

Children and Young People's Nursing Skills at a Glance

Edited by Elizabeth Gormley-Fleming Deborah Martin

WILEY Blackwell

Children and Young People's Nursing Skills at a Glance



Children and Young People's Nursing Skills at a Glance

Edited by

Elizabeth Gormley-Fleming

Head of Department for Nursing (Children's, Learning Disability and Mental Health) and Social Work

School of Health and Social Work University of Hertfordshire Hatfield, UK

Deborah Martin

Senior Lecturer Children's Nursing University of Hertfordshire Hatfield, UK

Series Editor Ian Peate

WILEY Blackwell

This edition first published 2018 © 2018 John Wiley & Sons Ltd.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, except as permitted by law. Advice on how to obtain permission to reuse material from this title is available at http://www.wiley.com/go/permissions.

The right of Elizabeth Gormley-Fleming and Deborah Martin to be identified as the authors of the editorial material in this work has been asserted in accordance with law.

John Wiley & Sons Ltd, The Atrium, Southern Gate, Chichester,

West Sussex, PO19 8SQ, UK

Editorial Office 9600 Garsington Road, Oxford, OX4 2DQ, UK

For details of our global editorial offices, customer services, and more information about Wiley products visit us at www.wiley.com.

Wiley also publishes its books in a variety of electronic formats and by print-on-demand. Some content that appears in standard print versions of this book may not be available in other formats.

Limit of Liability/Disclaimer of Warranty

The contents of this work are intended to further general scientific research, understanding, and discussion only and are not intended and should not be relied upon as recommending or promoting scientific method, diagnosis, or treatment by physicians for any particular patient. In view of ongoing research, equipment modifications, changes in governmental regulations, and the constant flow of information relating to the use of medicines, equipment, and devices, the reader is urged to review and evaluate the information provided in the package insert or instructions for each medicine, equipment, or device for, among other things, any changes in the instructions or indication of usage and for added warnings and precautions. While the publisher and authors have used their best efforts in preparing this work, they make no representations or warranties with respect to the accuracy or completeness of the contents of this work and specifically disclaim all warranties, including without limitation any implied warranties of merchantability or fitness for a particular purpose. No warranty may be created or extended by sales representatives, written sales materials or promotional statements for this work. The fact that an organization, website, or product is referred to in this work as a citation and/or potential source of further information does not mean that the publisher and authors endorse the information or services the organization, website, or product may provide or recommendations it may make. This work is sold with the understanding that the publisher is not engaged in rendering professional services. The advice and strategies contained herein may not be suitable for your situation. You should consult with a specialist where appropriate. Further, readers should be aware that websites listed in this work may have changed or disappeared between when this work was written and when it is read. Neither the publisher nor authors shall be liable for any loss of profit or any other commercial damages, including but not limited to special, incidental, consequential, or other damages.

Library of Congress Cataloging-in-Publication Data are available

ISBN: 9781119078531

Cover image: © Keith Brofsky/Gettyimages

Set in Minion Pro 9.5/11.5 by Aptara Printed in [Country only]

Contents





Contributors ix Preface x



Assessing children: Principles

- 1 Initial assessment: subjective 2
- 2 History taking 4
- 3 Principles of systematic assessment 6
- 4 Communication 8
- **5** Developmental considerations 10
- 6 Informed consent 12
- 7 Safeguarding 14
- 8 Family-centred care 16
- 9 Record keeping 18
- 10 Planning care 20



Assessment of the child: Objective data

- 11 Airway and breathing 22
- 12 Circulatory assessment 24
- 13 Measuring blood pressure 26
- 14 Assessment of pain 28
- **15** Moving and handling 30
- **16** Measuring temperature 32
- 17 Weight, BMI, height/length and head circumference 34
- 18 Blood glucose monitoring 36
- **9** Skin integrity 38
- 20 Pulse oximetry 40

