

Nurse / Non Medical Prescribing: National update

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University of London /
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Overview

- National developments
- Compliance with the NMC
 - Revalidation
- Pharmacology and NMP
 - Child health
- Understanding scope of practice
- Benefits of NMP - children



National developments



- 151 HEIs
- January 2023 council meeting
 - Approval of proposed changes to programme standards
 - Work with approved HEIs to implement changes to their programmes
 - Accessible format
 - Welsh

National developments



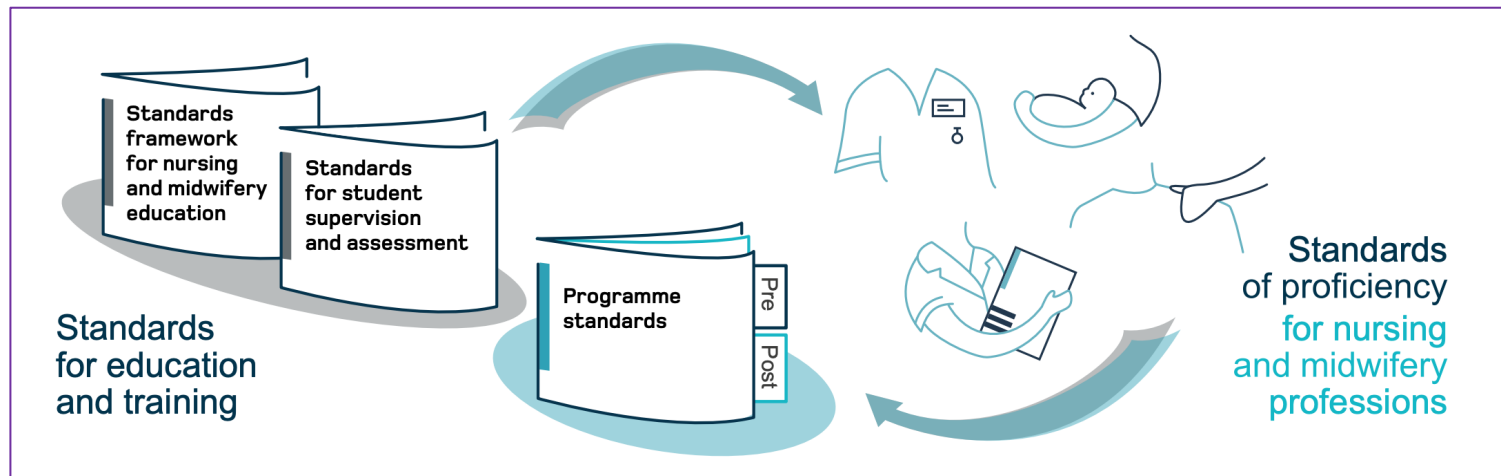
Standards

- Must be on NMC register in order to be able to prescribe
- LSBU
 - Full 100% of all module components
 - Ratified at exam board
 - Governing body informed
 - Students advised to contact NMP leads at Trust



Standards

- 1 - NMC Standards framework for nursing and midwifery education (2018)
- 2 - NMC Standards for student supervision and assessment (2018)
- 3 – NMC Standards for prescribing programmes 2018

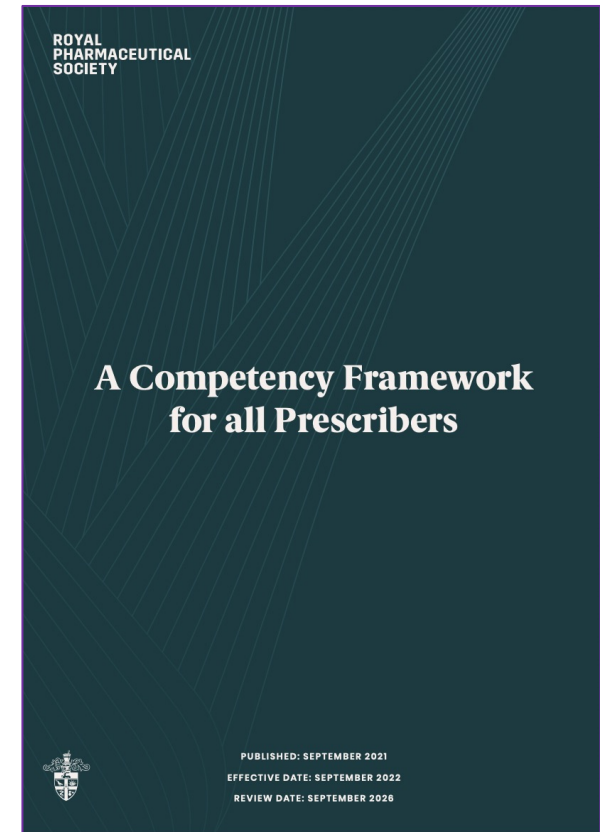


Standard 1

2.2 Ensure programmes are designed to meet proficiencies and outcomes relevant to the programme

Utilise the RPS Competency Framework for the practice Portfolio

- Modernising the usability

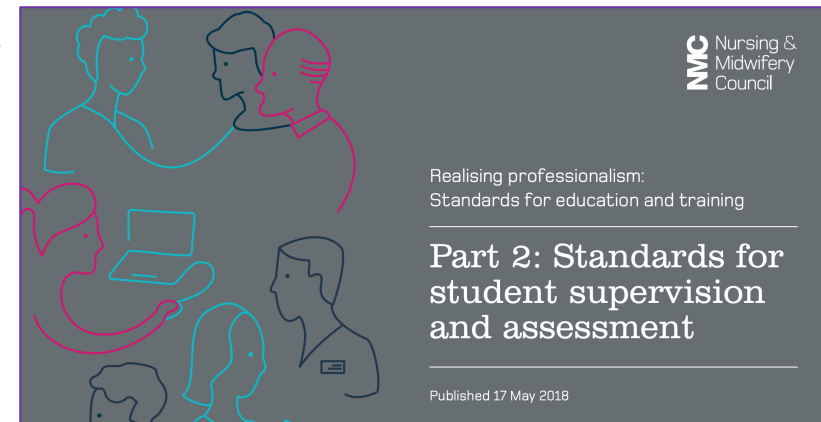


Standard 2

Practice Supervisors

3.4 have current knowledge and experience of the area in which they are providing support, supervision and feedback

