Diarrhoea Procedures

This information is intended to give guidance for vets and CP staff and volunteers in the treatment of a CP cat with diarrhoea.

In the shelter environment acute (sudden onset) diarrhoea is often caused by stress, but dietary indiscretion, a change in diet and overfeeding are also common causes.

Consideration should also be given to infectious causes of diarrhoea such as round- or tapeworms, protozoa such as Coccidia and Giardia, viral causes such as feline parvovirus and bacterial causes such as Salmonella and Campylobacter. Infectious diarrhoea may be the result of an existing infectious disease or a reactivated infectious disease due to stress-induced immunosuppression.

Some of the infectious causes of diarrhoea are zoonotic, so particular attention to hygiene for these cats should be made with the implication of barrier nursing and appropriate infectious waste disposal where necessary.

Other causes of diarrhoea, some of which may lead to more chronic disease include, but are not limited to, food allergies, inflammatory bowel disease, neoplasia, disorders of the pancreas, kidney disease, liver disease, hyperthyroidism, drug reactions and FIV/FeLV.

1. CP staff and volunteer guidelines

If an otherwise healthy cat has 3 consecutive episodes of diarrhoea (faeces are grade 2 or below as defined by Figure 1: CP Faeces Grading Chart), monitor the cat closely and start the Diarrhoea Monitoring Chart (Figure 2). When using the Diarrhoea Monitoring Chart there is no need to also record observations on the standard CP observation chart.

1.1 Criteria for when to contact the vet:

a. The cat is unwell
   - The cat is showing other signs of illness e.g. vomiting, coughing, sneezing
   - The cat is depressed
   - The cat is very underweight
   - The cat has no appetite
b. The cat is on medication for another condition or has another condition

c. The cat is on a special diet for reasons other than a sensitive stomach or obesity
d. The cat is under 8 weeks old

1.2 CP diarrhoea management protocol for weaned cats and kittens

Please refer to Figure 3: Diarrhoea Flow Chart

a. Give 5 days Panacur at 50 mg/kg (If using paste, dose is 1 graduation per kg. Check dosing with the vet). Still give this 5 day course if the cat
has had Panacur as part of routine deworming. If the cat is in the middle of a 3 day course of treatment, extend it to 5 days.

b. Give up to 7 days Yudigest – ½ sachet daily for adults, a ‘pinch’ daily for kittens (mix into the food well).
c. Feed 3 small meals a day of a wet or dry commercial intestinal (sensitivity-type) diet as per manufacturer’s recommendations and cat preference.

One of the following commercial diets should be chosen:
- Purina Proplan EN gastrointestinal (suitable for kittens)
- Hills i/d (provides complete balanced nutrition for adult cats and for growing kittens and is suitable for long term feeding)
- Royal Canin Sensitivity Control

Record all observations on Figure 2: Diarrhoea Monitoring Chart. The vet will need this information if the cat does not respond to this initial stage of diarrhoea management.

1.3 How to wean back to normal food after the diarrhoea improves

Day 1: Feed ¾ intestinal diet, ¼ normal
Day 2 & 3: Feed ½ intestinal diet, ½ normal
Day 4 & 5: Feed ¼ intestinal diet, ¾ normal
Day 6: Feed normal food and normal number of meals

If no improvement is seen after 5 days or, if at any time, the cat meets any of the criteria in Section 1.1, please ensure the cat is seen by the vet.

Continue using the diarrhoea monitoring chart until the cat sees the vet.

Bring a fresh faecal sample or a photo of the faeces to the exam as well as the Diarrhoea Monitoring Chart.

If the vet does faecal testing and a potentially zoonotic agent is identified, consult the table in Figure 4: Managing Common Feline Diarrhoeal Agents in Cats in CP Care – FOR VETS to see whether the new owner should be provided with a handout.

2. Vet guidelines

2.1 CP staff or volunteers will present a cat with diarrhoea to you if:

1. It is also unwell
2. It is otherwise well, but is on medication for another condition/has another condition or is on a special diet for reasons other than a sensitive stomach or obesity or is under 8 weeks old
3. It has been otherwise well and has been managed for 5 days via the CP diarrhoea management protocol, but hasn’t responded to the treatment i.e. it still has diarrhoea.

The CP diarrhoea protocol is:
1. Five day treatment with Panacur,
2. Five to seven day treatment with Yudigest
3. Feeding a commercial intestinal diet
4. Monitoring using the diarrhoea monitoring chart
4. The diarrhoea resolved with the CP diarrhoea protocol, but it relapsed on weaning back to normal food.

When a cat is presented to you at this stage, staff or volunteers should also provide you with a recent photo or a sample of the cat’s faeces and the completed diarrhoea monitoring chart.

