

Guideline for the Prevention and Management of Norovirus in Healthcare Settings

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HICPAC Meeting
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Core Norovirus Guideline Working Group

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- Craig Umscheid, CEP, UPHS
- Raj Agarwal, CEP, UPHS
- Gretchen Kuntz, CEP, UPHS
- Kurt Stevenson, HICPAC

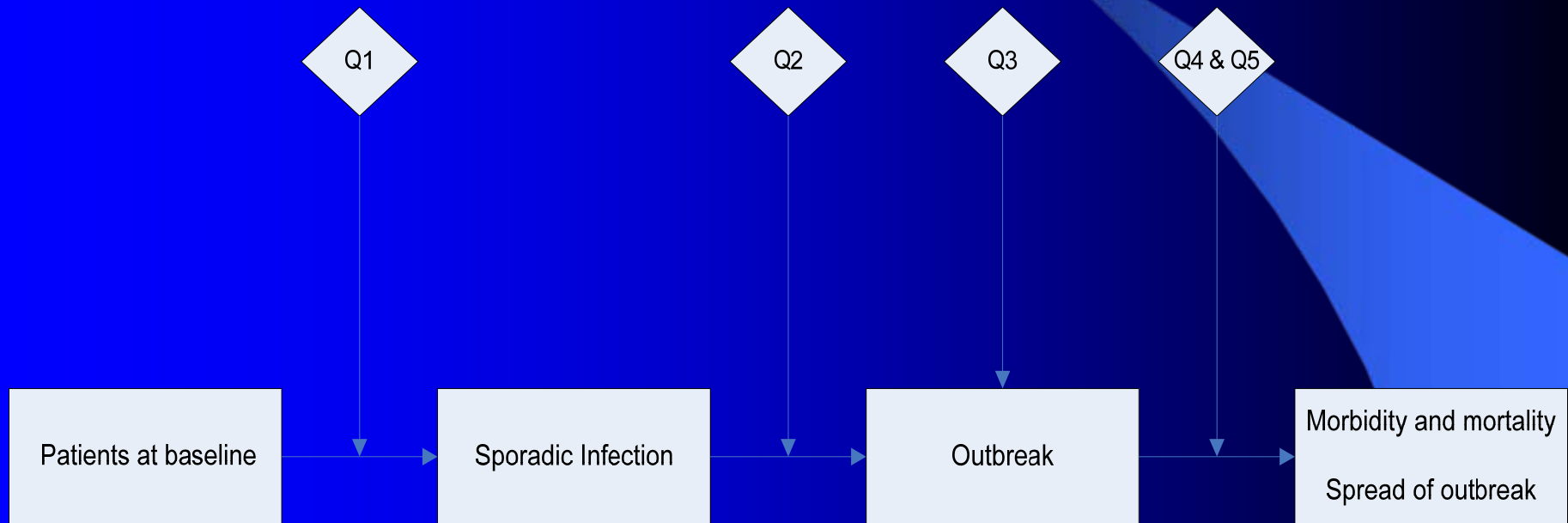
Consulting Experts

- Cliff McDonald, DHQP, CDC
- Marc Alain-Widdowson, NCIRD, CDC

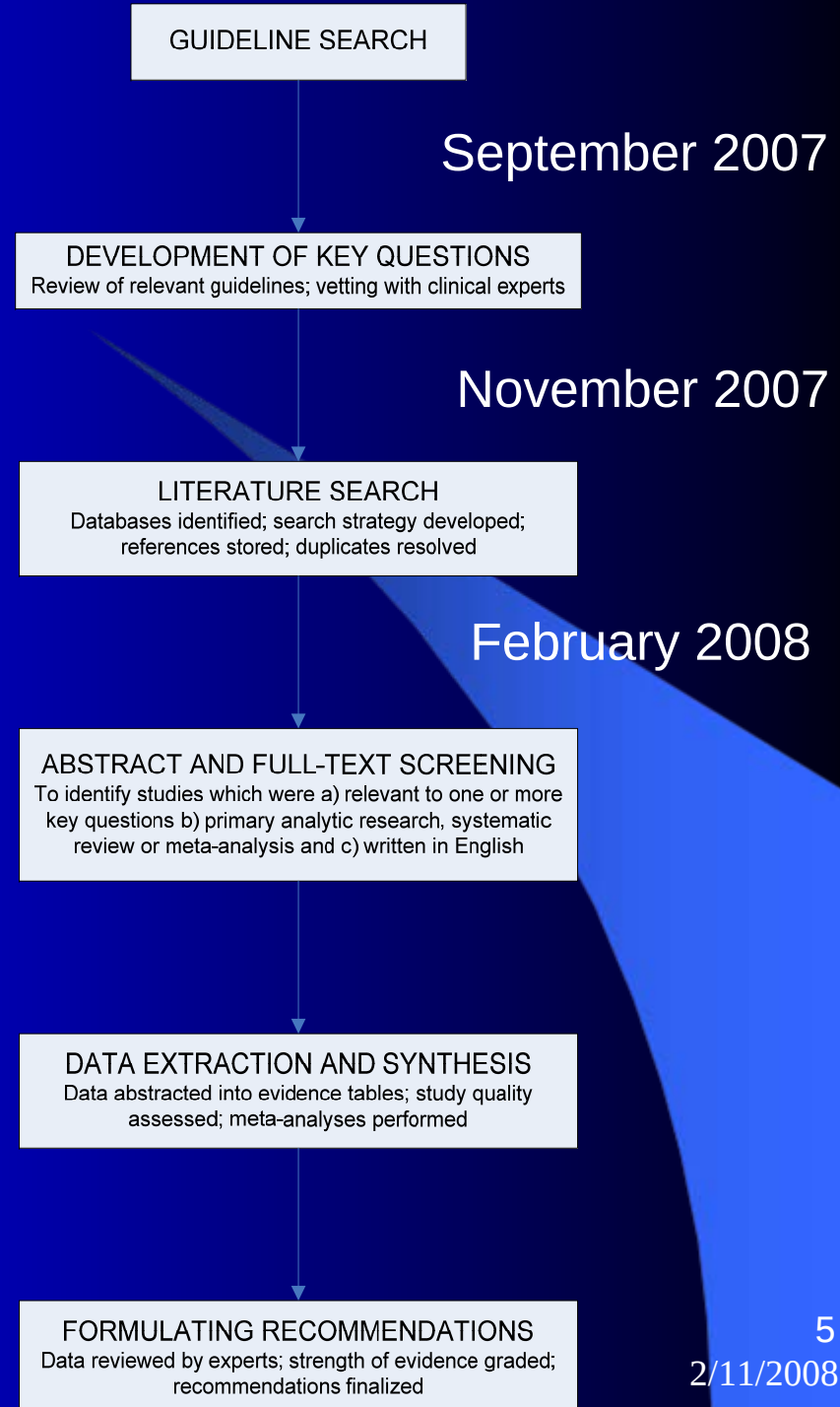
Key Questions

