Assessment, and management of CINV and education to the child and family

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Importance

* **Adequate control** of chemotherapy-induced emesis is crucial, because if left untreated it can lead to *electrolyte imbalance, dehydration, poor nutrition, prolonged hospitalization, significantly decreased compliance* in subsequent chemotherapy cycles and reduced quality of life.

* It is much more difficult to prevent and control *nausea* than vomiting.

* **Prevention** of CINV is strongly correlated with *better control* of nausea, which occurs more often than vomiting.
Effective assessment of CINV

Effective management
Assessment of and communication with the patient were major topics of discussion.

Patient assessment is a primary responsibility of oncology nurses, and an accurate assessment of patient response to medication and the occurrence of adverse events is a foundation for better patient outcomes.

Participants discussed the importance of an accurate assessment and communicating that assessment to the oncologist in the most concise and timely fashion.

A careful initial patient history can identify risk factors for CINV and may suggest a more or less aggressive approach depending on the chemotherapy regimen being used.
An assessment of current concomitant medications also is critical, and patients should be asked to bring in their medications because recall may not be accurate.

If this is not recorded properly the first time, the error often is perpetuated and may lead to issues down the line.

It was stated that the “brown bag approach” is the best way to ensure that such errors and issues are avoided. The patient is simply asked to bring in all their medications in a brown paper bag.
Assessment of CINV

- The Expert Group emphasized the importance of comprehensive patient assessment with proactive questioning about potential CINV risk factors, to be conducted before chemotherapy cycle 1 and then again before each subsequent cycle.

- Information from this assessment in combination with the published emetogenicity of the specific chemotherapy regimen, should be used to tailor the individual patient’s CINV management.
Reliance solely on the emetogenicity of the chemotherapy regimen without taking account of individual patient factors such as age, sex, previous experience of nausea/vomiting, and history of CINV can result in an underestimation of the level of CINV risk, and hence inadequate provision of prophylaxis.

The group suggested that nurses may often be better placed than doctors to assess the patients’ risk factors for CINV, because they frequently conduct a holistic assessment prior to chemotherapy and may have more frequent contact with individual patients.
Assessment of CINV risks should include patient factors as well as the recorded emetogenicity of the chemotherapy regimen.
Real-time monitoring, e.g. using diaries or proactive follow-up phone calls, is essential to obtain an accurate record of symptoms between clinic appointments.
It is essential to explain to patients that **prophylactic medications** must be taken as prescribed, **regardless** of how well they feel.
Toxicity scoring criteria (adapted from WHO toxicity scoring)

<table>
<thead>
<tr>
<th>Side-effect</th>
<th>0 None</th>
<th>1 Mild</th>
<th>2 Moderate</th>
<th>3 Severe</th>
<th>4 Very severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nausea</td>
<td>none</td>
<td>Able to eat ok</td>
<td>Still able to eat but not as much as normal</td>
<td>Can’t eat but can drink</td>
<td>Can’t eat or drink</td>
</tr>
<tr>
<td>Vomiting</td>
<td>none</td>
<td>1 vomit in 24 hours</td>
<td>2-5 vomits in 24 hours</td>
<td>6-10 vomits in 24 hours</td>
<td>&gt; 10 vomits in 24 hours</td>
</tr>
</tbody>
</table>

Parents/carers, children and young people are advised that if they score a three or above, or if they have any concerns, they should contact their ward as soon as possible for help or advice.
MASCC Antiemesis Tool (MAT)
# MASCC Antiemesis Tool: Instructions

**Your Name:**

**Date of chemotherapy (this cycle):**  
Day:  
Month:  
Day of the Week:

**Your Oncology Nurse:**  
Phone:

**Your Oncology Physician:**  
Phone:

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**Information about this brief form:**
The MASCC Antiemesis Tool (MAT) is a way to help your doctors and nurses be sure you get the best care there is to prevent nausea and vomiting from chemotherapy. By filling out this form, you can help us make sure that you are having the best control of these possible side effects.

Here are the definitions used on this form:

**Vomiting:** The bringing up of stomach contents.

**Nausea:** The feeling that you might vomit.

Please answer all questions. There are no right or wrong answers, only your impression.