Part 3

Drug administration

- 21 Principles of drug administration 42
- 22 Drug calculations 44
- 23 Administration of medication 46
- 24 Inhaled drug administration 48
- 25 Intranasal diamorphine 50
- **26** Intravenous fluid administration 52

Part 4

Respiratory

- 27 Spirometry 54
- 28 Peak expiratory flow 56
- 29 Arterial blood gas sampling 58
- 30 Oxygen administration 60
- 31 Suctioning 62

- 32 Tracheostomy care 64
- 33 Non-invasive ventilation 66
- 34 Underwater seal drain 68



Gastrointestinal

- 35 Infant feeding 70
- **36** Breastfeeding 72
- 37 Formula feeding 74
- 38 Insertion of nasogastric and nasojejunal tubes 76
- 39 Nasogastric tube feeding 78
- 40 Gastrostomy feeding 80



Renal

- 41 Urine collection 82
- 42 Catheter insertion 84
- 43 Catheter care 86



Neurological

- 44 Neurological assessment in children 88
- 45 Preparation for lumbar puncture 90



Musculoskeletal

- 46 Neurovascular assessment 92
- 47 Care of a cast 94
- **48** Skin traction 96



Skin

- 49 SteriStrip™ application 98
- 50 Wet wrapping in atopic eczema 100



Cardiac

- 12-lead electrocardiography 102
- 52 3-lead electrocardiography 104



Pre- and post-operative care

- 53 Pre-operative care and transfer to theatre 106
- 54 Post-operative recovery 108



Emergency Care

- 55 Basic life support (BLS) 110
- 56 Advanced resuscitation of the infant and child 112
- 57 Transfer of the critically ill child 114



Newborn

- 58 Phototherapy 116
- 59 Care of the umbilicus 118



Infection control

- 60 Hand washing 120
- 61 Aseptic non-touch technique 122



Haematology

- 62 Obtaining blood samples 124
- 63 Transfusion of blood and blood components 126
- 64 Cannulation 129



End-of-life care

- 65 Care of the dying child 132
- 66 Care after death 134

Index 136

Contributors





Elizabeth Akers, Chapters 12, 51, 52

Ceri Baker, Chapters 15, 39

Catherine Beadle, Chapter 50

Hannah Chance, Chapter 32

Samia Choudhury, Chapter 57

Sue Collier, Chapter 7, 8

Julie Enright, Chapters 53, 54

Jenni Etchells, Chapters 65, 66

Erica Everett, Chapter 56

Lynn Fanning, Chapter 24

Liz Gormley-Fleming, Chapters 5, 11, 13, 14, 16, 17, 20, 21, 22, 23, 26, 30, 31, 34, 45, 46, 55, 62, 63

Heather Grant Davey, Chapter 6

Amy Halliday, Chapter 40

Anice Kavathekar, Chapter 29, 58

Sue Liewelyn, Chapters 47, 48

Gary Meager, Chapters 18, 61

Michele O'Grady, Chapters 25, 44

Amanda Parson, Chapters 49, 64

Julia Petty, Chapters 1, 2, 3, 9, 10, 19, 33, 59

Katrina Polfrey, Chapter 4

Sam Pollard, Chapter 11

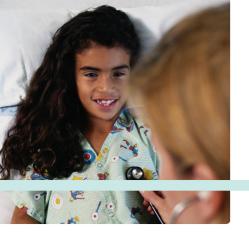
Sarah Pratley, Chapters 27, 28

Sheila Roberts, Chapters 41, 42, 43

Gemma Tammas, Chapter 38

Maxine Wallis-Redworth, Chapters 35, 36, 37

Yasemin Zerzavatci, Chapter 60



Preface

he prime focus of this text book is to provide evidence-based information in an accessible and easy format for children's and young people's nurses. I hope that the reader will elicit the key points relevant to their practice to enable them to deliver care in a safe and effective manner. The information is delivered in a stimulating visual format along with succinct informative text.

