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What factors influence parents' views and practices around routine childhood vaccines?

Featured review: Are antibiotics an effective treatment for COVID-19 and do they cause unwanted effects?

What factors influence parents' views and practices around routine childhood vaccines?

Authors: Cooper S, Schmidt B-M, Sambala EZ, Swartz A, Colvin CJ, Leon N, Wiysonge CS

Review aim

This Cochrane synthesis of qualitative evidence aimed to explore the factors that influence parents' views and practices around routine childhood vaccines. To do this, we searched for and analysed qualitative studies of parents' views, experiences, and practices.

This synthesis complements other Cochrane Reviews assessing the effect of strategies to improve the uptake of childhood vaccination.

Key messages

Many factors influence parents' vaccination views and practices, including those related to individual perceptions, social relationships, and the wider context in which parents live. When parents make decisions about vaccination for their children, they are often communicating not just what they think about vaccines, but also who they are, what they value, and with whom they identify.

What was studied in this synthesis?

Childhood vaccination is one of the most effective ways to prevent serious illnesses and deaths in children. However, worldwide, many children do not receive all recommended vaccinations. There are several potential reasons for this. Vaccines might be unavailable, or parents may experience difficulties in accessing vaccination services. Some parents may not accept available vaccines and vaccination services.

Our understanding of what influences parents' views and practices around childhood vaccination, and why some parents may not accept vaccines for their children is still limited. Qualitative research explores how people perceive and experience the world around them, and is therefore well-placed for examining these issues.

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What are the main findings of the review?

We included 27 studies in our analysis. Studies were conducted in Africa, the Americas, South-East Asia, Europe, and the Western Pacific, and included urban and rural settings, as well as high-, middle-, and low-income settings.

Many complex factors were found to influence parents' vaccination views and practices, which we divided into four themes.

Firstly, parents' vaccination ideas and practices may be influenced by their broader ideas and practices surrounding health and illness generally, and specifically with regards to their children, and their perceptions of the role of vaccination within this context. Secondly, many parents' vaccination ideas and practices were influenced by the vaccination ideas and practices of the people they mix with socially. At the same time, shared vaccination ideas and practices helped some parents establish social relationships, which in turned strengthened their views and practices around vaccination. Thirdly, parent's vaccination ideas and practices may be influenced by wider political issues and concerns, and particularly their trust (or distrust) in those associated with vaccination programmes. Finally, parent's vaccination ideas and practices may be influenced by their access to and experiences of vaccination services and their frontline healthcare workers.

We developed two concepts for understanding possible pathways to reduced acceptance of childhood vaccination.

The first concept, 'neoliberal logic', suggests that many parents, particularly from high-income countries, understood health and healthcare decisions as matters of individual risk, choice, and responsibility. Some parents experienced this understanding as in conflict with vaccination programmes, which emphasise generalised risk and population health. This perceived conflict led some parents to be less accepting of vaccination for their children.

The second concept, 'social exclusion', suggests that some parents, particularly from low- and middle-income countries, were less accepting of childhood vaccination due to their experiences of social exclusion. Social exclusion may damage trustful relationships between government and the public, generate feelings of isolation and resentment, and give rise to demotivation in the face of public services that are poor quality and difficult to access. These factors in turn led some parents who were socially excluded to distrust vaccination, to refuse vaccination as a form of resistance or a way to bring about change, or to avoid vaccination due to the time, costs, and distress it creates.

How up-to-date is this review?

We searched for studies published before 3 June 2020.

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Featured review: Are antibiotics an effective treatment for COVID-19 and do they cause unwanted effects?

Authors: Popp M, Stegemann M, Riemer M, Metzendorf M-I, Romero CS, Mikolajewska A, Kranke P, Meybohm P, Skoetz N, Weibel S

Key messages

• The antibiotic azithromycin is not an effective treatment for COVID-19.

• We don't know whether antibiotics other than azithromycin are effective treatments for COVID-19 because there is not enough research.

• We found 19 ongoing studies that are investigating antibiotics for COVID-19. We will update this review if their results change our conclusions.

What are antibiotics?