4.3 have sufficient opportunities to engage with practice assessors and academic assessors to share relevant observations on the conduct, proficiency and achievement of the students they are supervising



Examples of Practice Supervisors

Working with other professionals who aren't the DPP / PA / PE

Preferably be prescribers

- Physiotherapy clinic
- Microbiologist
- Ward pharmacist
- Professional in MDT



Standard 3

1.7 ensure that applicants for V300 supplementary/independent prescribing programmes have been registered with the NMC for a minimum of *one year* prior to application for entry onto the programme



Designated Prescribing Practitioner

LSBU criteria:

Must be an independent prescriber (IP)

Must have qualified as an IP minimum 3 years ago

Must be actively prescribing

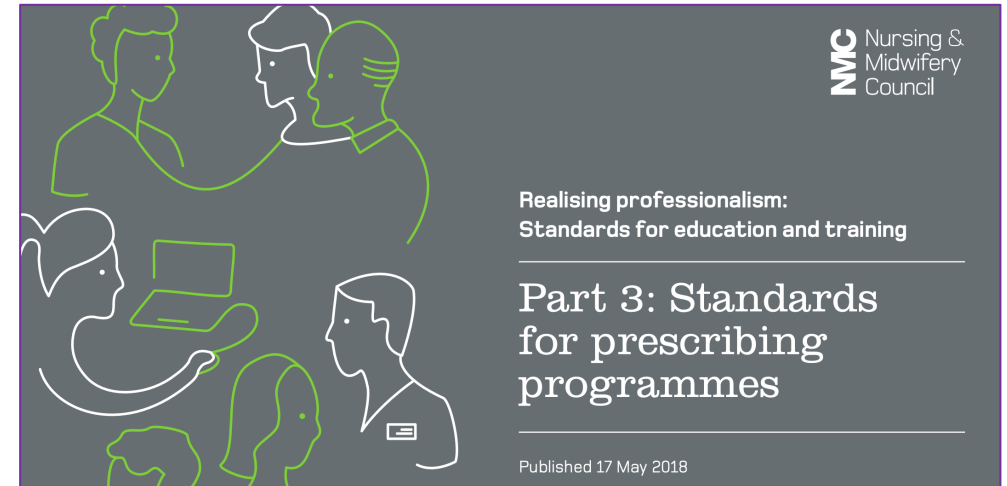
Must commit to working with the student a minimum of 30 hours

Must commit to having a minimum of 4 meetings

Academic Assessors

Also fulfils the role of personal tutor.

4.6 Ensure the student is assigned to an academic assessor who is a registered healthcare professional with suitable equivalent qualifications for the programme the student is undertaking



Our role – Personal Tutor

Supportive

- University life
- Time management skills
- Respond to emails within 5 working days
- Help in identifying personal strengths weaknesses
- Discuss personal goals



Our role – Personal Tutor

Administrative

- Meet with student at start of course and when requested
 - Formative feedback on work
- Maintain records of communication
- Liaise with Course Director re any issues
- Liaise with DPP
- Can visit on site if necessary
- Regular group tutorials

National developments

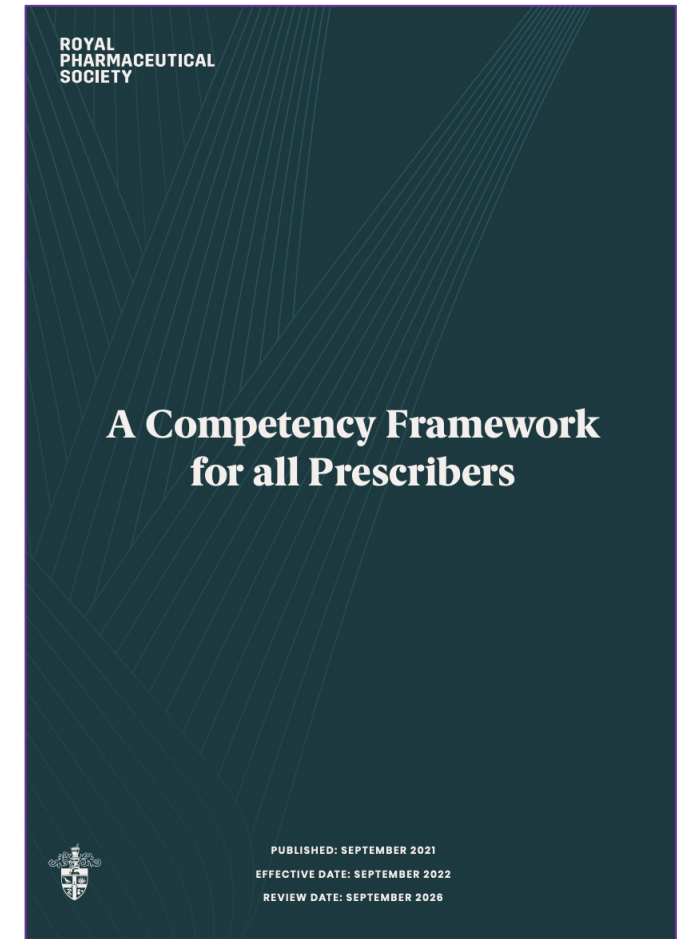


- October 2022
 - <https://www.rcn.org.uk/Get-Help/RCN-advice/non-medical-prescribers>