It is not possible to capture the complete set of skills a children's nurse requires in this text book. As with any text book, the contemporary nature of practice is ever changing as new evidence becomes available and the contributors have aimed to keep abreast of this in the creation of this book. The emphasis has been placed on presenting the skills that are fundamental to the learner nurse to acquire during their period of pre-registration education to enable them to achieve competence by the end of their course. The challenge has been to condense the text into a format that identifies the pertinent points and omits unnecessary information. The drawing and photographs have been chosen to illustrate the key points and also to make this text appear interesting to a range of learners.

It must be acknowledged that the continuum of childhood ranges from the neonatal period through to arrival at adulthood, hence the inclusion of the age ranges where required. This is not an exhaustive set of clinical skills in this book pertinent to all within the continuum of childhood as there are other text books in this series such as those that address the neonate and learning disabilities, for example.

The education of nurses is currently undergoing significant changes and the challenge to provide up-to-date education remains constant. This *At a Glance series* will be of interest to current students, health care support workers who work with children and young people, registered nurses who wish to update or consult the literature, and to those future students undertaking associate nurse programmes or those on apprenticeship routes.

This book has been written by experienced practitioners and educators who are all passionate about delivering quality nursing care to the child or young person and their families. Without their contribution, this book would not have been possible, so thank you for contributing and for your time.

Liz Gormley-Fleming



Initial assessment: subjective

Subjective assessment of the child's general appearance: Overview • Appearance, e.g., is it unusual in any way? Any recognizable anomalies? • Appropriate Child responses? В and • Expected family behaviours? Any emotional observances C evident?

Are they appropriate?

Subjective assessment according to stage of development: Examples

| Neonate (0-28 days) and infant (up to 1 year) | Parent-infant interaction. Normal behaviours, reflexes, e.g. rooting, sucking. Expected behaviours, crying, sleeping, consolability Physical signs: body movements, spontaneous, position, symmetry, facial feature |
|---|---|
| Toddler (1–2 years) | Parent-toddler interaction. Normal behaviours, e.g. separation anxiety, follow simple instructions. Expected developmental milestones, e.g. crawling, walking, early speech |
| Pre-school / (2–5 years) | Parent–child interaction. Normal behaviours, e.g. able to follow simple instructions Expected developmental milestones, e.g. physical abilities, able to speak/communicate/answer questions |
| Older child (5-12 years) | Parent–child interaction. Normal behaviours, e.g. greater autonomy Expected developmental milestones, e.g. physical abilities, able to hold a conversation |
| Adolescent (>12 years) | Parent-teenager interaction. Normal behaviours, e.g. articulation and explanations, social skills. Self-consciousness, body image, state of hygiene |

Subjective assessment according to body system: Examples

| Presence of audible breathing, cough, wheeze, grunting (babies). Breathing pattern and effort, dyspnoea, shortness of breath, depth and symmetry of breathing efforts, colour – see below |
|--|
| What is the colour of the skin, oral mucosa and nail beds? Are these pink? Is there cyanosis present? Or is the skin colour flushed? |
| Presence of normal or abnormal movements, gait, coordination, and head size and shape? Behavioural responses. Intact senses? |
| Is a runny nose visible? Is the voice normal or is there huskiness/croakiness/loss of voice? Can the child hear normally? Is the throat red? What is the position of the ears, eyes and facial features? Are there any dysmorphic features? |
| Does the child look dehydrated? Sunken eyes, skin colour with reduced turgor, dry, cracked lips, sunked fontanelle (baby)? Is there presence of oedema? |
| Abdomen size and shape, is there vomiting? Are the weight and size appropriate for age? Is there presence of obesity or failure to thrive? Is the child in pain, holding/guarding their abdomen? Appearance of the umbilicus (baby) |
| Does the child feel or look hot/cold? Is there any jitteriness (infant) in the case of a low blood sugar/metabolic disturbances? |
| Appearance may indicate generalized infection. Musculo-skeletal: body/limb proportions, tone, posture, symmetry; is the spine straight or is there any curvature? Skin: nature and distribution of lesions, wounds, bruises, rashes; is there a suspicious appearance? |
| |