If you have any concerns about how or when to complete this form, please ask.

Please notice that Question #4 and Question #6 have a different style. These questions are scales.

For this type of question, just circle the number from 0 to 10 that most closely resembles your experience with your nausea and vomiting and write the number in the box to the right. An example of this form of question (but dealing with parking) is given below. Feel free to practice with this example or ask one of us to go over it with you.

---

**How much difficulty did you have parking your car today?**  
(Write the number in this box)

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<thead>
<tr>
<th>0</th>
<th>1</th>
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<tbody>
<tr>
<td>None</td>
<td>As much as possible</td>
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</table>

Please return the form shortly after completing it, as discussed with us. Thank you!
**MASCC Antiemesis Tool**

Please fill this out the day after chemotherapy on:

Day:  
Month:  
Day of the Week:  

**Nausea and Vomiting during the first 24 hours after chemotherapy:**

(This page refers to the first 24 hours following chemotherapy):

1) In the 24 hours since chemotherapy, did you have any vomiting?  
   - Yes  
   - No

2) If you vomited in the 24 hours since chemotherapy, how many times did it happen?  
   (Write the number of times in this box)

3) In the 24 hours since chemotherapy, did you have any nausea?  
   - Yes  
   - No

4) If you had nausea, please circle or enter the number that most closely resembles your experience.

   How much nausea did you have in the last 24 hours?  
   - None  
   - As much as possible

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MASCC Antiemesis Tool
This page asks about the period from the day after to 4 days after chemotherapy. So it asks about the time after the first 24 hours. Please fill this out four days after chemotherapy on:

Day:  
Month:  
Day of the Week:  

<table>
<thead>
<tr>
<th>Delayed Nausea and Vomiting</th>
</tr>
</thead>
</table>
| 5) Did you vomit 24 hours or more after chemotherapy? | Yes ☐ No ☐

(Select one)

6) If you vomited during this period, how many times did it happen?  
(Write the number of times in this box)

7) Did you have any nausea 24 hours or more after chemotherapy? | Yes ☐ No ☐

(Select one)

8) If you had nausea, please circle or enter the number that most closely resembles your experience. How much nausea did you have over this time period?

0 1 2 3 4 5 6 7 8 9 10

None ↔ As much as possible

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## MASCC Antiemesis Tool (MAT)

### Patient Outcomes Score Sheet

<table>
<thead>
<tr>
<th>Patient Name</th>
<th>Chemotherapy</th>
<th>Date</th>
<th>Antiemetic Regimen</th>
<th>Acute Vomiting</th>
<th>Acute Nausea</th>
<th>Delayed Vomiting</th>
<th>Delayed Nausea</th>
<th>Action Taken</th>
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<tbody>
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<td>1</td>
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Nausea and Vomiting Assessment and Guidance

**General Assessment**

- Name, age, DOB, physician
- Name of caller/relationship
- Diagnosis, on or off treatment
- Type of treatment: Recent surgery, chemotherapy, radiation location, HSCT
- Last blood counts
- Current medications
- Allergies
- Pharmacy name, telephone number, and address
- Number for call back
Nausea and Vomiting Assessment and Guidance

Symptom Assessment – Guiding Questions

- How is your child acting right now?
- Is the client experiencing tachycardia (rapid heartbeat), pallor, weakness, diaphoresis, or dizziness?
- Is the child experiencing abdominal pain or are they irritable and inconsolable?
- When did the vomiting begin?
- When the child vomits, what is the frequency and quantity? Is it forceful?
- Is there a pattern to the vomiting (e.g. morning, after meals)?
- What is the date of last chemotherapy treatment and what did it consist of?
Nausea and Vomiting Assessment and Guidance

- What is the colour and texture of the emesis? Is there evidence of bleeding, frank blood, coffee grounds, or bile?
- What is the client's temperature (high or low can indicate a problem)?
- How many wet diapers did the child have in the last 24 hours? If the client has been going to the bathroom, what is the frequency and quantity?
- What does the urine look like (colour, cloudy, odour, etc.)?
- When was the client's last stool? What was its consistency?
- Determine how long client has been experiencing nausea. Has anything helped relieve it?
Nausea and Vomiting Assessment and Guidance

