

## Example: Diarrhea Syndrome Management Protocol

### Problem Or Syndrome

Diarrhea

### Causes To Consider

Watery stools - consider noninflammatory gastroenteritis, with causes that more commonly include *Rotavirus*, *Norovirus*, *enterovirus*, or *ETEC*. *Giardia lamblia* stools are particularly frothy or foul-smelling. *Vibrio cholera* stool are exceptionally watery and profuse.

Bloody or mucoid stools – consider inflammatory gastroenteritis (dysentery) with causes that more commonly include *Shigella*, *Salmonella enteritidis*, *Yersinia enterocolitica*, or amebic dysentery (*Entamoeba histolytica*).

### History

Duration and severity of the diarrhea may suggest a particular cause. For example, noninflammatory gastroenteritis is usually short duration and not severe. Diarrhea associated with dysentery is usually more severe and accompanied by systemic symptoms of fatigue, nausea and abdominal pain.

### Physical Examination

Measures of hydration status are most important, since diarrhea most commonly causes death from dehydration and electrolyte loss. Toxicity assessment, temperature, weight, pulse and blood pressure (lying and standing), respiratory rate, eyes and mucus membranes for dehydration, abdominal exam for tenderness & pain

### Laboratory And Imaging (Minimal access to these)

Urine color and/or specific gravity for hydration status

Fresh stool exam for presence fecal leukocytes, fecal ova and/or parasites

### Definitive Diagnostic Criteria

With limited laboratory, definitive diagnosis of a causative organism is rarely possible. However, categorization of the diarrheal illness into either gastroenteritis or dysentery is extremely useful to guide appropriate management.

### Treatment

Restoration of hydration status is the mainstay of diarrheal treatment. This can almost always be accomplished via Oral Rehydration Solution alone. The presence of persistent vomiting or decreased mental status may prompt appropriate use of intravenous hydration.

Antibiotics are rarely indicated in the treatment of gastroenteritis, with the exception of cholera. Metronidazole or tinidazole are indicated for *Giardia lamblia*. Antibiotic therapy for dysentery must be reserved for those patients who are more toxic and whose recovery is slower than expected.

### **Prevention**

Principles include improved hand washing and general personal hygiene, breastfeeding and proper weaning, reduction of the fly population, provision of safe drinking water, improved sanitation through the use of latrines and sanitation systems.

Assurance of safe drinking water can be provided by a variety of means, including: protected wells and springs, sand dams, bio-sand filters, portable water treatment systems, disinfection systems that utilize filtration, UV light and/or chlorine dosing.