- › **Nurse independent prescribers and controlled drugs: changes to the Misuse of Drugs Regulations**
- › **Pharmacists and Allied Healthcare Professionals**
- › **Nurse prescribers and RCN indemnity**
- › **Become a nurse prescriber**
- › **Further information**

National developments

- November 2021
 - NMC accepted RPS competency framework as their standards of competency for prescribing practice
- September 2022
 - Framework updated
 - NICE and HEE approached the RPS to manage the update of the framework on behalf of all the prescribing professions in the UK
 - The RPS agreed to revise and update the framework in collaboration with the other prescribing professions and members of the public



Revalidation



- Allows you to maintain your registration with the NMC
- Demonstrates your continued ability to practise safely and effectively
- A continuous process that you will engage with throughout your career
- May 2019



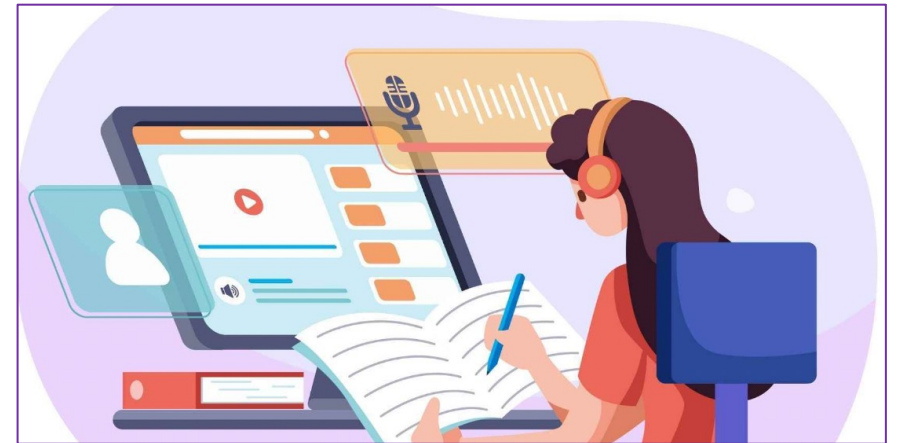
Practice hours

- 450 hours required over the last three years
- **LSBU**
 - Requires that all health care professionals undertaking our module are working at least 25 hours a week clinically



Continuing Professional Development

- 35 hours of CPD relevant to your scope of practice over the last three years
- **LSBU**
 - 90 hours supervised practice
 - 12 days (x6 hours per day = 36 hours) of study





**London
South Bank
University**

EST 1892

PRACTICE COMPETENCY PORTFOLIO

(An electronic copy is available for download on the NMP V300 VLE site)

Cohort		Colour	
---------------	--	---------------	--

Student Name		Student number	
Placement Address			
Nominated PA / PE / DPP			
Nominated Academic Assessor			

Practice related feedback

- 5 pieces of practice related feedback in the last three years
- **LSBU**
 - **Four practice supervisor records**

The image shows two identical practice supervisor record forms side-by-side. Each form is titled "Practice Supervisor Record" and contains the following fields:

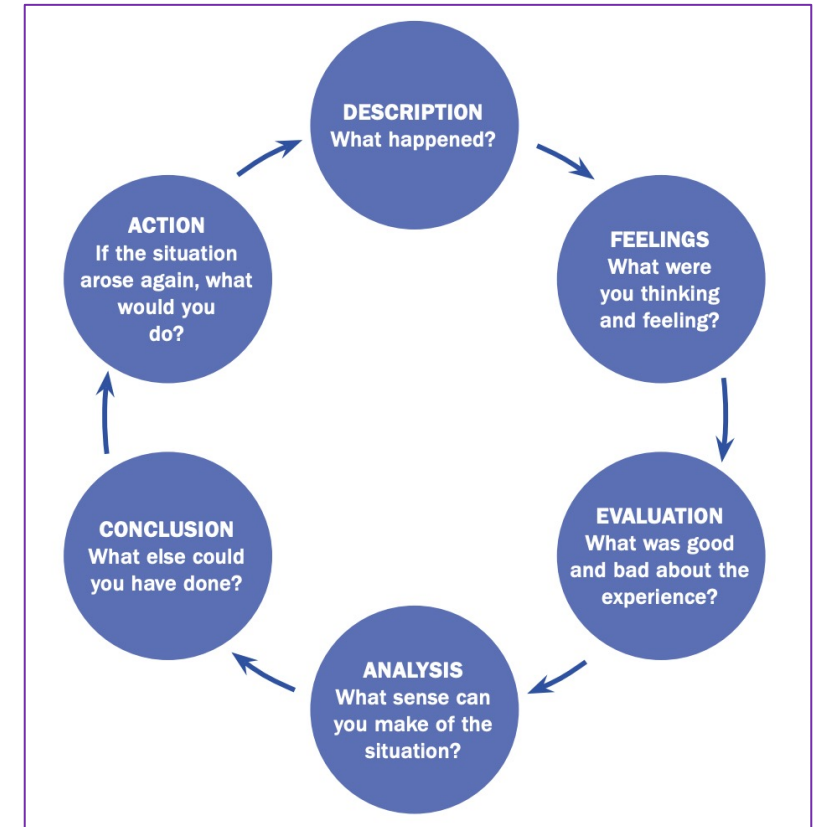
- Student Name:
- Student ID:
- Cohort:
- Practice Supervisor name:
- Practice Supervisor email:
- Location:
- Date:
- Practice supervisor comment: (large empty box)
- Practice Supervisor signature:

At the bottom of each form, it reads: "Course Director: Bernadette Rae: raeb2@lsbu.ac.uk LSBU NMP V300 2019/20".

