Improving childhood vaccination in disadvantaged minorities: a realist review of health system interventions

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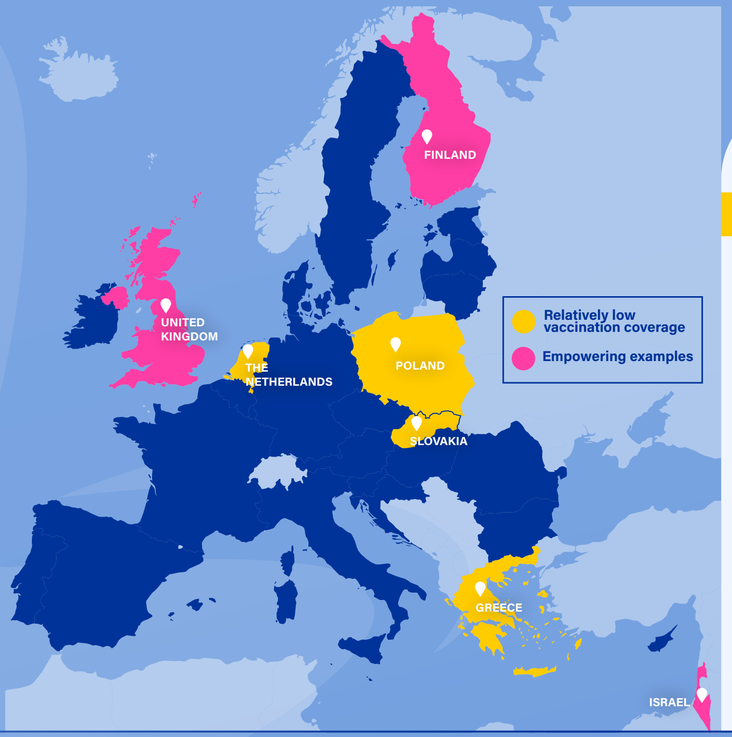
Background

Childhood vaccination is one of the most cost-effective public health interventions that has the potential to drastically prevent the spread of communicable diseases and reduce health inequality worldwide.

Most minority populations in Europe have lower childhood vaccine uptake than the general population.

Improving uptake in these populations requires specifically developed, context-specific interventions.

As part of the EU-funded RIVER-EU project, we conducted a realist review to identify interventions effective at improving vaccine uptake among disadvantaged, underserved communities.



Methods

We searched MEDLINE, EMBASE, CINAHL, COCHRANE, and Proquest for **articles published between 2010 and 2021**, using combination keyword searches in English. Following **title and abstract screening**, full texts were **assessed for relevance**. We also **searched grey literature and references of references**. **Data extraction and analysis** was performed by two reviewers. **Programme theories** were generated from included articles and data extraction were carried out paying particular **attention to context, mechanisms, and outcome configurations.**

Results

From **1942 screened titles**, we **selected 87 studies** for full-text review of which **36 were included**. We identified **10 primary intervention categories:**

- Parental and youth education
- Clinic outreach
- Quality improvement
- Health provider training/community leaders' education
- School-based education
- Technology interventions
- Cash incentives
- Home visits
- Comic books
- Consent policy changes

We found moderate to high level evidence regarding the success of parental and youth education programs, school-based education programs, quality improvement interventions, community leaders' education, comic books, health care providers training, and home visits. Technology interventions and cash incentives were less effective at increasing vaccine uptake among this group. Interventions that used multi-components were the most effective at increasing vaccine uptake.

Conclusions

- Several intervention categories can potentially improve vaccine coverage among underserved minority populations.
- Interventions that incorporated multi-component strategies were the most effective.
- It is important to keep in mind that there is not a one-size fits all intervention that can be transferred as is across disadvantaged groups.
- Rather, interventions need to be appropriately tailored and adapted to meet the unique context and needs of each specific group.

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