



EVIDENCE SUMMARY:

Gastroenteritis

WHAT IS IT?

Gastroenteritis is a common disease, usually of viral origin that inflames both the stomach and small intestine. It is characterized by fever, diarrhea and vomiting.

EVIDENCE SUMMARY

The purpose of this document is to describe the effectiveness of three treatment options, based on a 2013 Overview of Reviews.*

Some children with serious illness may be admitted to the hospital. However, this summary describes treatment outcomes in outpatients. These are children who are cared for at a clinic or at the emergency department, but who are not admitted to the hospital.

The treatments were compared using four outcomes to examine which treatment was the most effective overall. These areas were:

- » Did treatment reduce rate of hospital admission or re-admission?
- » Did treatment reduce the length of hospital stay?
- » Was intravenous therapy needed due to failure of other treatment?
- » Is the treatment associated with any side effects?

TREATMENT SCENARIO 1

Oral Rehydration Therapy (ORT) vs Intravenous Therapy (IV)

H HOSPITAL ADMISSIONS / RE-ADMISSIONS

There was no data available indicating whether there was a difference in hospital admissions or re-admissions between patients treated with ORT or IV therapy.

C LENGTH OF STAY

Patients receiving ORT had a similar length of hospital stay compared to those treated with IV therapy.

I NEED FOR INTRAVENOUS THERAPY

There was no important difference in the number of children who failed treatment with ORT compared to IV therapy.

A ADVERSE EFFECTS

There were fewer cases of phlebitis with ORT. There were more cases of paralytic ileus with ORT.

TREATMENT SCENARIO 2

Anti-Vomiting Drugs vs Placebo

H HOSPITAL ADMISSIONS / RE-ADMISSIONS

Anti-vomiting drugs lowered the rate of admission to the hospital. There was no difference in the need for re-admission 72 hours after discharge, compared with placebo.

C LENGTH OF STAY

There was no data available on the length of hospital stay between patients treated with anti-vomiting drugs or placebo.

THE FINDINGS

TREATMENT SCENARIO 1

Oral rehydration therapy is recommended as the first choice for preventing the development of dehydration and for the treatment of children with mild or moderate dehydration associated with acute gastroenteritis. The length of stay in hospital is similar to IV therapy but it is less invasive and avoids the possible complications associated with receiving intravenous therapy.

TREATMENT SCENARIO 2

Most children with acute gastroenteritis do not need intravenous rehydration. **Anti-vomiting drugs should be considered the first line adjunct to promote the success of ORT**, especially in children with significant vomiting. Anti-vomiting drugs reduce the need for IV rehydration and the need for hospitalization. Drug of choice is Ondansetron. The use of Dimenhydrinate should be discouraged.

TREATMENT SCENARIO 3

Probiotics appear to reduce the length of stay in children who are hospitalized with gastroenteritis. However, **there is not enough information on the type of probiotics that work best**, as well as how much and for how long the probiotics should be given to support routine use in outpatients.

*** The information presented in this evidence summary is based on:**

Freedman SB, et al. Treatment of Acute Gastroenteritis in Children: An Overview of Systematic Reviews of Interventions Commonly Used in Developed Countries. Evidence-based Child Health: A Cochrane Review Journal 8: 1123-1137 (2013).

This evidence summary was developed by the Alberta Research Centre for Health Evidence (ARCHE). Funding was provided through Translating Emergency Knowledge for Kids (TREKK), and through the Women and Children's Health Research Institute.

Thank you to Dr. Stephen Freedman of the Alberta Children's Hospital Research Institute for his help with clinical content for this document.

TREKK is supported by the Government of Canada through the Networks of Centres of Excellence Knowledge Mobilization Initiative.

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(TREATMENT SCENARIO 2 CONTINUED)



NEED FOR INTRAVENOUS THERAPY

Anti-vomiting drugs lowered the need for IV therapy (even up to 72 hours after discharge) compared with placebo.



ADVERSE EFFECTS

There was some evidence that anti-vomiting drugs cause an increase in diarrhea.

TREATMENT SCENARIO 3

Probiotics vs Placebo



HOSPITAL ADMISSIONS / RE-ADMISSIONS

There was no data available indicating whether there was a difference in hospital admissions or re-admissions between patients treated with probiotics or placebo.



LENGTH OF STAY

Patients receiving a probiotic had a reduced hospital stay of 24 hours compared to those treated with placebo.



NEED FOR INTRAVENOUS THERAPY

There was no data available indicating whether there was a difference in need for IV therapy between patients treated with probiotics or placebo.



ADVERSE EFFECTS

There were no adverse effects reported due to probiotics.

SUMMARY

Oral rehydration should be the first choice to rehydrate children with mild to moderate dehydration.

In most cases intravenous rehydration is not necessary and anti-vomiting drugs can be used to reduce its use. Drug of choice is Ondansetron. The use of Dimenhydrinate should be discouraged.

Not enough is known about probiotics to make firm recommendations in outpatients.