2.2 Diagnostics

When presented with a diarrhoeic cat, please carry out a full clinical exam and on the basis of this decide if targeted diagnostic testing is warranted.

Approximately 90% of acute diarrhoea is self-limiting and therefore it is often appropriate to treat these cases symptomatically, reserving diagnostic work-ups for cats that relapse, are systemically unwell or are suffering from chronic diarrhoea.

If an infectious cause is suspected, barrier nursing should be implemented if this has not already been done. Staff and/or volunteers should be made aware of the risks of zoonotic disease and the approach needed when handling the affected cat, food bowls and litter trays.

Please use Figure 4: Managing Common Feline Diarrhoeal Agents in Cats in CP Care – FOR VETS for guidance on diagnostics for infectious agents.

2.3 Treatment

Approximately 90% of acute diarrhoea is self-limiting and it is therefore often appropriate to treat these cases symptomatically.

If an infectious agent is suspected or has been identified by laboratory testing, Figure 4: Managing Common Feline Diarrhoeal Agents in Cats in CP Care – FOR VETS can be used to guide approach to treatment that is targeted to the infectious agent in question.

If an infectious agent has been identified by diagnostic testing and the treatment has been successful, please do not perform post-treatment testing as it is not indicated at this stage. This includes potentially zoonotic agents that may have been identified. In these cases, CP will advise the owner of the relative risks and provide a handout on zoonotic disease.

If you require further guidance on acute, chronic or non-responsive diarrhoea, please contact the Veterinary Department.
<table>
<thead>
<tr>
<th>Grade 1</th>
<th>Liquid, watery faeces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 2</td>
<td>Mostly unformed stools; watery faeces with lumps</td>
</tr>
<tr>
<td>Grade 3</td>
<td>Approximately 50% formed stools in softer stools</td>
</tr>
<tr>
<td>Grade 4</td>
<td>Mostly formed stools with a very small amount of softer stool</td>
</tr>
<tr>
<td>Grade 5</td>
<td>All firm, well-formed stools</td>
</tr>
<tr>
<td>Grade 6</td>
<td>Small, very hard faecal pellets</td>
</tr>
</tbody>
</table>
**Figure 2: DIARRHOEA MONITORING CHART**

- Start this chart after 3 episodes of Grade 1 or 2 faeces are noted. Use 1 chart per litter of kittens in a pen.
- If the cat is on medication or a prescription diet then please ensure the cat is seen by your vet.
- If the cat becomes unwell such as decreasing appetite, vomiting, diarrhoea worsening, then please ensure the cat is seen by your vet.
- Please note that the grey boxes in the table means no entry needs to be

<table>
<thead>
<tr>
<th>Day</th>
<th>Colour</th>
<th>Blood or Mucus (B/M)</th>
<th>Grade (1-6)</th>
<th>Frequency per/day</th>
<th>Weight (kg)</th>
<th>Name of food offered + state wet or dry</th>
<th>Eaten (Y/N)</th>
<th>Drinking (approx. mls/day)*</th>
<th>Vomiting (Y/N)</th>
<th>Panacur Given (Y/N)</th>
<th>Yudigest given (Y/N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*A standard CP water bowl holds 300 ml*
Figure 3: Diarrhoea Flow Chart

- If at any time a cat seems unwell e.g. off food, vomiting, losing weight ensure the cat is seen by a vet - see section 1.1 of the diarrhoea protocol for more details
- If at any point you are suspicious of spread between pens of cats, isolate those affected, start barrier nursing and consult your vet.

Cat Unwell – off food, Vomiting
- Start diarrhoea monitoring chart but do not change diet or start panacur without veterinary advice
  - And
  - Ensure cat is seen by vet with faecal sample and/or photo of faeces

3 episodes diarrhoea - Grade 1 or 2
- Any of the following apply:
  - Cat < 8 wks old
  - On special diet
  - On medication or has underlying condition

Cat well and eating
- Start diarrhoea monitoring chart
- 5 days panacur (50mg/kg)
- Commercial Intestinal diet (3 small meals daily)
- Yudigest
- Follow standard vaccination protocol.

Still has diarrhoea on day 5

Diarrhoea reoccurs

Diarrhoea resolving grade 3 or above on day 5
- Wean on to normal diet over 5 days
- Faeces grade 3 or above
- Continue standard homing process

Diarrhoea reoccurs

Faeces grade 3 or above
- Continue standard homing process

Ensure cat is seen by vet with faecal sample and/or photo of faeces
Points to remember:

It is understood that a confirmed diagnosis will not always be sought for diarrhoea in a shelter cat.