- Has the client been eating and maintaining adequate nutrition? Any changes in diet?
- Does the client have a nasogastric tube? Is it still in place?
- Are there any other associated symptoms (e.g. pain, recent injury)?
- Determine if the client is on any oral medications (e.g. oral chemotherapy, electrolyte supplements). Are they able to take them? Any recent changes in medications?
- Did the client have any sick contacts?
- Has the client’s schedule recently changed (e.g. going back to school)?
- Does the child have a Ventriculoperitoneal shunt (VP shunt) or Ommaya reservoir?
Triaging of patients

**Non-Urgent**
- Has acute vomiting that resolves and child is able to take fluids and continues to vomit
- Chemotherapy-related nausea that responds to anti-emetic treatment
- No evidence of dehydration

**Urgent**
- Has not voided in 12 hours (8 hours in < 5 years)
- Unable to tolerate fluids for 24 hours and fluids pushed for 6 hours with anti-emetic but ineffective
- Vomits for longer than 24 hours
- Projectile vomiting
- No tears when crying, dry mouth, poor skin turgor, sunken eyes
- Early morning vomiting on a daily basis
- Client has vomited NG tube and sole source of oral intake

**Emergent**
- Change in level of consciousness, confusion, not responsive, lethargic, dizzy
- Severe abdominal pain or headache
- Recent injury to head or abdomen followed by vomiting
- Focal
- Bloody, coffee grounds, bilious emesis

**Support, Teaching, and Follow-Up, As Required**

**Requires Medical Attention within the Next 4-6 Hours**

**Requires Immediate Medical Attention**
ارزیابی اولیه بیمار

<table>
<thead>
<tr>
<th>سؤال</th>
<th>پاسخ</th>
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<tr>
<td>رتبه بیمار از نظر فعالیت چقدر است؟</td>
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<tr>
<td>کودک شما از سوی فرمانده می‌داند که چقدر غلتکی روزانه دارید؟</td>
<td></td>
</tr>
<tr>
<td>آیا کودک در ۴ ساعت گذشته غذا گرفته و چه سایر مایعاتی در خورد؟</td>
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<td>آیا کودک قادر به نوشیدن مایعات است؟</td>
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<td>آیا چشمهای کودک گودافتد و یا دچار فرورفتگی شده است؟</td>
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<td>آیا کودک بیپرود و تحریک پذیر است؟</td>
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<td>آیا کودک شما هنگام گریه اشک دارد؟</td>
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<td>آیا دهان و دیگر غشای مخاطی بدن کودک شما خشک است؟</td>
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<tr>
<td>حجم یا دفعات ادرار کودک شما نسبت به قبل چگونه است؟</td>
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<tr>
<td>وقتی کودک استفراغ می‌کند، آیا بافشار است؟</td>
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<tr>
<td>آیا علائم همراه دیگری (تاب، زخم دهانی و درد شکمی) وجود دارد؟</td>
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<tr>
<td>سیر پله‌ای کودک تان از زمان بروز استفراغ تا الان چگونه بوده است؟</td>
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<tr>
<td>پاتوهه به زمان بروز استفراغ کودک از چه نوع می‌باشد؟</td>
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</tbody>
</table>
ارزیابی جراحی ویا (ورژانس، درمانگاه و یا تلفنی) تاثیر تهوع و استفراغ بر عملکرد روزانه کودک چگونه است؟ مشکل دارد ولی تاثیرچندانی بر فعالیتهای روزانه ندارد (قابل تحمل است)

رتبه بیمار از نظر فعالیت چقدر است؟ محدوده نرمال در بازی محدودیت متوسط تاخفیف در بازی محدودیت شدید در بازی کودک شما چند بار در روز استفراغ می کند یا عق می زند؟ ≥ 2