Antibiotics are cheap and common medicines used to treat bacterial infections. However, recent laboratory studies found that some antibiotics slowed the reproduction of some viruses, including SARS-CoV-2, the virus that causes COVID-19. In laboratory tests, one antibiotic, azithromycin, reduced viral activity and inflammation, and so it has been studied as a potential treatment for COVID-19. We need good evidence before giving antibiotics for COVID-19 because overuse or misuse of antibiotics can lead to 'antimicrobial resistance', where organisms that cause infection change, so that antibiotics stop working.

What did we want to find out?

We wanted to know if antibiotics reduce death, severity of disease, and length of infection in people with COVID-19, if they have an effect on quality of life or cause unwanted effects. We included studies that compared antibiotics to placebo (dummy treatment), no treatment, usual care, another antibiotic, or treatments for COVID-19 that are known to work to some extent, such as remdesivir or dexamethasone. We excluded treatments that we know do not work for COVID-19, such as hydroxychloroquine, or have an unknown influence on the disease.

We evaluated the effects of antibiotics on people with COVID-19 on:

• people dying;

• whether people's COVID-19 symptoms got better or worse;

• unwanted effects;

• heart rhythm problems;

• quality of life.

What did we do?

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We searched for studies that investigated antibiotics to treat people with COVID-19 in hospital or as outpatients.

We compared and summarised the results of the studies and rated our confidence in the evidence, based on common criteria such as study methods and sizes.

What did we find?

We found 11 studies with 11,281 people that investigated antibiotics to treat COVID-19. All 11 studies investigated azithromycin. Nine studies (10,807 people) compared azithromycin to no treatment, placebo or usual care alone. Two studies compared azithromycin to another antibiotic: lincomycin (1 study, 24 people) and clarithromycin (1 study, 450 people), however, they did not report data that we could use in this review, so our results apply to azithromycin only.

Seven studies included people with moderate to severe COVID-19 in hospital and four studies included outpatients with mild COVID-19. The studies used different doses of azithromycin and different durations of treatment.

We found 19 ongoing studies. We have not classified 15 completed studies because we are waiting for more information from the authors, or they have not yet been published.

Main results

Inpatients with moderate to severe COVID-19

Azithromycin compared to usual care alone, does not lead to more or fewer deaths in the 28 days after treatment (4 studies, 8600 people).

Compared to usual care alone or placebo, azithromycin probably does not:

• worsen (1 study, 7311 people) or

• improve patients' condition (3 studies, 8172 people);

• increase or decrease serious unwanted events (4 studies, 794 people), and heart rhythm problems (4 studies, 7865 people).

Azithromycin may increase non-serious unwanted effects slightly compared to usual care alone (3 studies, 355 people).

No studies looked at quality of life.

Outpatients with mild COVID-19

Compared to usual care alone or placebo azithromycin may make little or no difference to:

• people dying in the 28 days after treatment (3 studies, 876 people);

• whether the people's disease worsened in the 28 days after treatment (3 studies, 876 people) or

• whether people's COVID-19 symptoms got better in the 14 days after treatment (1 study, 138 people).

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We don't know whether azithromycin compared to usual care alone or placebo increases or decreases serious unwanted effects (2 studies, 454 participants).

No studies reported non-serious unwanted events, heart rhythm problems, or quality of life.

What are the limitations of the evidence?

We are very confident in the evidence on azithromycin for COVID-19 inpatients. However, we are less confident in the evidence on azithromycin in outpatients, mainly because there were few studies that also had some flaws, therefore we could not draw reliable conclusions. We found relevant evidence on only one antibiotic, azithromycin, so we do not know the effects of other antibiotics for treating COVID-19. We will continue to search for new studies to fill this evidence gap. Our evidence does not suggest azithromycin is an effective treatment for COVID-19, especially given the danger of antimicrobial resistance. Azithromycin or any other antibiotic should not be used to treat COVID-19 outside well-designed studies.

How up to date is this evidence?

The evidence is up to date to 14 June 2021.

If you have any questions or comments with regard to the above document please feel free to contact me.

Kind regards

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