The following table (Figure 4) is designed to help with the management of diarrhoea cases in CP cats where a laboratory diagnosis has been obtained or in some cases where there is a strong suspicion of the presence of a specific causative agent.

If an infectious agent has been identified by diagnostic testing and the treatment has been successful, please do not perform post-treatment testing as it is not indicated at this stage. This includes potentially zoonotic agents that may have been identified. In these cases, CP will advise the owner of the relative risks and provide a handout on zoonotic disease.

The CP zoonotic diarrhoea handout should only be used if diagnosis of the specific agent has been confirmed by laboratory testing.
**Figure 4: Managing Common Feline Diarrhoeal Agents in Cats in CP Care – FOR VETS**

- It is understood that a confirmed diagnosis will not always be sought for diarrhoea in a shelter cat.
- The table below is designed to help with the management of diarrhoea cases in CP cats where a laboratory diagnosis has been obtained or in some cases where there is a strong suspicion of the presence of a specific causative agent.

* The CP zoonotic diarrhoea handout should only be used if diagnosis of the specific agent has been confirmed by laboratory testing.

<table>
<thead>
<tr>
<th>Agent</th>
<th>Incubation/pre-patent period</th>
<th>Shedding pattern</th>
<th>Environmental control</th>
<th>Diagnosis</th>
<th>Specific treatment indicated?</th>
<th>Likelihood of transmission to people</th>
<th>Home with CP zoonotic diarrhoea handout?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cryptosporidium spp. (coccidia) usually C. felis</td>
<td>Shed infective oocysts 3-6 days after infection.</td>
<td>Intermittent</td>
<td>Resistant to bleach. Clean bowls and trays with boiling water.</td>
<td>Faecal smear with Giemsa or modified Ziehl-Neelsen stain. Avoid faecal ELISA, PCR.</td>
<td>Not usually, is often secondary to other agents.</td>
<td>Very low risk as most cats infected with C. felis. (C. parvum is the zoonotic species)</td>
<td>YES</td>
</tr>
<tr>
<td>Isospora spp. (coccidia) I. rivolta and I. felis</td>
<td>Prepatent period 4–11 days depending on species.</td>
<td>Intermittent. Can be asymptomatic. Can be shed for up to 9 weeks after treatment.</td>
<td>Resistant. Cysts infectious 8–36 hours and requires humidity and temperatures of 20–37°C. Frequent litter tray changes. Clean infected cats’ coat/perineum.</td>
<td>ZnSO₄ faecal flotation test. May also be diagnosed on direct examination of a faecal smear. If significant will see high levels.</td>
<td>Sometimes. Is usually self-limiting. Treat if clinical signs warrant or to manage potential spread within an establishment. Sulfadimethoxine 50 mg/kg orally q24h for 10–14 days or Trimethoprim/sulphonamide 15 mg/kg orally q24h for 10–14 days</td>
<td>Not zoonotic</td>
<td>NO</td>
</tr>
</tbody>
</table>

