i) pre- and post-intervention periods for study and control groups are the same;
  - ii) the choice of the control site is appropriate, e.g. no major baseline differences between study and control groups;
  - iii) there are at least two intervention sites and two control sites.
- Interrupted time series (ITS) studies provided that:
i) there is a clearly defined point in time when the intervention occurred;
ii) there are at least three data points before and three after the intervention.

Types of participants
The participants we will include in this review are children and young people who are eligible for any kind of health insurance scheme, but have not been enrolled. The age bracket of children will depend on the eligibility criteria of the health insurance programs. For example, Medicaid covers children aged six through 18 living in poverty (Thorpe 1998-1999); SCHIP targets children under 19 years old with family incomes of less than 200% of FPL (Flores 2005); Egypt’s School Health Insurance Program aims to cover all school age children (Nandakumar 2000).

Types of interventions
We will include any outreach intervention for improving implementation of existing health insurance and enrolling more eligible children into health insurance programs. They may be one or a mixture of the following measures.

- Increasing awareness of schemes: television or radio advertisements, or information distribution through specific places, etc.
- Modifying enrollment: helping families with the paperwork and the other procedures necessary to apply for health insurance; outstationing of eligibility workers; authorizing more entities to interview applicants; shared eligibility with other insurance or public programs; and other methods for improving application procedures.
- Improving the management and organization of insurance schemes: improving information system, training staff for better management, and other methods for improving management.

If a study evaluated interventions which included both changing the design of health insurance and outreach interventions, we will include it only if it differentiated the effectiveness of changing design from the effectiveness of outreach interventions.

Secondary outcomes
- Any measures of health service utilization by insured children.
- Any measures of health status of insured children.
- Any measures of attitude or satisfaction of children and their parents.
- Any measures of costs of the interventions.
- Any adverse effects of interventions.

Search methods for identification of studies
See: Effective Practice and Organization of Care Group methods used in reviews.

Electronic searches
We will develop strategies that incorporate the methodological component of the EPOC search strategy combined with selected index terms and free text terms. We will adapt the PubMed search strategy for the other databases using the appropriate controlled vocabulary as applicable. See Appendix 1 for the search strategy. We will search the following electronic databases for primary studies.

- The Cochrane Effective Practice and Organisation of Care Group (EPOC) Specialised Register (and the database of studies awaiting assessment)
- The Cochrane Central Register of Controlled Trials (CENTRAL)
- PubMed
- EMBASE
- PsycINFO
- ERIC
- Healthcare Management Information Consortium (HMIC)
- Public Affairs Information Service (PAIS) International
- International Bibliography in Social Science
- WHO library databases (WHOLIS)
- Global health
- World Bank -- Documents & Reports
- Popline
- JSTOR
- EconLit
- SSRN
- IDEAS (Research Papers in Economics)
- ELDIS
- British Library for Development Studies (BLDS)
- System for Information on Grey Literature in Europe (OpenSIGLE)
- National Technical Information Service (NTIS)
- ProQuest Dissertation & Theses Database
- ISI Proceedings
Assessment of risk of bias in included studies

We will use the EPOC criteria (EPOC 2002) to assess the risk of bias for every outcome of all included studies. For each criterion, two authors will independently describe what was reported in the study, comment on the description, and judge the risk of bias. We will discuss unresolved disagreements with a third author and, if we cannot reach consensus, with the EPOC contact editor. For RCTs, CCTs, and CBAs we will use the following criteria.

