Assessment and management of diarrhoea

When working with patients with challenging and potentially life-threatening conditions, it is essential to design a plan of care that ensures all their complex needs are met. A number of resources give guidance for health professionals to address the needs of patients with gastroenterology problems (World Gastroenterology Organisation, 2012), and infection prevention and control documents provide guidance for the management of infectious diarrhoea (Department of Health, 2009).

The need for practical guidance in diarrhoea management was highlighted at a Royal College of Nursing infection prevention conference in 2010 and confirmed in surveys of nursing groups at directors of nursing and student nurses’ conferences. Danone Health Affairs has provided unrestricted educational grants to develop and publish the guidelines, which were launched at the 2013 RCN Infection Prevention Conference (RCN, 2013), and to develop the Nursing Times Learning unit, which launches this week.

Causes of diarrhoea

Although almost everyone experiences diarrhoea at some time, it can particularly affect morbidity and mortality in vulnerable groups, such as the very old or young, and is a symptom of an underlying pathology.

When patients say they have diarrhoea nurses must be sure they are correct in their diagnosis. Some may report diarrhoea when they have increased stool liquidity only. Diarrhoea is defined in terms of frequency, consistency and either weight or volume of faeces – a stool or liquid stool frequency of more than three times per day and weighing more than 200g in total is classed as diarrhoea (Forbes, 2003).

The condition is categorised as acute onset or chronic. Acute diarrhoea lasts for fewer than four weeks; if symptoms continue for longer it is chronic (WGO, 2012). This cut-off point is important in terms of the approach to management.

Anatomy and physiology

It is helpful to understand the processes involved in normal digestion in order to fully understand how malfunction can lead to diarrhoea symptoms (Fig 1).

Types of diarrhoea

Diarrhoea is a broad term and the type depends on the cause and exact symptoms. Management plans depend on the type of diarrhoea patients have (Table 1).

Osmotic diarrhoea

Osmotic diarrhoea occurs when too much water is drawn into the bowel by osmosis, for example when a non-absorbable substance, such as a laxative, has been ingested. Large amounts of artificial sweeteners containing sorbitol can also cause osmotic diarrhoea. This type of diarrhoea can also be the result of generalised malabsorption, as in coeliac disease and pancreatic insufficiency. The symptoms resolve when the patient stops eating or the substance is discontinued.

Tip Osmotic diarrhoea may be suspected if it stops when the patient fasts.

Secretory diarrhoea

Secretory diarrhoea occurs when there are increased intestinal secretions of fluid and electrolytes and decreased absorption. Causes include abnormal mediators such as enterotoxins (for example cholera, E coli, C difficile) and neurohormonal agents (for example vasoactive intestinal peptide in Verner-Morrison syndrome), bile salts in the colon following ileal resection, and some laxatives.

Tip Secretory diarrhoea continues even when the patient is fasting (Kumar and Clarke, 2012).
Inflammatory diarrhoea
This is caused by damage to the intestinal mucosal cells leading to a loss of fluid and blood, and defective absorption of fluid and electrolytes. Common causes include infective conditions such as dysentery due to shigella, and inflammatory conditions for example ulcerative colitis, Crohn’s disease and coeliac disease.

Tip Patients with inflammatory diarrhoea often have nocturnal symptoms

Abnormal gut motility
Diabetic and hyperthyroid diarrhoea are due to abnormal motility of the gut. In many of these cases, the volume and weight of the stool is not particularly high, but frequency of defecation is increased.

Assessment
A thorough assessment will establish the most appropriate treatment for each patient. It will also aid decisions about isolation and the need for stool collection. Both the RCN guidelines and the Nursing Times Learning unit include an assessment tool to aid this process.

The first question nurses should ask is if the patient is presenting with a new onset of diarrhoea. The Bristol Stool Chart (tinyurl.com/stoolchart) is a useful aid to support in identification. Patients should also be asked about incontinence and urgency and nurses should be aware that patients may believe they have diarrhoea when they actually have a disorder of continence. They may be reluctant to talk about incontinence so it is important to ask about it during the assessment.

Tip People with functional bowel disease, such as irritable bowel syndrome, rarely have nocturnal disturbances. Those with organic disease will usually have nocturnal symptoms.

![GI TRACT WITH DIGESTION PROCESSES](image)

Patient assessment should determine duration, frequency, pattern and severity of symptoms. Nurses should ask about stool characteristics, such as whether it is watery, bloody or fatty. Fatty stools tend to float in the toilet and may be difficult to flush, and may present with a foul smell.

Clinical Assessment
The Royal College of Physicians (2012) recommends using the national early warning score (NEWS) during clinical assessment. This gives a score to physiological measurements of six parameters:

- Respiratory rate;
- Oxygen saturation;
- Temperature;
- Systolic blood pressure;
- Pulse rate;
- Level of consciousness.

The score indicates whether an urgent medical referral is required.

The malnutrition universal screening tool (MUST) is useful to assess rehydration and nutrition requirements (Todorovic et al, 2003).

Examination
The presence or absence of abdominal pain and the type of pain should be evaluated. Pain is often present in inflammatory bowel disease (IBD), irritable bowel syndrome (IBS) and ischaemic colitis. Abdominal bloating may accompany pain.

Abdominal inspection and examination is only useful if the nurse undertaking it has the clinical skills to do so. It may reveal abdominal distension, an abdominal mass or tenderness over a particular part of the bowel. The nature of the pain is important, as well as a pain score.