8 Diarrhoea Procedures – October 2017
<table>
<thead>
<tr>
<th>Agent</th>
<th>Incubation/pre-patent period</th>
<th>Shedding pattern</th>
<th>Environmental control</th>
<th>Diagnosis</th>
<th>Specific treatment indicated?</th>
<th>Likelihood of transmission to people</th>
<th>Home with CP zoonotic diarrhoea handout?*</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Toxoplasma gondii</em>  (coccidia)</td>
<td>Shed 3 days after infection. Oocysts infective 24 hr after passed.</td>
<td>Continuous, shed for up to 20 days</td>
<td>Oocysts survive in soil and water 18 months Use boiling water, iodine, bleach.</td>
<td>Rare to find oocyst in faeces. Serology used for clinical cases</td>
<td>Rarely causes diarrhoea in the cat, treat only if systemic infection</td>
<td>Low, only shed oocysts in faces at 1st infection, for limited time</td>
<td>YES</td>
</tr>
<tr>
<td>Giardia spp. Usually <em>G. duodenalis</em> assemblage F in cats</td>
<td>Shed infective cysts 3–25 days (usually 7–10 days) after infection. Cysts immediately infective.</td>
<td>Intermittent</td>
<td>QAC or 1:32 bleach. Allow surfaces to dry</td>
<td>First choice is microscopic examination - direct faecal smear for trophozoites; ZnSo4 faecal centrifugation for cysts Avoid faecal Ag tests, e.g. ELISA</td>
<td>Yes Oral fenbendazole 50mg/kg q24h, 5-7 days +/- metronidazole 25 mg/kg orally q12h for 7 days</td>
<td>Debatable – people usually infected with assemblages A and B. Some cats are infected with assemblage A</td>
<td>YES</td>
</tr>
<tr>
<td><em>Tritrichomonas foetus</em></td>
<td>8–10 days</td>
<td>Intermittent</td>
<td>Only survives 2 hr in environment. Routine hygiene</td>
<td>Direct faecal smear if fresh (&lt;2 hr) sample, faecal culture, faecal PCR</td>
<td>Yes Oral fenbendazole 50 mg/kg q24h for 5 days + metronidazole orally 10 mg/kg q12h for 14 days or Ronidazole 30–50 mg/kg q24h for 2 weeks. <strong>Not licensed.</strong> Use lower dose and q12h in kittens.</td>
<td>Low, mainly only in immunosuppressed person</td>
<td>NO</td>
</tr>
<tr>
<td>Agent</td>
<td>Incubation/pre-patent period</td>
<td>Shedding pattern</td>
<td>Environmental control</td>
<td>Diagnosis</td>
<td>Specific treatment indicated?</td>
<td>Likelihood of transmission to people</td>
<td>Home with CP zoonotic diarrhoea handout?*</td>
</tr>
<tr>
<td>-------</td>
<td>-----------------------------</td>
<td>-----------------</td>
<td>-----------------------</td>
<td>-----------</td>
<td>-------------------------------</td>
<td>--------------------------------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>Roundworm Toxocara cati, Toxascaris leonina</td>
<td><em>T. cati</em> approx. 6 weeks; <em>T. leonina</em> 13 weeks</td>
<td>Survives &gt; 1 yr in environment. Can use extreme temperatures, dessication and UV light to control.</td>
<td>Faecal flotation</td>
<td>Yes Pyrantel 20 mg/kg orally, repeated after 3 weeks or, Fenbendazole 50 mg/kg orally q24h for 3 days or, Selamectin 6 mg/kg topically monthly or, Moxidectin minimum dose 0.1 mg/kg topically monthly or, Milbemycin minimum 2 mg/kg orally, single dose</td>
<td>Low to medium depending on degree of de-worming prophylaxis</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>Hookworm Ancylostoma tubaeforme</td>
<td>15-17 days</td>
<td>As for roundworms</td>
<td>Faecal flotation</td>
<td>Yes Fenbendazole 50 mg/kg orally q24h for 3 days or a single dose of 100 mg/kg orally or, Pyrantel 10 mg/kg orally single dose or, Selamectin or, Moxidectin or, Milbemycin as per roundworm</td>
<td>Very low as the agent is very rarely found in UK cats</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>Agent</td>
<td>Incubation/pre-patent period</td>
<td>Shedding pattern</td>
<td>Environmental control</td>
<td>Diagnosis</td>
<td>Specific treatment indicated?</td>
<td>Likelihood of transmission to people</td>
<td>Home with CP zoonotic diarrhoea handout?*</td>
</tr>
<tr>
<td>----------------------</td>
<td>-----------------------------</td>
<td>------------------</td>
<td>----------------------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>-------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td><em>Escherichia coli</em></td>
<td></td>
<td>Continuous</td>
<td>Usually survives a week. Use QAC, inorganic peroxygen or bleach</td>
<td>Culture plus determination of virulence (biochemical assays or PCR)</td>
<td>Only if severe clinical signs, no other pathogens and signs of systemic involvement</td>
<td>Depends on the strain</td>
<td>YES</td>
</tr>
<tr>
<td>Various strains, not all are zoonotic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Salmonella spp.</em></td>
<td></td>
<td>Continuous</td>
<td>Use bleach or QAC</td>
<td>Culture</td>
<td>Only if systemic infection</td>
<td>Low, transmission to people from cats is rarely documented</td>
<td>YES</td>
</tr>
<tr>
<td>Various serovars, not all are zoonotic <em>S. typhimurium</em> most common</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Clostridium difficile</em></td>
<td></td>
<td>Continuous</td>
<td>Spores last long time. Use 1:10 bleach</td>
<td>Culture plus faecal ELISA for toxin A and B</td>
<td>Only if ill (most cats that test positive are not ill)</td>
<td>Very low, theoretically possible, but not proven</td>
<td>NO</td>
</tr>
<tr>
<td><em>Campylobacter spp.</em></td>
<td></td>
<td>Continuous</td>
<td>Relatively hardy. Survives well in water, faeces, resists freezing. Use QAC, bleach or inorganic peroxygen</td>
<td>S-shaped organisms in faecal smear and culture</td>
<td>If mild signs, treatment may not be necessary, use antibiotics with caution</td>
<td>Medium, infective dose for people is low, <em>C. jejuni</em> is zoonotic species</td>
<td>YES</td>
</tr>
<tr>
<td>Usually <em>C. upsaliensis</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>