The right-hand form also includes a "Student comment:" box at the top right and signature lines for "Student signature:", "Practice Assessor name:", "Practice Assessor email:", "Academic Assessor name:", and "Academic Assessor email:" at the bottom right.

Written reflective accounts

- 5 written reflective accounts in the last three years
- **LSBU**
 - **2 Reflections**
 - **The Consultation**
 - **Prescribing Governance**
 - **Reflection model**
 - **Supporting article**



(Wain, 2017)

Reflective discussions

- Reflective discussion with another NMC registrant regarding the 5 reflective accounts
- **LSBU**
 - **Formative feedback**
 - **Group tutorials**
 - **DPP feedback**

One template per meeting. May be typed or completed by hand – handwriting must be legible.

Meeting Number (1, 2, 3 or 4 etc)	
DPP formative comment (required)	
Strategies and resources to be utilised in next 4 weeks (required)	

Assessment of achievement	NAME (BLOCK CAPITALS)	SIGNATURE	DATE
DPP			
Student			

Pharmacology

- Detailed principles of pharmacology teaching
- Paediatric health care professionals
 - Nurses
 - Pharmacists
 - Dieticians



	Developmental change	PK consequence	Drugs affected	Examples
Absorption	↓Intestinal transit	↓C _{max} and ↓AUC	Poorly solubles Sustained release formulations	Theophylline
	↓Gastric pH	↑C _{max} for weak acids ↓C _{max} for weak bases	Weak acids Weak bases	Penicillin Itraconazole
	↓Intestinal bile concentration	↓C _{max} and ↓AUC	Poorly solubles	Hydrocortisone
Distribution	Body composition	↔V _d (neonates have relatively reduced fat whereas infants have relatively increased fat compared with adults; extracellular water is relatively higher in neonates compared with preschool children)	Lipophilic drugs ↓V _d in neonates and ↑V _d in infants compared with adults Hydrophilic drugs ↑V _d in infants compared with neonates	Diazepam Aminoglycosides (e.g. gentamycin)
	↓plasma protein	↑free fraction of drug in plasma ↑V _d	Highly protein bound drugs	Phenytoin, salicylates, ampicillin, nafcillin, sulfisoxazole and sulfamethoxyphrazine
Metabolism	Larger relative size of liver	↑hepatic clearance of drugs	Those extensively metabolized	Theophylline, caffeine, carbamazepine and valproic acid
	Ontogeny of liver enzymes	↔hepatic metabolism of drugs	Drugs metabolism by specific pathways eg UDP glucuronosyl transferase	Chloramphenicol
	Bacterial colonization of the intestine	↑C _{max} and ↑AUC	Those metabolized within the gut	Digoxin
Elimination	Larger relative size of kidney	↑renal clearance in infants and preschool children	Those excreted unchanged in urine	Levetiracetam, cimetidine and certirizine
	Ontogeny of tubular transporters	↔renal clearance of drugs	Those susceptible to tubular transport	Digoxin

(Batchelor & Marriott, 2013)

Absorption

Oral – most common route for children

Will the drug actually ever get to the GI tract?

Children reject medications

Taste

Smell

Texture

Rectal

Early expulsion of the suppository

Increased number of pulsatile contractions that occur in the GI tract in neonates



Taste

Children born preferring sweet tastes

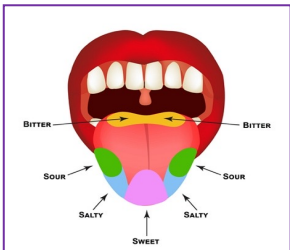
- Breastmilk
- Analgesia

More 'bitter sensitive' than adults

- Aversion to green vegetables

Need to consider palatability of oral drug formulations

- Amoxicillin – v sweet
- Flucloxacillin – v unpleasant



When the scientists have stopped being brilliant making vaccines, could a couple of them please divert their brilliance to trying to make an antibiotic for children that doesn't taste like battery acid.

[#LosingTheBattle](#)



Variance in age

- Neonates
- Childhood
- Adolescence

Examination

- Ante-natal USS
 - Boy
- Baby born
 - Male sex of rearing assigned
 - Given a male name
- Post natal check
 - No testes in scrotum

Polly

- Presented to the General Practitioner (GP) aged 13 years May 2014
 - ‘High BMI’
 - Gaining weight
 - Mum ‘very strict – diet and exercise’
 - Menarche – 11 years
 - Regular / heavy

Clinical Examination

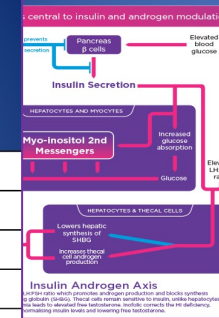
- Ear, nose and throat clear
- Clammy and sweaty
- No increased work of breathing
 - Slight wheeze bilaterally
 - Good air entry
 - Swollen cervical lymph nodes
- No dysmorphic features

Temperature	36.8°C
Heart rate	120
Respiratory rate	20
O2 saturations in air	98%
Blood pressure on right arm	90 / 60
Capillary refill time (CRT)	Less than 2 seconds
Height	112cm