آیا کودک در 24 ساعت گذشته توانسته غذا بخورد؟ بله

آیا کودک قادر به نوشیدن مایعات است؟ خوب

آیا چشمهای کودک گودافتاده و یا دچار فرورفتگی شده است؟ خیر

آیا کودک بیقرار و تحریک پذیر است؟ خیر

آیا خون و یا ذراتی مشابه دانه های قهوه در استفراغ کودک به چشم می خورد؟ خیر

آیا کودک هنگام گریه اشک دارد؟ بله

آیا دهان و دیگر غشاهای مخاطی بدن کودک شما خشک است؟ خیر

حجم یا دفعات ادرار کودک شما نسبت به قبل چگونه است؟ مثل قبل

وقتی کودک استفراغ می کند، آیا بافشار است؟ خیر

آیا علائم همراه دیگری (تب، زخم دهانی و درد شکمی) وجود دارد؟ خیر

سیر بهبودی کودک تان از زمان بروز استفراغ تا الان چگونه بوده است؟ بهتر شده

باتوجه به زمان بروز، استفراغ کودک از کدام نوع می باشد؟ استفراغ قابل پیش بینی، استفراغ حاد و یا تاخیری

بازدهی نداشته ولی استفراغ از دو ماه پیش می‌باشد.

بیمارستان

آموزش، حمایت و پیگیری تلفنی:

• بار در هفته

• بار در هفته
- Review antiemetic therapy, schedule, and dose
- Consult with team regarding changing or adding anti-emetic regime
- Review oral chemotherapy administration and any change in time given
- Encourage fluids frequently (based on size of child), small frequent meals, bland foods
- Teach signs and symptoms of dehydration such as increased thirst, loss of skin turgor, dry mouth, decreased urine output, decrease in number of wet diapers, weakness, lethargy, dizziness, decreased LOC, lack of tears
Client/Family Member Teaching

- Use of **distraction tools** for the client
- **Give parameters** for contacting again about the condition and response to treatment
- **Record** date and time of telephone encounter
- **Record** assessment, interventions, and any follow-up plans
- از بوهای نامطبوع خودداری شود.
- خوردن وعده‌های غذایی کوچک
- مصرف زنجبیل، نعناع فلفلی
- راه‌های درمانی (لیمو/مرکبات، نعناع)
- جویدن تکه‌های زنجبیل یا مصرف قرص زنجبیل
- نوشیدن جرعه‌ای از آب، آب میوه یا نوشیدنی‌های صاف شده نرم
- خوردن غذاهای آبدار و آبی و امتحان کردن سوپ‌های شفاف، قطعات یخی و زله
- پیشنهاد غذاهای نرم یا غذاهای شور و تنقلات
- تغییر رژیم‌های غذایی کودک در صورت دریافت کودک تغذیه‌روهه ای (به عنوان مثال تغذیه مداوم به جای تغذیه بولوس).
- آزمایش آب و الکترولیت‌ها و موارد مشابه در جایگزینی خوراک‌های مبتنی بر شیر
- میل غذاهایی که به صورت سرد یا در دمای اتاق سرو می‌شوند
- تغذیه به صورت سرد یا در دمای اتاق سرو می‌شوند
- خودداری از غذاهایی که بیشتر دارند.
• عدم اصرار والدین به کودک برای خوردن
• سعی در تهیه غذاهای درخواستی و مورد علاقه کودک
• توضیح در مورد دلایل نیاز به تغذیه خوب
• ۶ بار در روز غذا داده شود: سه وعده غذای و سه میان وعده
• تشویق کودک به اتمام آنچه که شروع به خوردن کرده
• تهیه شکل پرچرب مودغذایی مانند مرغ سوخاری به جای پخت‌های شده آن
• استفاده از ابزارهای انحراف حواس
• درنظر گرفتن بارامترهای تماس مجدد در مورد شرایط و پاسخ به درمان

Teach to child/family
Follow-Up/Evaluation/Documentation

- **Record** date and time of telephone encounter
- **Record** assessment, interventions, and any follow-up plans
- If *non-urgent*, reinforce with client to call back within **24 hours** if symptoms do not improve or begin to deteriorate, reinforce with *parent* to seek immediate medical attention if any emergent symptoms appear
- Review with *parent* how to seek immediate medical attention
Potential Complications

- Dehydration and/or electrolyte imbalance
- Decreased nutrition
- Inability to take oral medicines as prescribed
- Potential for aspiration pneumonia, GI bleeding
- Esophageal tears
- Non-pharmacological approaches
- Commonly used **acupressure** points
Non-pharmacological approaches

