

Generating Evidence Based Nursing Care Guidelines for the Treatment of Pyrexia in Adults

Julie Foster, Governance Co-ordinator, Gynaecology, STHT
 Clare Warnock, Practice Development Sister, Cancer Services, STHT
 Cheryl Dixon, Staff Nurse, Infection and Tropical Medicine, STHT

Catherine Jennings, Practice and Development Facilitator, (Record Keeping) Learning and Development, STHT
 Irene Mabbott, Practice Development Co-ordinator, (Evidence Based Practice) Learning and Development, STHT

Abstract

This project, developed from discussions at the STHT Evidence Based Council examined the current practice associated with treating and reducing pyrexia in hospital patients. This project culminated in the development of a nursing care guideline.

Nursing Care Guidelines

- What is a Nursing Care Guideline:
 - An evidence based nursing care guideline, covers an episode of care or event that supports the pathway of care for that particular patient, providing detailed information and guidance for that care.
- How do the NCG's work?
 - Defines the issue
 - Lists potential adverse effects
 - States the goal
 - Highlights the guideline to nursing action
 - Shows the preferred outcome
 - Demonstrates the evidence links

What the Literature Said

- Discussions at the Evidence Based Council meetings led to a group being formed to examine the evidence related to the treatment of pyrexia and provide consistent evidence based guidance for practice.
- A literature search of the major electronic databases, including Medline, CINAHL etc, was conducted as well as internet resources such as SIGN, NICE and the Cochrane database.
- A wide variation in the use of anti-pyrexial medication and techniques in practice were identified.
- There was concern identified with inappropriate use medications and practices leading to the masking of clinical infections.
- It was felt that the evidence available would support the development of a care guideline for patient with pyrexia

Getting the Evidence into Practice

- Members of the group reviewed the citations and decided on their relevance based on specified inclusion criteria.
- The citations found three key areas of interest including the pharmacological / medical interventions, practical solutions to the problems and reassurance and assessment theories.
- Data from the studies were extracted and the evidence systematically appraised.
- Nursing care guidelines were developed based on this evidence which outlined a step by step approach to care.
- Myths and healthcare rituals were discovered as part of this process but the guidance that was developed relied on up to date available evidence to provide active support for clinical staff and improve direct patient care.
- The dissemination of these guidelines has helped provide consistency in care throughout the organisation.

Sheffield Teaching Hospitals NHS
 Nursing Care Guideline no.162

PYREXIA

DEFINITION: Elevation of body temperature above the normal range. Types of pyrexia can be categorised as: low grade (37.5-38°C), moderate to high pyrexia (38.5-40°C) and hyperpyrexia (above 40°C)
Causes of pyrexia include: infection (systemic or local), disturbance of body tissues by trauma, malignancy, surgery or thrombosis, metabolic disturbance and CNS damage (e.g. CVA, brain tumour/hypothyroidism, myocardial infarction, pharmaceutical agents, heat stroke, blood transfusion reactions, alcohol withdrawal).

POTENTIAL ADVERSE EFFECTS (usually associated with hyperpyrexia): hypovolaemia, metabolic acidosis, increased metabolic rate (causing an increase in oxygen demand), neurological impairment, potential rapid breakdown of muscle, death.

GOAL:

- Identify deterioration in patients condition and to ensure prompt interventions
- Early detection of problems associated with pyrexia
- Identify and treat the cause of the temperature
- Maintain patient comfort

GUIDELINE TO NURSING ACTION:

- Record 4 hourly SIEWS observations. Inform the medical staff of abnormalities. Increase frequency of observations if indicated. The most sensitive time for detecting pyrexia is 6pm.
 - Inform the medical staff of pyrexia even though this does not trigger a SIEWS score.
 - Be particularly vigilant with patients at increased risk of infection (e.g. neutropenic, immunocompromised patients)
 - Neurology patients - please refer to local guidelines for care.
- Monitor patient for any signs and symptoms of infection. Report any new or worsening symptoms to medical staff.
- Attempt to identify the possible cause of the pyrexia and/or infection. Possible sites of infection include lungs, mouth, urinary tract, wounds, intravenous access sites/lines, catheters and drains.
- Obtain samples suggested by symptoms/requested by doctors (e.g. MSU, stool, sputum, swabs, blood cultures).
- Where potential causes of pyrexia are identified, liaise with the doctors re: the treatment plan, implement the appropriate treatment plan, monitor and evaluate its effectiveness. Inform the doctor of any changing or worsening symptoms.
- Provide measures to promote comfort and lower temperature if the patient is pyrexial.
 - Reclining covers may be used for patient comfort if the patient is pyrexial, but they should not be removed during rigors as this will increase shivering and discomfort.
 - Provide cool, fresh and dry bed linen.
 - Provide reassurance during episodes of rigors.
 - Antipyretics, e.g. paracetamol, can be given as prescribed, however, routine use is not recommended and antipyretics should be used with caution as they can interfere with the body's natural defence mechanisms and mask the symptoms of illness.
- If the patient is able to take fluids orally encourage fluids. Monitor fluid balance if the patient is pyrexial for a period of time due to the risk of dehydration.
- Promote regular mouth care as oral mucous membranes dry easily from dehydration.
- Administer pharmacological agents as prescribed (e.g. antibiotics, intravenous fluids).
- Monitor the patient's response to treatment and liaise with the medical staff about the patient's progress.
- Maintain a safe environment, ensure the call bell is always within the patient's reach and they know how to use it.
- Ensure the patient and family (with patient consent) are fully informed about the plan of care and know to inform the nursing and medical staff if they develop any new or worsening symptoms.

PREFERRED OUTCOME- For the patient to be managed appropriately in accordance with the nursing care guidelines.

Source: Lister, S. & Lister, S. (2008) The Royal Marsden Manual of Clinical Nursing Procedures, 7th Edition, Oxford, Wiley Blackwell.
 Hillier, S. (2008) Evidence Based Practice, 2nd Edition, London, Wiley Blackwell.
 Jones, J. (2011) How to write a good literature review for the clinical management of patients with pyrexia. Nursing Times, 108 (1), 16-18
 Montague, S., Wilson, R., Bartlett, R. (2005) Protocols for Nursing Practice, Edinburgh, Elsevier
 © STHT Evidence Based Council - © NHS UK. Reproduced with permission. Published by Sheffield Teaching Hospitals NHS Foundation Trust
 March 2016 Review Date 09/2017

STHT Evidence Based Council

- Started in 1998
- Developed to be a networking opportunity for staff to share and disseminate good practice
- Multidisciplinary, bottom up approach
- Meet regularly – with email & website communication methods to support
- Everyone has a voice – equal partnerships
- Examine clinically relevant topics
- Members and non members invited to be part of the activities
- Supports research, audit and service review activities