Assessment overview

Assessment is an important component of nursing practice, necessary for the planning and delivery of patient and family-centred care. A comprehensive nursing assessment includes both subjective (qualitative) and objective (quantitative/measurable) elements, namely, general appearance, patient history, physical examination and measurement of vital signs. Of these four components, the area of subjective assessment and observation of clinical appearance is the focus of the present chapter. Objective physical assessment, including history taking and monitoring will follow in subsequent chapters.

Subjective assessment

Subjective nursing assessment is an individualized, qualitative approach that does not use objective, measurements, tools or equipment. Rather, it is based on individualized clinical observation relating to the physical, emotional and behavioural characteristics of the child and family. Therefore, by its very nature, such a form of assessment can be open to interpretation and opinion. However, it also serves as an essential starting point to any holistic assessment of a child and family. Inspection and observation of general appearance and behaviour are therefore an integral part of an initial assessment before any objective data can be recorded. The skills of performing sound, clinical observation and judgement develop over time and through experience by nursing students and beyond into qualification. The importance of such skills should not be underestimated. It should also be remembered that parents or primary caregivers are best placed to recognize concerns and will report these based on subjective observations of changes in their child's physical or emotional state. This information should be considered alongside nursing assessment data.

How to perform a subjective assessment

The initial nursing assessment of a child should be undertaken with a parent or known caregiver upon arrival to a ward, on preadmission or, in the case of out-of-hospital care, at the first meeting following introduction to a new child and family in line with any referral for ongoing care. Ideally, initial assessment should be completed within 24 hours of admission and any key information should be documented clearly using appropriate records.

Observation can be carried out while taking the history and establishing rapport. This can be done in conjunction with observations by and from the parents, if present, along with sound clinical nursing judgement. For example, you can observe the child's behaviour, level of understanding and general appearance on admission at first introduction and consider this with the parents' own reports. General appearance of the child and family includes observation of their physical, behavioural and emotional state. At any age, considerations for the subjective assessment of the child or young person include:

- Do they look well or unwell?
- Are they pale, blue or flushed?
- · Are they moving, active or lethargic?
- What is the general posture?
- Are they agitated or calm?
- Are they able to respond appropriately to questioning and are they obeying requests? Or are they resistant in their responses and reaction?
- What is the family reaction and perceived emotional state?

Subjective assessment according to age

Care of the child encompasses a wide range of ages from newborn up to the adolescent period. Although some of the principles of assessing children are similar to assessing adults, children are not just small adults, and the approach to assessment and content can be quite different. Moreover, assessment changes in relation to what to observe as children develop and get older so that eventually, in the young person, it is similar to adults. The Figure aims to highlight the important differences to give some general principles and provide an outline of subjective assessment in different age groups. This emphasizes that the approach to subjective assessment is influenced by a child's age, stage of development and level of understanding.

In the neonatal and infant period, physical assessment includes, for example, observation of facial features, symmetry, posture, movement and tone of the limbs. Behavioural elements include presence of a strong cry and normal responses to being held/consoled. Emotional elements include observation of interaction between them and their parents. In the young child, gross physical and fine motor skills can be observed according to age expectations, with refinement occurring as the child gets older. Age-appropriate speech and language can also be noted. Behaviour can be observed by a child's mood and, again, interaction with parents. In an adolescent, similar points can be addressed but in line with behaviours applicable to teenage years, including level and type of communication and emotional reaction.

Subjective assessment according to body system

Subjective assessment can also be carried out according to the biological system, as is commonly used in the systematic approach to holistic physical examination. This will be covered in greater detail in Chapter 3. A full examination of all the systems is the most thorough way to gain a complete physical picture of the child or young person. The subjective components of these systems are displayed in the Figure.