Medication review

- Stay on same dose of Fludrocortisone
- Hydrocortisone suspension three times a day
 - 2/2/3mg
- Changed to hydrocortisone 10mg tablets
 - 1.25mg four times a day
 - Guidance given on crushing and mixing with water breast milk
 - Dosage titrated against BSA calculations
 - Side effects of underdosing → androgenisation
 - Side effects of overdosing → Cushing’s
 - Regular bloods
- Intensive emergency management training
 - x 3 emergency hydrocortisone packs prescribed and administered

Inofolic sachets



- Combination of Folic Acid and Myo-Inositol (MYO)
- MYO
 - Involved in the signal of insulin from the insulin receptor, so important for patients with insulin resistance..
 - Important role in nuclear and cytoplasmic oocyte development
- Helps menstrual cycle disturbances
- Reduces obesity
- Reduces hyperandrogenism

Carbimazole


- Decreases the uptake and concentration of inorganic iodine by the thyroid
- Half life of 5.3 – 5.4 hours
 - Prolonged by renal or liver disease
- Side effects
 - Itchiness
 - Anti-histamines
 - Propylthiouracil
- Can cross the placenta
 - May cause fetal goitre
- Decreases effect of Metyrapone
- Affects concentration of Digoxin



Confusing array of ways to administer hydrocortisone – risk of dose related side effects



Risk of overtreatment



Cushingoid appearance
Weight gain
and height stasis

ESPE 2010

Manipulation of tablets

Quartering 10mg hydrocortisone tablets

Unacceptable dose variations

Glucocorticoid excess

Cortisol insufficiency (*Madathiletu, 2018*)

Splitting tablets

Unequal parts / crumbling = unequal doses

Common practice

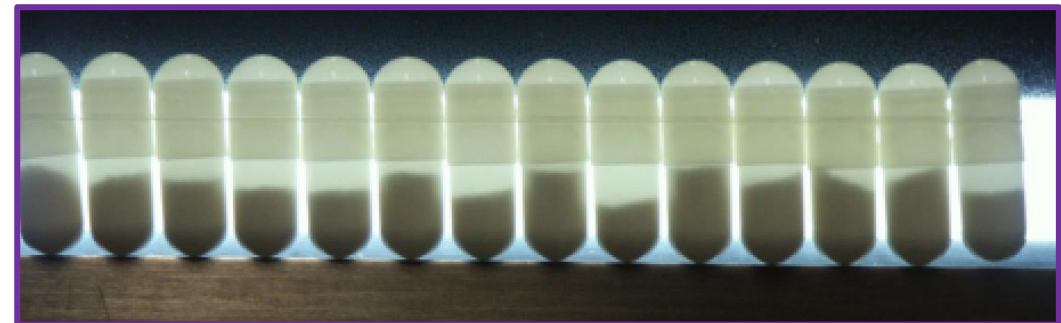
Renders the medication unlicensed

No guidelines or evidence (*Richey, 2013*)

Compounded Hydrocortisone capsules

Variability in capsule content = variation
in dose

(*Neumann, 2017*)



Alkindi - granules

Granules well tolerated in children less than 6 years of age

Cortisol levels measured

Smell and taste are neutral (Neumann, 2018)

1. Hold capsule so that the text is at the top and tap the capsule to make sure the granules are at the bottom

2. Gently squeeze the bottom of the capsule

3. Twist off the top of the capsule

4. Pour all granules out of capsule

Either pour all the granules directly onto the child's tongue

OR pour all the granules directly onto a spoon and place them in the mouth

OR for children who are able to take soft food, sprinkle the granules onto a spoonful of cold or room temperature soft food (such as yoghurt or fruit puree) and give immediately

REVIEW ARTICLE

Clin Pharmacokinet 2006; 45 (11): 1077-1097
0312-5963/06/0011-1077/\$39.95/0
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Guidelines on Paediatric Dosing on the Basis of Developmental Physiology and Pharmacokinetic Considerations

Imke H. Bartelink¹, Carin M.A. Rademaker², Alfred F.A.M. Schobben¹ and John N. van den Anker^{3,4,5}

Review
For reprint orders, please contact: reprints@futuremedicine.com

Pharmacokinetic considerations when prescribing in children

International Journal of
Pharmacokinetics

CURRENT OPINION

Current Issues in Pediatric M

Doreen Matsui
Department of Paediatrics, Children's H

Published in final edited form as:
J Clin Pharmacol. 2018 May ; 58(5): 650-661. doi:10.1002/jcph.1054.

Obesity and Pediatric Drug Development

Janelle D. Vaughns, M.D.^{1,3}, Laurie S. Conklin, M.D.², Ying Long, Pharm.D.⁴, Panli Zheng, B.S.⁵, Fahim Faruque, Pharm.D.⁶, Dionna J. Green, M.D.⁸, John N. van den Anker, M.D., Ph.D.^{3,7}, Gilbert J. Burckart, Pharm.D.⁸



OPEN ACCESS

Pharmacokinetic studies in children: recommendations for practice and research

Charlotte I S Barker,^{1,2,3} Joseph F Standing,^{1,2} Lauren E Kelly,^{4,5} Allison C Needham,⁸ Michael J Rieder,^{6,7} Saskia N de Wildt,^{9,10} Martin Offringa^{8,11}

ORIGINAL ARTICLE

Adherence to treatment in adolescents

Danielle Taddeo MD¹, Maud Egedy MD², Jean-Yves Frappier MD¹

'Our legal responsibility ... to intervene on behalf of the child': Recognising public responsibilities for the medical treatment of children

Jo Bridgeman University of Sussex, UK

Medical Law International
2021, Vol. 21(1) 19-41
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Article r
sagepub.com/journ
DOI: 10.1177/0968
journals.sagepub.