Rectal bleeding may indicate a more substantial and clinically important pathology. Digital rectal examination (DRE) is a useful assessment tool but should only be carried out by nurses who have been assessed as competent to do so (RCN, 2012). It can establish the presence of faecal matter in the rectum, the amount and consistency, and enable assessment of anal pathology. Examination of the perianal region can reveal the following:

- Haemorrhoids;
- Anal fissure;
- Anal skin tags;
- Rectal loading;
- Wounds – dressings and discharge;

Identifying the cause of diarrhoea
Once severity has been assessed and action taken to stabilise the patient’s medical condition, assessment should continue by identifying the underlying cause. The following prompts may be useful:

- Could any predisposing factors have

### TABLE 1. CLASSIFICATIONS OF DIARRHOEA

<table>
<thead>
<tr>
<th>Common</th>
<th>Uncommon</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gastroenteritis viral (rotavirus)</td>
<td>Coeliac disease</td>
<td>Autonomic neuropathy</td>
</tr>
<tr>
<td>Bacterial (salmonella, campylobacter)</td>
<td>Hypogammaglobulinemia</td>
<td>Tropical sprue</td>
</tr>
<tr>
<td>Parasitic (Giardia lamblia)</td>
<td>Bacterial overgrowth</td>
<td>Ischaemic colitis</td>
</tr>
<tr>
<td>Toxin (E coli, shigella)</td>
<td>Microscopic colitis</td>
<td>Whipple’s disease</td>
</tr>
<tr>
<td>Irritable bowel syndrome</td>
<td>Chronic pancreatitis</td>
<td>Collagenous colitis</td>
</tr>
<tr>
<td>Drugs (many)</td>
<td>Thyrotoxicosis</td>
<td>Addison’s disease</td>
</tr>
<tr>
<td>Alcohol</td>
<td>Pseudomembranous colitis</td>
<td>Hyppoparathyroidism</td>
</tr>
<tr>
<td>Colorectal cancer</td>
<td>Laxative abuse</td>
<td>Amyloidosis</td>
</tr>
<tr>
<td>Irritable bowel disease</td>
<td>Food allergy</td>
<td>Behcet’s disease</td>
</tr>
<tr>
<td>Hypolactasia</td>
<td>ileal/gastric resection</td>
<td>Gastrinoma</td>
</tr>
<tr>
<td></td>
<td>NSAID enteropathy</td>
<td>Zinc deficiency</td>
</tr>
</tbody>
</table>

Source: Royal College of Nursing (2013)
caused an enteric infection? These could include *C difficile* or norovirus.
» Could any pre-disposing medical conditions account for the diarrhoea?
» Is there a history of gastrointestinal surgery?
» Is there a history of recent travel? This could indicate that the cause may be of an infective origin or due to exposure to potentially contaminated food.
» Has there been any alcohol intake in the previous 24 hours?
» Is there any laxative use (including treatment of hepatic encephalopathy using osmotic laxatives)?
» Is the patient taking oral iron?
» Is the patient diabetic and taking metformin?
» Is the patient taking any antibiotics? These can cause diarrhoea by changing the levels of microbiota in the bowel.
» What is the patient’s dietary history?
» Nasogastric feeding and use of dietary agents, such as sorbitol, can affect bowel movements. Nurses should also be aware of potential food poisoning.

At this point, a discreet enquiry about sexual history may be necessary. Anal intercourse may be a cause of proctitis as well as increasing the risk of sexually transmitted diseases.

Nurses should also keep in mind that constipation can present as diarrhoea. This “overflow diarrhoea” is common in frail older people and those with neurogenic bowel dysfunction, and may be misdiagnosed as diarrhoea and therefore treated incorrectly (Harari, 2004).

Management
Appropriate treatment and management of diarrhoea have been demonstrated to reduce its duration, which then reduces the likelihood of dehydration and its complications (RCN, 2013). Using the RCN’s Principles of Nursing Practice (2010), it is possible to design care plans tailored to individual needs, which reduce risks and improve patient outcomes and experience.

The importance of identifying whether a patient actually has diarrhoea is crucial and nurses should consider this before designing care plans (RCN, 2013). Drug therapy, diet and lifestyle choices can all affect episodes of diarrhoea and it is vital that the cause is taken into consideration when management is being planned.

Diarrhoea can be difficult to talk about, and patients may withhold details due to embarrassment. Nurses should aim to remove embarrassment as much as possible to keep care person-centred and ultimately to improve patient outcomes and experiences of care (RCN, 2013). Responsive care and thoughtful planning is essential and, as diarrhoea is a distressing condition, attributes most valued by patients, such as kindness, empathy and the ability to communicate, availability of facilities and confidence-boosting are important.

Diet, hydration and elimination issues, coping with the stresses of life, reduction in mobility and support networks, changes in health and mental state all affect how people cope with diarrhoea. These need to be considered when planning care and the importance of sharing information with the person, their carers and relatives.

Conclusion
Diarrhoea not only affects individual patients but also causes wider problems when outbreaks of infection are suspected or confirmed. Significant problems are created when wards have limited toilet and isolation facilities, and when community settings have limited support to deal with an outbreak of diarrhoea.

Providing dignified and compassionate care while promoting high-quality professional care standards is challenging. Tools such as the RCN guidance and Nursing Times Learning unit should help nurses to achieve this. NT

References

TEST YOUR KNOWLEDGE
Do you know how to assess and care for patients with diarrhoea? Check your knowledge and apply your learning to practice by taking our FREE learning unit at nursingtimes.net/diarrhoea

Gain a score of 70% or more and receive a personalised certificate to download and store in your professional portfolio.

The unit counts as 2 hours’ CPD, and you will have the option to undertake additional written work.