To conclude, sound clinical judgement goes hand in hand with subjective nursing assessment and should be used to make decisions on the need for further, more objective, and possibly more invasive assessment methods.

Key points



- Subjective nursing assessment should include inspection and general observation. These are the important parts of any initial assessment or examination, undertaken in conjunction with the parents or caregivers where possible.
- Subjective assessment should include the physical, behavioural and emotional characteristics of the child or young person and their family.
- The approach to subjective assessment is influenced by the age of the child or young person, their developmental stage and level of understanding.

Further reading

Broom, M. (2007) Exploring the assessment process. *Paediatric Nursing*, **19**(4), 22–25.

Engel, J. K. (2006) Mosby's Pocket Guide to Pediatric Assessment, 5th edn. Mosby, New York.

Roland, D., Lewis, G. and Davies, F. (2011) Addition of a subjective nursing assessment improves specificity of a tool to predict admission of children to hospital from an emergency department. *Pediatric Research*, 70, 587.

History taking overview

Taking a patient history includes

- ✓ Establishing a rapport with the patient and his or her family
- ✓ Using effective communication skills. See communication framework figure
- ✓ Gathering information on:
- the current concern, using both open and closed questions
- ✓ SAMPLE (see below) may be useful as a prompt, to include:
 - √ symptoms experienced
 - ✓ medical history, and medication
- √ the patient's overall health status
- √ family and social
- perception of his or her well-being
- ✓ Asking about emotional health
- ✓ Discover the family's perspective
- ✓ Closure, with rapport maintained
- Documenting clearly and thoroughly

Communication framework for history taking

Source: Adapted from Kurtz et al., 1998

Calgary-Cambridge framework for effective communication – adapted for children

1. Initiating the session

Establish initial rapport with child and family

2. Gathering information

Explore the patient's problem Understand the patient's perspective

3. Building the relationship

Develop rapport. Involve the child and family

4. Providing structure to the interview

Summarizing, signposting. Sequencing, timing

5. Explanation and planning

Provide the correct amount and type of information
Aid accurate recall and understanding
Achieve a shared understanding

6. Close the session

Using SAMPLE to obtain a child's health history

Symptoms What symptoms are experienced and how have they developed? How have they been managed?

Allergies Are there any known allergies? Has there been a reaction to something leading to the symptoms?

Medications Is the child taking any medications, either prescribed or other?

Past history Have there been any previous medical, psychological, or social conditions/illnesses?

Last eaten and drank? When did the child last have anything to eat or drink?

E Events What events occurred that led to the current situation? E.g. external events such as accidents

Examples of questions to obtain a child's health history: according to the systems

- □ Airway and breathing Has the child had problems with their breathing?
- □ Cardiovascular Does the child's skin change colour when crying? If so, what colour do you see?
- Disability (neurological) Does the child tire easily or sleep excessively?
- ENT Does the child frequently develop streptococcal pharyngitis (strep throat)?
- □ Fluids Is the child passing urine? Drinking?
- □ Gastrointestinal Does the child have feeding difficulty?
- □ Homeostasis Has the child been feverish?
- □ Skin Is the child showing a rash or other skin sign?
- □ Musculo-skeletal Does the child have any problems with activity and co-ordination?aaaa

Examples of questions to obtain a child's medical and nursing health history: according to age

□ Are there any delays or recent concerns with expected developmental and age-appropriate milestones – physical,/

motor, behavioural, corgitive?

- □ Has the child experienced any growth delay, weight loss or increase?
- □ Are there any age-specific issues to consider, e.g. in babies, were there any antenatal issues of note? What is the pattern of bowel movements, number of wet nappies, sleeping and waking for feeds? In the older child, are there any changes to their activity levels, reports of pain and discomfort, exposure to infections at nursery/school?