- **Was the allocation adequately generated?** Score “yes” if a random component in the sequence generation process is described (e.g. referring to a random number table). Score “no” when a nonrandom method is used (e.g. performed by date of admission). CCTs and CBAs should be scored “no”. Score “unclear” if not specified in the paper.
- **Was the allocation adequately concealed?** Score “yes” if the unit of allocation was by institution, team or professional and allocation was performed on all units at the start of the study; or if the unit of allocation was by patient or episode of care and there was some form of centralized randomization scheme, an on-site computer system or sealed opaque envelopes were used. CBAs should be scored “no”. Score “unclear” if not specified in the paper.
- **Were baseline outcome measurements similar?** Score “yes” if performance or patient outcomes were measured prior to the intervention, and no important differences were present across study groups. In RCTs, score “yes” if imbalanced but appropriate adjusted analysis was performed (e.g. analysis of covariance). Score “no” if important differences were present and not adjusted for in analysis. If RCTs have no baseline measure of outcome, score “unclear”.
- **Were baseline characteristics similar?** Score “yes” if baseline characteristics of the study and control providers are reported and similar. Score “unclear” if it is not clear in the paper (e.g. characteristics are mentioned in text but no data were presented). Score “no” if there is no report of characteristics in text or tables or if there are differences between control and intervention providers. Note that in some cases imbalance in patient characteristics may be due to recruitment bias whereby the provider was responsible for recruiting patients into the trial.
- **Were incomplete outcome data adequately addressed?** Score “yes” if missing outcome measures were unlikely to bias the results (e.g. the proportion of missing data was similar in the intervention and control groups or the proportion of missing data was less than the effect size, i.e. unlikely to overturn the study result). Score “no” if missing outcome data was likely to bias the results. Score “unclear” if not specified in the paper. (Do not assume 100% follow up unless stated explicitly.)
- **Was knowledge of the allocated interventions adequately prevented during the study?** Score “yes” if the authors state explicitly that the primary outcome variables were assessed blindly, or the outcomes are objective. Primary outcomes are...
those variables that correspond to the primary hypothesis or question as defined by the authors. Score “no” if the outcomes were not assessed blindly. Score “unclear” if not specified in the paper.

- Was the study adequately protected against contamination? Score “yes” if allocation was by community, institution or practice and it is unlikely that the control group received the intervention. Score “no” if it is likely that the control group received the intervention (e.g. if patients rather than professionals were randomized). Score “unclear” if professionals were allocated within a clinic or practice and it is possible that communication between intervention and control professionals could have occurred (e.g. physicians within practices were allocated to intervention or control).

- Was the study free from selective outcome reporting? Score “yes” if there is no evidence that outcomes were selectively reported (e.g. all relevant outcomes in the methods section are reported in the results section). Score “no” if some important outcomes are subsequently omitted from the results. Score “unclear” if not specified in the paper.

- Was the study free from other risks of bias? Score “yes” if there is no evidence of other risk of biases.

We will summarize the overall risk of bias across criteria for the primary outcome. We will primarily consider the following criteria: baseline outcome measurements; baseline characteristics measurements; incomplete outcome data addressed; and protection against contamination. If these four criteria are all scored “yes” (met) for the primary outcome in a study, the summary assessment will be that there is a low risk of bias; if one or more key criteria are scored “unclear” the summary assessment will be an unclear risk of bias; and if one or more key criteria are scored “no”, the summary assessment will be a high risk of bias.

For ITSs, we will use the following criteria.

- Was the intervention independent of other changes? Score “yes” if there are compelling arguments that the intervention occurred independently of other changes over time and the outcome was not influenced by other confounding variables/historical events during the study period. If events/variables identified, note what they are. Score “no” if it is reported that the intervention was not independent of other changes in time.

- Was the shape of the intervention effect pre-specified? Score “yes” if the point of analysis is the point of intervention OR a rational explanation for the shape of intervention effect was given by the author(s). Where appropriate, this should include an explanation if the point of analysis is NOT the point of intervention. Score “no” if it is clear that the condition above is not met.

- Was the intervention unlikely to affect data collection? Score “yes” if reported that the intervention itself was unlikely to affect data collection (for example, sources and methods of data collection were the same before and after the intervention). Score “no” if the intervention itself was likely to affect data collection (for example, any change in source or method of data collection reported).

- Was knowledge of the allocated interventions adequately prevented during the study? Score “yes” if the authors state explicitly that the primary outcome variables were assessed blindly, or the outcomes are objective. Primary outcomes are those variables that correspond to the primary hypothesis or question as defined by the authors. Score “no” if the outcomes were not assessed blindly. Score “unclear” if not specified in the paper.

- Were incomplete outcome data adequately addressed? Score “yes” if missing outcome measures were unlikely to bias the results (e.g. the proportion of missing data was similar in the pre- and post-intervention periods or the proportion of missing data was less than the effect size, i.e. unlikely to overturn the study result). Score “no” if missing outcome data were likely to bias the results. Score “unclear” if not specified in the paper. (Do not assume 100% follow up unless stated explicitly.)

- Was the study free from selective outcome reporting? Score “yes” if there is no evidence that outcomes were selectively reported (e.g. all relevant outcomes in the methods section are reported in the results section). Score “no” if some important outcomes are subsequently omitted from the results. Score “unclear” if not specified in the paper.

- Was the study free from other risks of bias? Score “yes” if there is no evidence of other risk of biases.

For these studies we will primarily consider the following criteria when we summarize the overall risk of bias across these criteria: intervention independence, intervention affecting data collection, and incomplete outcome data addressed.