- Ginger

Benefits of ginger in the control of chemotherapy-induced nausea and vomiting

ABSTRACT

Objectives: To identify and discuss scientific evidence of the effects of ginger use in the management of chemotherapy-induced nausea and vomiting. Methods: This is an integrative review performed by Ganong’s reference. Results: We included 24 studies, highlighting three thematic categories, namely 1) antiemetic action of ginger — nausea (13 articles; of these, nine significant) and emesis (10 studies; of these, six significant); 2) action in the control of nausea (11 articles; of these, six significant) and vomiting (8 articles; of these, three significant) in the acute phase; 3) action in the control of nausea (6 articles; of these, three significant) and vomiting (6 articles; of these, three significant) in the delayed phase. There were divergences of the methods used. Final considerations: This complementary therapy has low cost and easy access, but no statistical confirmation of its effectiveness in the management of nausea and vomiting in cancer patients was found.

Descriptors: Nausea; Vomiting; Chemotherapy; Ginger; Zingiber Officinale.
- Non-pharmacological approaches
  - Aromatherapy (Lemon/citrus, peppermint)
- Non-pharmacological approaches
  - The use of music and guided visual imagery: Paintings depicted such views of nature as beach, forest, lake and mountain, prairie, and sky and clouds.
  - Music therapy offers diversion, distraction, and enhanced relaxation and may benefit patients experiencing pain. Alongside a specialty trained music therapist, patients engage in active music making, lyric writing, and song selection that is meaningful to them.
### ارزیابی اولیه بیمار

(اورژانس، درمانگاه و یا تلفنی)

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<tr>
<td>غیرقابل تحمل</td>
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### سؤالات به‌خصوص

- آیا کودک خواب الودگی و یا کاهش سطح هوشیاری دارد؟
- آیا کودک قادر به نوشیدن مایعات است؟
- آیا کودک بیقرار و تحریک پذیر است؟
- آیا خون و یا ذراتی مشابه دانه‌های قهوه در استفراغ کودک به چشم می‌خورد؟
- وقتی کودک استفراغ می‌کند، آیا با‌افشار است؟
- آیا علامات همراه دیگری (نبض، زخم دهانی و درد شکمی) وجود دارد؟
- باتوجه به زمان بروز استفراغ تا الان چکر بوده است؟

### نکته

- بیماران با درمانگاه و اورژانس، باید تا گزارش سرپرست خود را به درستی مصرف کنند.
<table>
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<tbody>
<tr>
<td>Educate and assist patient about oral hygiene.</td>
<td>This is associated with anorexia and excessive salivation. Oral hygiene helps alleviate the condition and facilitates comfort.</td>
</tr>
<tr>
<td>Eliminate strong odors from the surrounding (e.g., perfumes, dressings, emesis)</td>
<td>Strong and noxious odors can contribute to nausea.</td>
</tr>
<tr>
<td>Maintain fluid balance in patients.</td>
<td>Sufficient hydration before chemotherapy has been shown to reduce the risk of nausea in these situations.</td>
</tr>
</tbody>
</table>
**Nursing Interventions**

<table>
<thead>
<tr>
<th>Interventions</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allow the patient to use <strong>non pharmacological nausea control techniques</strong> such as relaxation, guided imagery, music therapy, distraction, or deep breathing exercises.</td>
<td>These methods have helped patients alleviate the condition but needs to be used before it occurs.</td>
</tr>
<tr>
<td>Apply acustimulation bands as ordered, or apply <strong>acupressure</strong>.</td>
<td>Stimulation of the Neiguan P6 acupuncture point on the ventral surface of the wrist has been found to control nausea in some points. This has been found to be helpful for patients who experience motion-related nausea.</td>
</tr>
<tr>
<td>Introduce <strong>cold water, ice chips, ginger products, and room temperature broth or bouillon</strong> if tolerated and appropriate to the patient’s diet.</td>
<td>These aid hydration. Ginger helps relieve nausea whether in ginger ale, ginger tea, or chewed as crystallized ginger. Fluids that are too cold or hot may be difficult to tolerate.</td>
</tr>
<tr>
<td>Give <strong>frequent, small amounts of foods</strong> that appeal to the patient.</td>
<td>This approach will help maintain nutritional status. For some patients, an empty stomach exacerbates nausea.</td>
</tr>
<tr>
<td>Nursing Interventions</td>
<td></td>
</tr>
<tr>
<td>----------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Dry food like crackers or toast</strong></td>
<td>Crackers or toast before rising are especially known to be effective for pregnancy-related nausea.</td>
</tr>
<tr>
<td><strong>Bland, simple foods like broth, rice, bananas, or Jell-O</strong></td>
<td>Patients may endure these types of foods. They should attempt to consume more when nausea is absent.</td>
</tr>
<tr>
<td><strong>Tell patient to avoid foods and smells that trigger nausea.</strong></td>
<td>Strong and noxious odors can contribute to nausea.</td>
</tr>
<tr>
<td><strong>Position the patient upright while eating and for 1 to 2 hours post-meal</strong></td>
<td>This can be helpful in reducing the risk.</td>
</tr>
</tbody>
</table>
**Nursing Interventions**