RESEARCH ARTICLE

Parental involvement in decision-making about their child's health care at the hospital

Antje Aarthun^{1,2} | Knut A. Øymar^{1,3} | Kristin Akerjordet^{2,4}

WILEY **NursingOpen**

A critical analysis of legal and ethical issues regarding consent in childhood

Maggie Pocock

Scope of practice

- Professional, legal and ethical issues

Legislation	Professional	Regulatory
<ul style="list-style-type: none">■ Prescription only Medicines (POMs) (Human use) Orders 1997 and subsequent statutory instruments■ Misuse of Drugs Act 1971■ Misuse of Drugs Regulations 2001■ Human Medicines Regulations 2012■ Human Medicines (Amendment) Regulations 2018	<ul style="list-style-type: none">■ Nursing and Midwifery Council http://www.nmc-uk.org■ General Pharmaceutical Council http://www.pharmacyregulation.org■ Health and Care Professional Council (HCPC) http://www.hcpc-uk.org■ General Optical Council Standards of Practice for Optometrists and Dispensing Opticians http://www.optical.org	<ul style="list-style-type: none">■ Medicines and Healthcare Products Regulatory Agency (MHRA) http://www.mhra.gov.uk■ Drugs and Therapeutics Committees

(Mitchell & Pearce, 2021)



nmc Nursing & Midwifery Council



hcpc health & care professions council

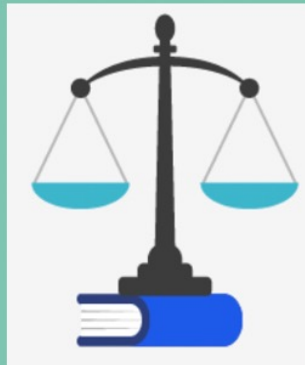


General Pharmaceutical Council



Paediatric Legal Aspects of Non-Medical Prescribing

Kate Davies
Associate Professor
Paediatric Prescribing & Endocrinology



With thanks to Bernadette Rae



Legal Aspects - Children

- Consent and capacity
 - Mental Capacity Act (2005)
 - Data Protection Act (1998)
- Parental responsibility
- Controversial prescribing
- Accountability
- Nurse as a prescriber
 - Health and Social Care Act (2001)
- Pharmaceutical companies

RESEARCH ARTICLE

Short-term outcomes of pubertal suppression in a selected cohort of 12 to 15 year old young people with persistent gender dysphoria in the UK

Polly Carmichael^{1*}, Gary Butler^{1,2,3}, Una Masic¹, Tim J. Cole³, Bianca L. De Stavola³, Sarah Davidson¹, Elin M. Skageberg¹, Sophie Khadr³, Russell M. Viner³

¹ Gender Identity Development Service (GIDS), Tavistock and Portman NHS Foundation Trust, London, United Kingdom, ² Paediatric Endocrine Service, University College London Hospitals NHS Foundation Trust, London, United Kingdom, ³ UCL Great Ormond Street Institute of Child Health, University College London, London, United Kingdom

8.5. Recognises and responds to factors^e that might influence prescribing.

8.6. Works within the NHS, organisational, regulatory and other codes of conduct when interacting with the pharmaceutical industry.

