



IV. Recommendations for Further Research

NOROVIRUS PREVENTION AND CONTROL GUIDELINES FOR HEALTHCARE SETTINGS PAGE 7 of 12 $\,$ ALL PAGES $\,$

Guideline for the Prevention and Control of Norovirus Gastroenteritis Outbreaks in Healthcare Settings (2011)

AT A GLANCE

Recommendations for Further Research from the Guideline for the Prevention and Control of Norovirus Gastroenteritis Outbreaks in Healthcare Settings (2011).

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Recommendations

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Recommendations

The literature review for this guideline revealed that many of the studies addressing strategies to prevent norovirus gastroenteritis outbreaks in healthcare facilities were not of sufficient quality to allow firm conclusions regarding the benefit of certain interventions. Future studies of norovirus gastroenteritis prevention in healthcare settings should include:

- 1. Analyses of the impact of specific or bundled infection control interventions,
- 2. Use of controls or comparison groups in both clinical and laboratory trials,
- 3. Comparisons of surrogate and human norovirus strains, focusing on the differences in their survival and persistence after cleaning and disinfection, and compare the natural history of disease in animal models to that in human norovirus infections,
- 4. Assessment of healthcare-focused risk factors (e.g the impact of isolation vs. cohorting practices, duration of isolation, hand hygiene policies during outbreaks of norovirus, etc.)
- 5. Statistically powerful studies able to detect small but significant effects of norovirus infection control strategies or interventions, and
- 6. Quantitative assessments of novel, and practical methods for effective cleaning and disinfection during norovirus outbreaks.

The following are specific areas in need of further research in order to make more precise prevention recommendations (see also recommendations under the category of No recommendation/unresolved issue in the Evidence Review):

Measurement and Case Detection

1. Assess the benefit of using the Kaplan criteria as an early detection tool for outbreaks of norovirus gastroenteritis in healthcare settings and examine whether the Kaplan criteria are differentially predictive of select strains of norovirus.

Host Contagiousness and Transmission

- 1. Determine correlations between prolonged shedding of norovirus after symptoms have subsided and the likelihood of secondary transmission of norovirus infection.

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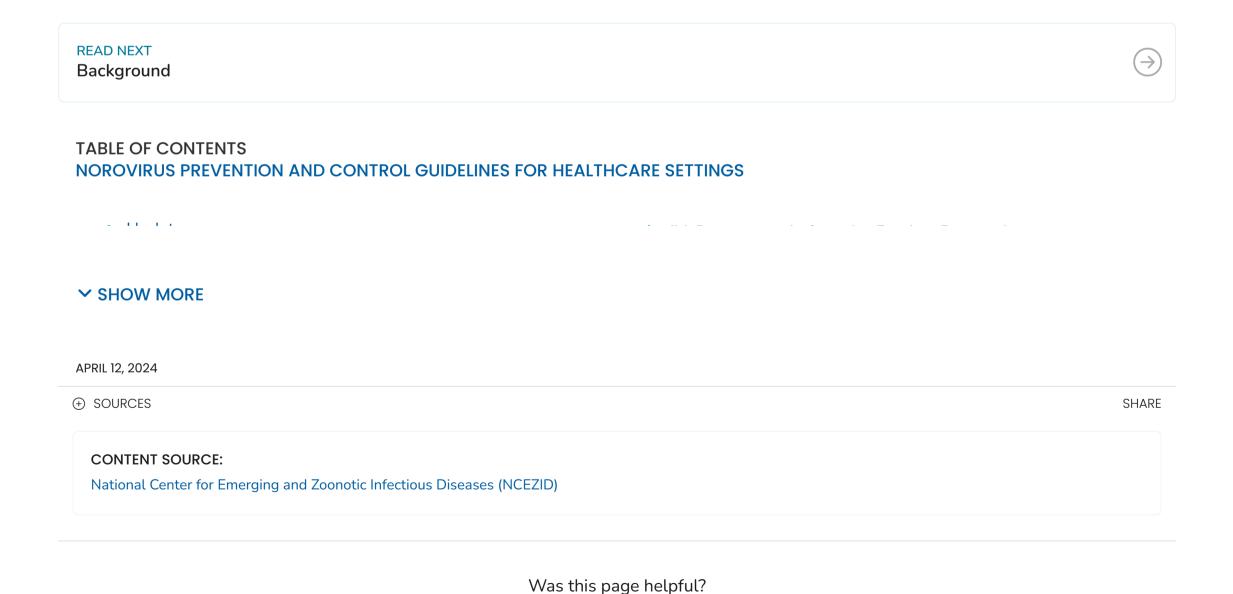
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- 2. Assess the utility of medications that may attenuate the duration and severity of norovirus illness.
- 3. Determine the role of asymptomatic shedding (among recovered persons and carriers) in secondary transmission.
- 4. Evaluate the duration of protective immunity and other protective host factors, including histo-blood group antigens (HBGA) and secretor status.
- 5. Assess the contribution of water or food sources to outbreaks of norovirus gastroenteritis in healthcare settings.

Environmental Issues

- 1. Quantify the effectiveness of cleaning and disinfecting agents against norovirus or appropriate surrogates.
- 2. Evaluate effectiveness and reliability of novel environmental disinfection strategies such as fogging, UV irradiation, vapor-phase hydrogen peroxides, and ozone mists to reduce norovirus contamination.
- 3. Develop methods to evaluate norovirus persistence in the environment, with a focus on persistent infectivity.
- 4. Identify a satisfactory animal model for surrogate testing of norovirus properties and pathogenesis. Translate laboratory findings into practical infection prevention strategies.

Hygiene and Infection Control

- 1. Evaluate the effectiveness of FDA-approved hand sanitizers against norovirus or appropriate surrogates, including viral persistence after treatment with non-alcohol based products.
- 2. Assess the benefits and impact of implementing Universal Gloving practices during outbreaks of norovirus gastroenteritis



Partly

No

Yes

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