<table>
<thead>
<tr>
<th>Action</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administer antiemetics as ordered.</td>
<td></td>
</tr>
<tr>
<td>Keep rooms well-ventilated. If possible, assist the patient to go outside to get some fresh air.</td>
<td>A well-ventilated room or having a fan close by promotes easier breathing.</td>
</tr>
<tr>
<td>Educate the patient or caregiver about appropriate fluid and dietary options for nausea.</td>
<td>Patients and caregivers can promote adequate hydration and nutritional status by acknowledging dietary points to consider when nauseated.</td>
</tr>
<tr>
<td>Educate the patient to take prescribed medications as ordered.</td>
<td>Following the prescribed schedule for medications reduces episodes of nausea.</td>
</tr>
<tr>
<td>Education the patient about the importance of changing positions slowly and calmly.</td>
<td>Abrupt or gross movements may aggravate the condition.</td>
</tr>
</tbody>
</table>
**Nursing Interventions**

<table>
<thead>
<tr>
<th>Educate patient or caregiver the use of no pharmacological nausea control techniques such as relaxation, guided imagery, music therapy, distraction, or deep breathing exercises.</th>
<th>Teaching the patient and caregiver methods to control nausea increases the sense of personal efficacy in managing nausea.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Evaluate</strong> the patient’s response to antiemetics or interventions to alleviate the condition.</td>
<td>This approach is helpful in determining the effectiveness of such interventions.</td>
</tr>
<tr>
<td>Inform the patient or caregiver to seek medical care if vomiting develops or persists longer than 24 hours.</td>
<td>Persistent vomiting can result in dehydration, electrolyte imbalance, and nutritional deficiencies.</td>
</tr>
<tr>
<td>Educate the patient or caregiver how to apply accustimulation bands or accupressure.</td>
<td>Patients and caregivers may desire to proceed with intervention if it was found useful and effective.</td>
</tr>
</tbody>
</table>
ارزیابی اولیه بیمار (اورژانس، درمانگاه و یا تلفنی)

تاثیر تهوع و استفراغ بر عملکرد روزانه کودک چگونه است؟

مشکل دارد ولی تاثیر قلیایی بر فعالیتهای روزانه ندارد (قابل تحمل است)