Prescribing errors

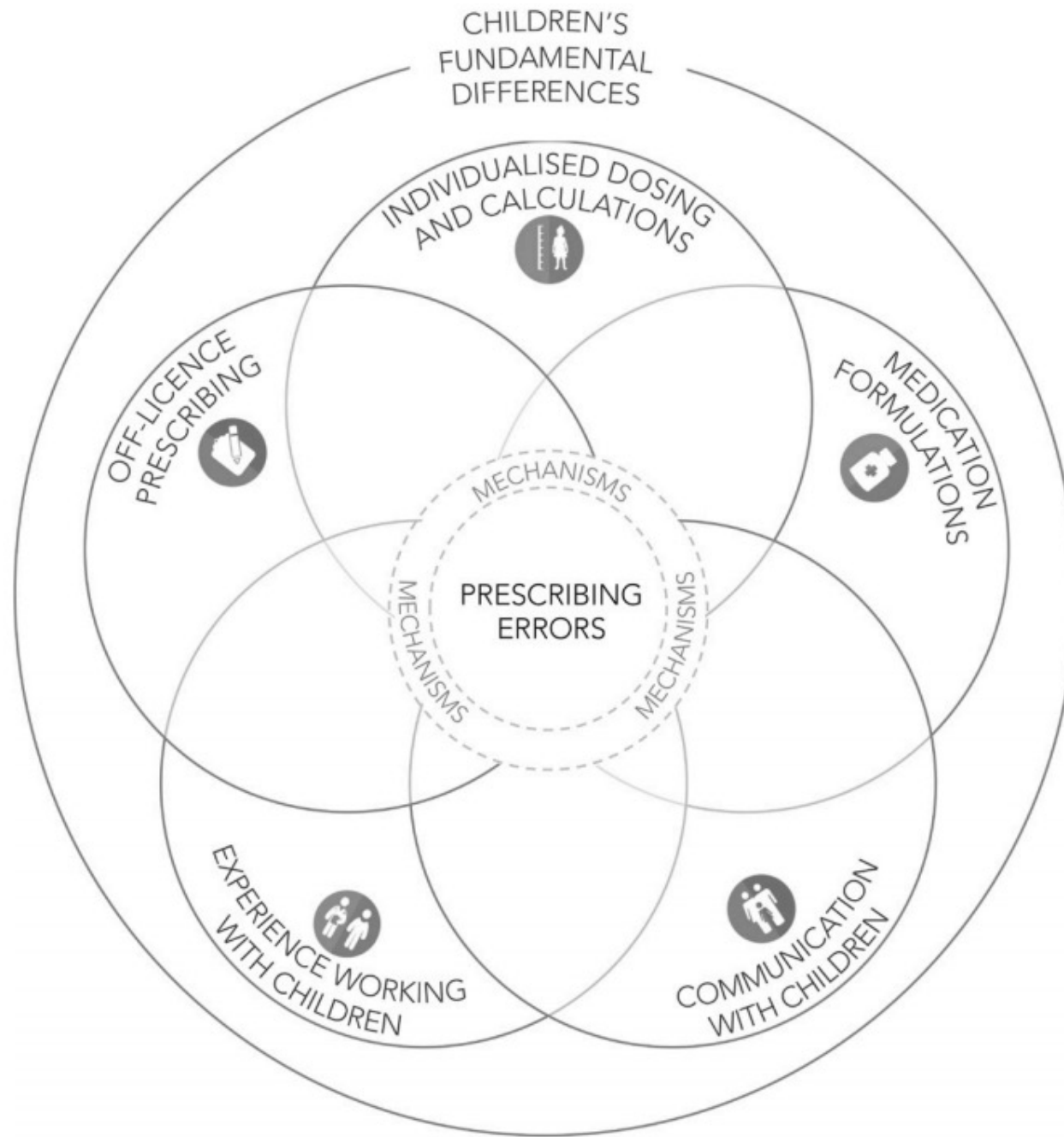
Open access

Research

BMJ Open What causes prescribing errors in children? Scoping review

Richard L Conn,^{1,2} Orla Kearney,³ Mary P Tully,⁴ Michael D Shields,^{2,5}
Tim Dornan¹

Conn RL, *et al.* *BMJ Open* 2019;**9**:e028680. doi:10.1136/bmjopen-2018-028680



Off licence drug use

Off-licence drug use	'Special' formulations	7PP1	<i>Off-licence medications are things that (aren't) available with the UK licence... a specialist manufacturer somewhere will start producing a medication, or it'll be licensed in Europe or something like that, and we'll import that. Some of those products need translated so they don't have a UK label on them.</i>
	Multiple, inconsistent resources	8PT2	<i>A lot of centres, neonatal units, will have different prescribing manuals, so whereas you're used to [using] a certain medication in such a way, you'll go to a manual, it'll say do it a different way.</i>

Best practice in prescribing off-label medication for children

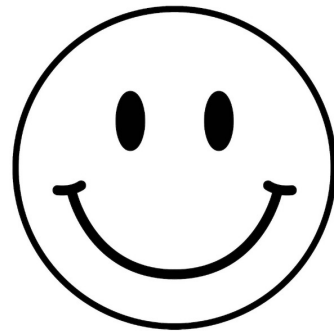
Michelle Bennett

Nurse Prescribing 2018 Vol 16 No 5

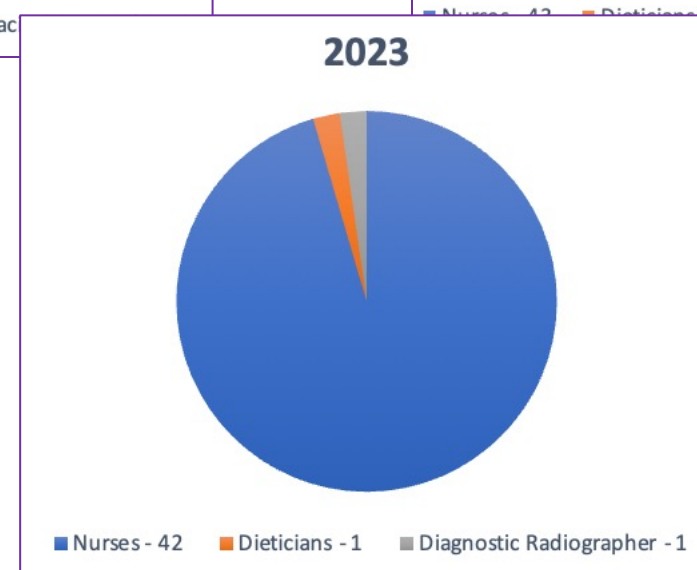
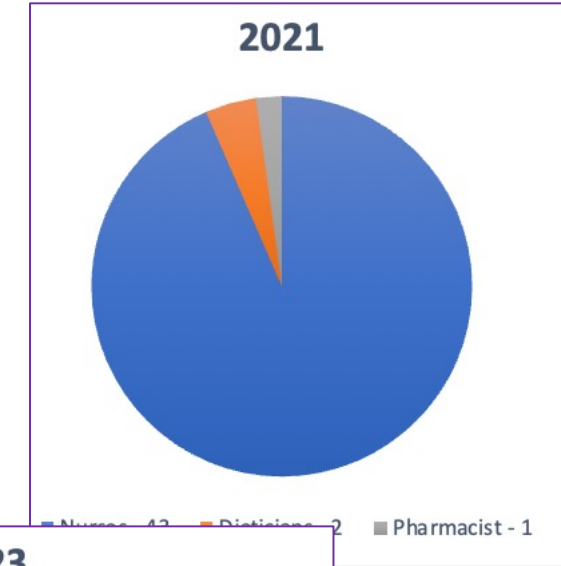
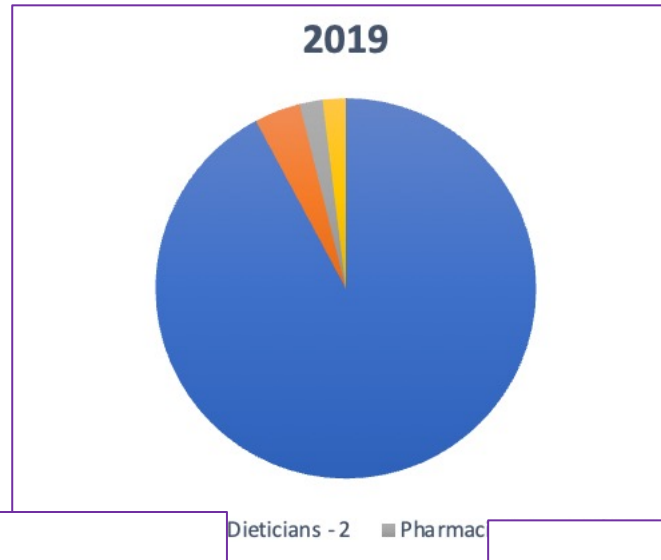
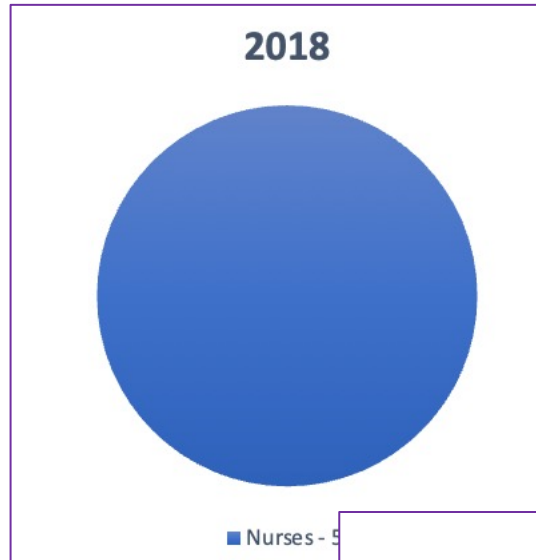
EST 1892
LSBU