We will assess the quality of evidence for the primary outcome - that is the extent of our confidence in the estimate of effect across studies - using the GRADE approach (GRADE 2004).

**Data synthesis**

We will report the main results of each of the included studies in natural units. For RCTs, CCTs, and CBAs we will present results in terms of absolute change and relative percentage change. We will also calculate absolute change from baseline and the difference in absolute changes from baseline if baseline data are available. For ITS studies we will report the change in the level of outcome immediately after the introduction of the intervention and the differences in the level at different points in time (e.g. after one year and two years).

We will base primary analyses upon consideration of dichotomous measures of the primary outcome (i.e. proportions of eligible children enrolled into health insurance schemes). We will present the results for all comparisons using a standard method of presenta-
We will report the following results separately for each study design:

- median effect size across included studies;
- inter-quartile ranges of effect sizes across included studies;
- range of effect sizes across included studies

Comparisons that allocate clusters (e.g. schools or communities) but do not account for clustering in the analysis have a potential unit of analysis error, resulting in overly low P values and overly narrow confidence intervals. We will reanalyze this kind of comparison if we can extract the intra-cluster coefficient. If reanalysis is not possible, we will report only the point estimate.

If papers with ITS design do not provide an appropriate analysis or reporting of results, but present the data points in a scannable graph or in a table, we will reanalyze the data using methods described in Ramsay 2003.

If there are sufficient studies which are similar in study design, intervention, participants and outcome measures, we will carry out meta-analysis. For the included studies with dichotomous outcomes, we will use risk ratios (RR) for the proportion of insured eligible children with 95% confidence intervals as summary data. For continuous outcomes, we will use mean differences (MD) with 95% confidence intervals or standardized mean differences (SMD) with 95% confidence intervals, if the scales of the continuous outcome measures are not identical. We will explore heterogeneity within similar study designs and use a random-effects model with 95% CI.

We will prepare tables and bubble plots comparing effect sizes of studies grouped according to potential effect modifiers, including the following.

- Characteristics of participants (non-poor children and poor children; local/permanent children and immigrant/temporary children)
- Type of intervention (awareness campaign, application assistant, facilitating enrollment, and mixed measures)
- Type of insurance (public health insurance, private health insurance)
- Study setting (high-income, middle-income, and low-income country)
- Study design (RCTs, CCTs, CBAs, ITSs)
- Overall risk of bias for primary outcome within studies (low risk of bias, unclear risk of bias, and high risk of bias)

We will assess publication bias by examining the funnel plot. Providing there are sufficient trials, we will also conduct a sensitivity analysis to investigate the robustness of the results to the risk of bias components.

**REFERENCES**

Aizer 2002

Aizer 2006

Andrulis 1999

Arnold 1992

Buchmueller 2007

DeNavas-Walt 2004

DeNavas-Walt 2006

EPOC 2002

Flores 2005

GRADE 2004

Haley 2007
Holahan 2004

Holl 1995

Institute of Medicine 2002

Jacobson 2007

Kuehl 2000

Langwell 2003

Li 2001

Lu 2008
Lu M, Zhang J, Ma J, Li B, Quan H. Child health insurance coverage: a survey among temporary and permanent residents in Shanghai. BMC Health Services Research 2008;8:238.

Nandakumar 2000

Que 1998

Ramsay 2003

Secretary of Health and Human Services 1998

Thorpe 1998-1999

Zambrana 2004

Zhang 1999

*Indicates the major publication for the study

APPENDICES

Appendix 1. Search strategy
#1: child[MH]
#2: adolescent[MH]
#3: minors[MH]
#4: infant[MH]
#5: students[MH]
#6: child[TIAB] OR children[TIAB]
#7: adolescent[TIAB] OR adolescents[TIAB]
#8: minor[TIAB] OR minors[TIAB]
#9: infant[TIAB] OR infants[TIAB]
#10: student[TIAB] OR students[TIAB]
#11: kid[TIAB] OR kids[TIAB]
#12: teenager[TIAB] OR teenagers[TIAB]
Outreach strategies for expanding health insurance coverage in children (Protocol)

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#64: #20 AND #51 AND #63
#67: #65 NOT #66
#68: #64 AND #67

**HISTORY**
Protocol first published: Issue 1, 2010

**CONTRIBUTIONS OF AUTHORS**
All review authors have contributed to the production of the protocol. Qingyue Meng drafted the protocol. Beibei Yuan and Liying Jia amended it with comments from all other co-authors.

**DECLARATIONS OF INTEREST**
None known.

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- No sources of support supplied

**External sources**
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