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Understanding the impact on children and families of children being kept away from childcare due to Shiga-toxin producing *E. coli* (STEC) infection

What is the problem?

A key public health priority in the United Kingdom (UK) is the management of a bacteria called Shiga-toxin producing *E. coli* (STEC). STEC are a public health priority because they can cause serious illness and deaths, large outbreaks, and high healthcare costs, particularly in young children.

Each year, 8 in every 100 000 children under the age of four are infected with STEC. Around 20% of these children develop the most severe form of STEC infection which can cause acute kidney failure leading to kidney dialysis, transplantation and life-long consequences. This infection is called Haemolytic Uraemic Syndrome (HUS).

STEC outbreaks particularly affect children under the age of six because:

- Children under six have the highest rates and most serious consequences of STEC including kidney failure and long periods at home.
- Public health guidelines for STEC require children under six to stay away from childcare until clear of infection.
- Eight percent of children under six with STEC infection have to stay away from childcare for more than 60 days.

Current STEC guidelines help prevent the spread of STEC but they do not take into account the consequences for families. To date, no research has looked at the impact of these guidelines on children and families. We do not know if there are inequalities in the consequences of these guidelines for families living in different circumstances.

What is our approach?

I will conduct interviews with parents/carers of children under the age of six, who are asked to stay away from childcare because of STEC infection. The findings will give an in-depth understanding of the experience of parents/carers keeping children away from childcare because they have STEC infection. It will help us understand inequalities in the impact of these guidelines for families living in different circumstances.

Why Now?

The COVID pandemic showed us that there can be inequalities in the impact of infectious diseases, and the impact of measures aiming to control infectious diseases. We need to better understand these inequalities in order to find ways of reducing them.

Public Involvement

A public involvement group advised on the use of plain English and the focus of this project. This group also helped design the information sheet and will be involved in analysing the results and sharing its findings.

Sharing Findings

Findings will be shared through publications, conferences and with participants. Findings will also be shared with the UK Health Security Agency who write guidelines for STEC infection.

What difference will it make?

The findings of the study will be used to revise guidelines for STEC in the future. This will help improve the experience of patients and address any unequal impact of STEC infection guidelines. It may also help us find other options to manage risk in childcare settings. Its findings will help us prepare for outbreaks in the future.