1. What patient characteristics increase or decrease the risk of Norovirus infection in healthcare settings?
2. What practices decrease the risk of a Norovirus outbreak in healthcare settings?
3. What are the best methods to identify a Norovirus outbreak in a healthcare setting?
4. What patient management strategies decrease the spread of Norovirus outbreaks in healthcare settings?
5. What environmental management strategies decrease the spread of Norovirus outbreaks in healthcare settings?

Analytic Framework for Research Questions



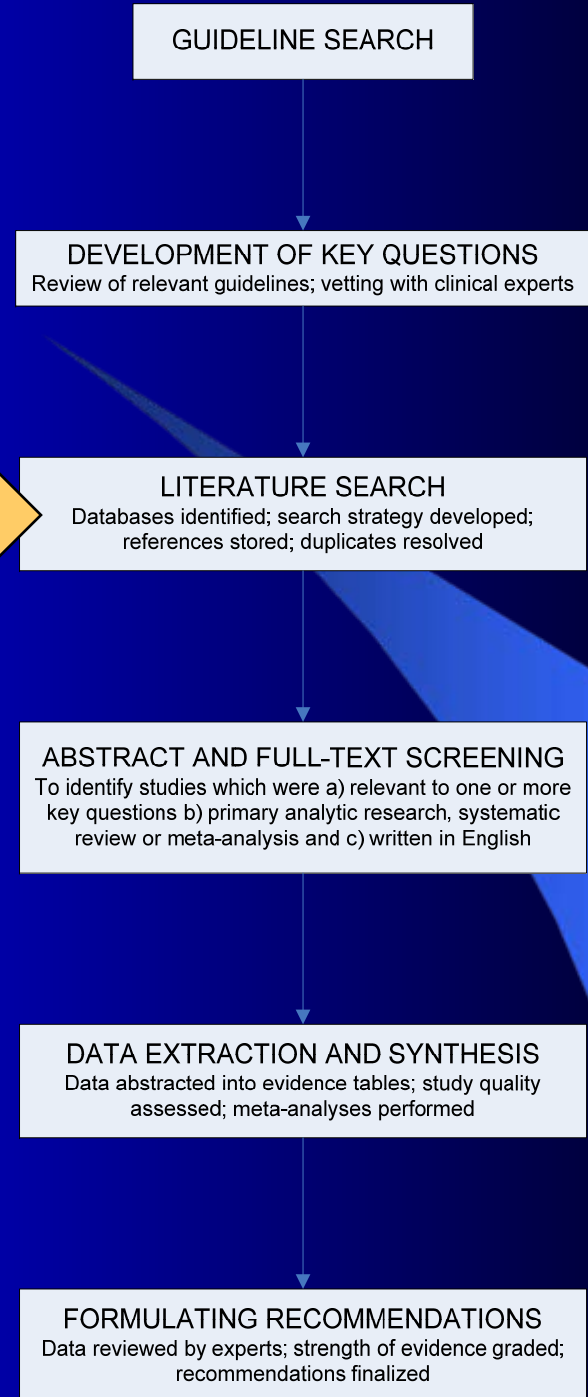
General Guideline Development Process



Current Steps...