غیرقابل تحمل است

رتبه بیمار از نظر فعالیت چقدر است؟

محدوده نرمال در بازی

محدودیت متوسط

تاخفیف در بازی

مشکل شدید در بازی

کودک شما چند بار در روز استفراغ می کند یا عق می‌زند؟

≥ 2

< 5

< 6

آیا کودک در 24 ساعت گذشته توانسته غذا بخورد؟

بله

بله ولی کمتر از همیشه

خیر

آیا کودک قادر به نوشیدن مایعات است؟

خوب

باولع می‌نوشته و ترشته

ندارد و به سختی می‌نوشته

آیا کودک خواب الودگی و یا کاهش سطح هوشیاری دارد؟

خیر

بله

آیا چشمهای کودک گودافتاده و یا دچار فرورفتگی شده است؟

خیر

بله

آیا کودک بیقرار و تحریک پذیر است؟

خیر

گاهی اوقات

مدام بیقرار و تحریک پذیر است

آیا خون و یا ذراتی مشابه دانه های قهوه در استفراغ کودک به چشم می‌خورد؟

خیر

بله

آیا کودک هنگام گریه اشک دارد؟

بله

خیر

آیا دهان و دیگر غشاهای مخاطی بدن کودک شما خشک است؟

خیر

بله

حجم یا دفعات ادرار کودک شما نسبت به قبل چگونه است؟

مثل قبل

ادرار پررنگ شده اما دفعات آن فرقی نکرده

کاهش دفعات و حجم ادرار

وقتی کودک استفراغ می کند، آیا بافشار است؟

خیر

بله

آیا علائم همراه دیگری (تب، زخم دهانی و درد شکمی) وجود دارد؟

خیر

بله

سیر بهبودی کودک تان از زمان بروز استفراغ تا الان چگونه بوده است؟

بهتر شده

تغییری نکرده

بدتر شده

باتوجه به زمان بروز، استفراغ کودک از کدام نوع می‌باشد؟

استفراغ قابل پیش‌بینی

استفراغ حاد و یا تاخیری

استفراغ پیشرو و مقاوم

آیا بیمار داروهای پروفیلاکتیک تجویز شده را به درستی مصرف می‌کند؟

مراجعه به اورژانس بیمارستان مفید

مراجعه به سایر بیمارستانها
Assessment of dehydration

Signs of 5% dehydration

- Loss of body weight, dry mucous membranes, slightly reduced urine output

Signs of 10% dehydration

- Decreased turgor with poor capillary return, increased capillary filling time, dry mucous membranes, depressed fontanelle, sunken eyes, poor volume pulses, lethargic, oliguria

Signs of >10% dehydration

- Acidotic breathing, tachycardia, tachypnoea, shock, anuria, eventual coma
Nursing’s Role in Fluid and Electrolyte Balance

- Assessment of fluid and electrolyte status
- Prevention strategies
- Fluid and electrolyte replacement
1. ASSESSMENT

Fluid Volume Deficit – Assessment Findings

- Decreased skin and tongue turgor
- Decreased oral cavity moisture
- Decreased urine output and urine specific gravity
- BUN rises out of proportion to serum creatinine
- Changes in vital signs (increased heart rate, respiratory rate, and temperature, and a decreased blood pressure)
- Decreased capillary refill time
- Thirst may be present, but often absent in the older adult population
- Decreased weight
- Dry, cracked, mucous membranes
- Dizziness, syncope
- Orthostatic hypotension

Sources: Metheny, 2012; Reid et al., 2004; Severs, Rookmaaker, & Hoorn, 2015.
Accuracy of Intake and Output Measurement and Recordings

Best practice indicates that intake and output measurement and recordings are an interprofessional responsibility.

Providing cups that have fluid volume markers and easy-to-use charts can help involve patients.

Subtotaling of intake and output amounts should be ongoing or several times a day, as opposed to at the end of an 8- or 12-hour shift.
2. Fluid and Electrolyte Balance

- Nurses play a major role in the management of fluid and electrolyte balance.
- The fundamentals of fluid and electrolyte balance focus on increasing fluid intake when fluid loss increases and decrease fluid intake in many cases when fluid loss decreases.
- Fluid therapy should be guided by the same principles as drug therapy regarding administration principles and monitoring of the patient’s response.
Fever

- Fever guideline
کنترل ایده آل استفراغ حاد

ناشی از شیمی درمانی

فقدان استفراغ، اوغ و تهوع و عدم استفاده از سایر داروهای ضداستفراغ (غیر از داروهای تجویزی برای پیشگیری از استفراغ حاد تجویز شده اند) و عدم وجود تغییر در رژیم غذایی که به معنای کنترل ایده آل استفراغ حاد می‌باشد. این سطح از کنترل استفراغ باید در تمام روزهای دریافت شیمی درمانی و نیز تا ۲۴ ساعت پس از اتمام درمان ادامه پاید.

- کنترل پارشیل استفراغ: ۱-۴ بار استفراغ در ۲۴ ساعت یا تهوع کمتر از ۵ ساعت در ۲۴ ساعت
- کنترل ناموفق استفراغ: بیش از ۴ بار استفراغ در ۲۴ ساعت یا تهوع بیش از ۵ ساعت در ۲۴ ساعت
Thanks