Benefits of NMP in child health

- Thorough understanding of what consent means
- Complexity
- Calculations
- Improving patient care
 - Enhancing safety
 - Increased satisfaction
- Role development
 - Autonomy
 - Increased satisfaction



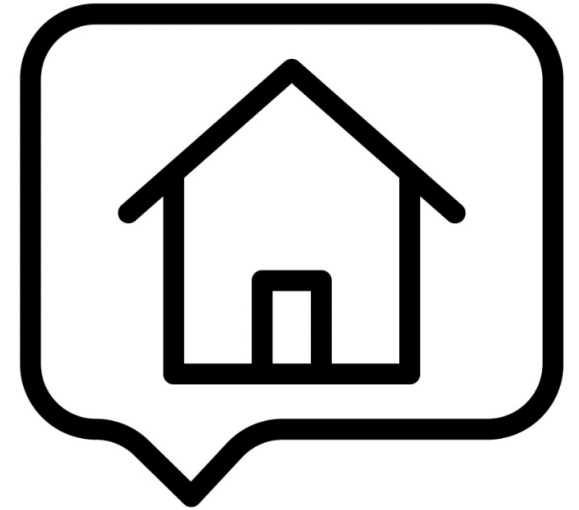
Enhances MDT working



LSBU

Summary

- Overview of national developments
- NMC Code
- Revalidation
- Understanding of pharmacokinetics and pharmacology
- Scope of practice
 - Legal aspects
 - Prescribing errors
- Benefits of independent prescribing in child health
 - Multidisciplinary team working




Thank you



@LSBU_Prescribe



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PODCAST

Non Medical Prescribing at London South Bank University

Kate

FOLLOWING



London South Bank University

LSBU Prescribing Team
@LSBU_Prescribe Follows you

The official twitter account for the LSBU prescribing team (part of @LSBU_HSC)
linktr.ee/NMP_LSBU

London, England lsbu.ac.uk/study/study-at...
Joined December 2020

70 Following 279 Followers

kate.davies@lsbu.ac.uk

EST 1892 **LSBU**

The OTHER event of the year!



LSBU PAEDS NMP CPD DAY
Friday 21 July 2023



EST 1892 **LSBU**

References

Carmichael P, Butler G, Masic U, Cole TJ, De Stavola BL, Davidson S, Skageberg EM, Khadr S, Viner RM. Short-term outcomes of pubertal suppression in a selected cohort of 12 to 15 year old young people with persistent gender dysphoria in the UK. *PLoS One*. 2021 Feb 2;16(2):e0243894

Conn RL, Kearney O, Tully MP, *et al* What causes prescribing errors in children? Scoping review *BMJ Open* 2019;9:e028680. doi: 10.1136/bmjopen-2018-028680

Madathilethu J, Roberts M, Peak M, Blair J, Prescott R, Ford JL.(2018) Content uniformity of quartered hydrocortisone tablets in comparison with mini-tablets for paediatric dosing. *BMJ Paediatr Open*. Jan 29;2(1)

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Richey, R. H., Shah, U. U., Peak, M., Craig, J. V., Ford, J. L., Barker, C. E., Nunn, A. J., & Turner, M. A. (2013). Manipulation of drugs to achieve the required dose is intrinsic to paediatric practice but is not supported by guidelines or evidence. *BMC pediatrics*, 13, 81. <https://doi.org/10.1186/1471-2431-13-81>

RPS (2022) A competency framework for all prescribers *Royal Pharmaceutical Society*

Wain, A. (2017) Learning through reflection *British Journal of Midwifery* 25 (10) pp.662 - 666