- Databases identified
- Search strategy developed
- References stored
- Duplicates resolved

Timeframe: Feb 2008



Sample Search Strategy - Medline

#	Searches	Results
PHASE 1: SEARCH TERMS FOR NOROVIRUS		
1	exp Norovirus/	1257
2	(norovirus\$ or norwalk).mp. [mp=title, original title, abstract, name of substance word, subject heading word]	1773
3	(small round structured virus\$ or SRSV).mp. [mp=title, original title, abstract, name of substance word, subject heading word]	205
4	norwalk-like virus\$.mp.	353
5	winter vomiting disease.mp.	20

Sample Search Strategy (cont.)

PHASE 2: SEARCH TERMS FOR CALICIVIRUS AND RESTRICTED VIRAL GASTROENTERITIS TERMS		
6	exp Caliciviridae/ or exp Calicivirus, Feline/ or calicivirus.mp. or exp Caliciviridae Infections/	2421
7	exp virus diseases/ and exp gastroenteritis/ and (exp disease outbreaks/ or outbreak\$.mp. or exp horizontal disease transmission/ or exp health facilities/)	1112
8	(virus or viral).mp. and exp gastroenteritis/ and (exp disease outbreaks/ or outbreak\$.mp. or exp horizontal disease transmission/ or exp health facilities/)	900
9	((virus or viral) adj5 gastroenterit\$).mp. and (exp disease outbreaks/ or outbreak\$.mp. or exp horizontal disease transmission/ or exp health facilities/)	297
10	(nosocomial adj5 gastroenteritis).mp.	53
11	(epidemic adj5 gastroenteritis).mp.	200
12	(non?bacterial adj5 gastroenteritis).mp.	145
13	exp virus diseases/ and exp diarrhea/ and (exp disease outbreaks/ or outbreak\$.mp. or exp horizontal disease transmission/ or exp health facilities/)	491
14	(virus or viral).mp. and exp diarrhea/ and (exp disease outbreaks/ or outbreak\$.mp. or exp horizontal disease transmission/ or exp health facilities/)	351
15	((virus or viral) adj5 diarrhea).mp. and (exp disease outbreaks/ or outbreak\$.mp. or exp horizontal disease transmission/ or exp health facilities/)	217

Sample Search Strategy (cont.)

PHASE 3: COMBINING PHASES AND APPLYING LIMITS		
16	or/1-15	4160
17	(addresses or bibliography or biography or clinical conference or comment or congresses or consensus development conference or consensus development conference nih or dictionary or directory or duplicate publication or editorial or festschrift or historial article or interview or lectures or legal cases or news or newspaper article or patient education handout).pt.	853201
18	16 not 17	4067
19	limit 18 to (humans and english language)	2324

Summary of Results

Database	Number of Hits*
MEDLINE (1950 to 2008 Week 5)	2324
EMBASE (1980 to 2008 Week 5)	1533
CINAHL (1987 to 2007 Dec Week 1)	160
Global Health (1910 to Dec 2007)	1064
Cochrane Library	33
ISI Web of Science	1463
Total	?

* On 02/07/2008

Exclusion criteria

- Not in English
- Meeting abstract (no full text has been published)
- Not primary analytic research (primary analytic research includes systematic reviews of analytic research, meta-analysis, economic analysis, interventional studies, prospective and retrospective observational studies [cohort, case-control, analytic cross sectional studies])
- Not relevant to one of our key questions
- Full text is published, but is not available for review
- Other

Example of Quality Scales

A. Randomized Controlled Trials

1. Described as randomized
2. Randomization appropriately performed
3. Described as double-blind
4. Outcome assessor blinded
5. Study participant blinded
6. Investigator blinded
7. Attrition described
8. Attrition smaller than 10-15% of assigned patients
9. Attrition appropriately analyzed (i.e. intention-to-treat analysis for superiority studies)

Example of Quality Scales

B. Cohort Studies/Case Control Studies

1. All study groups derived from similar source/reference populations
2. Attrition not significantly different across all study groups
3. The measure of exposure is valid
4. The measure of outcome is valid
5. Investigators blinded to endpoint assessment
6. Potential confounders identified
7. Statistical adjustment for potential confounders performed

Next Steps...

- ❑ Screen titles and abstracts for full text retrieval
- ❑ Retrieve full text for review
- ❑ Review full text for inclusion/exclusion
- ❑ Abstract data into evidence tables

Timeframe: June 2008

