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Interprofessional collaboration and nurse prescribing

Prof. dr. Tinne Dilles



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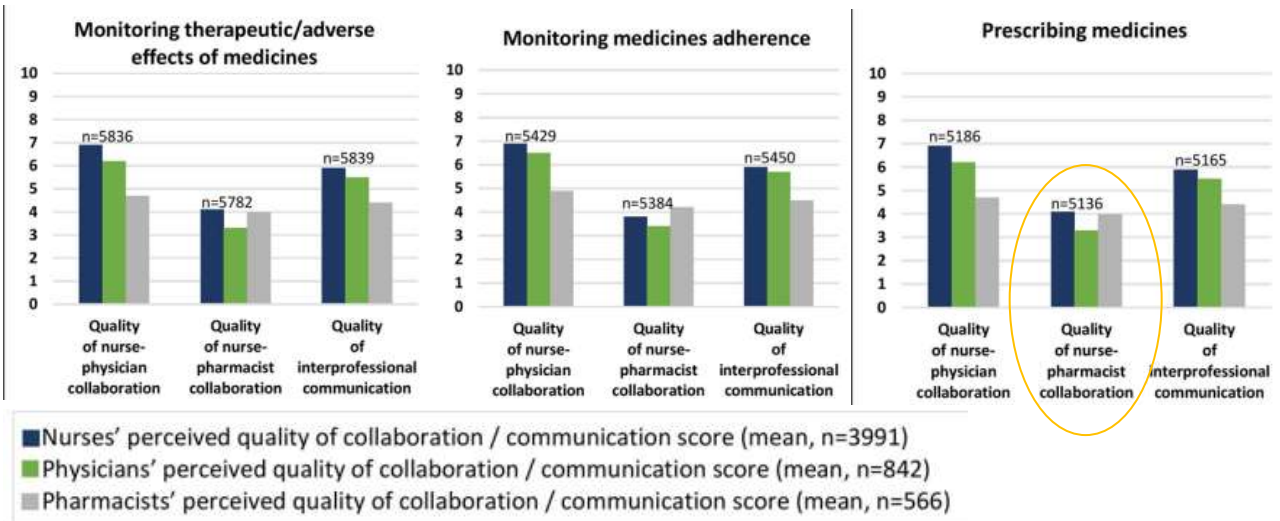


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No conflicts of interest to declare





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Models of nurse prescribing

International Council of Nurses

https://www.icn.ch/sites/default/files/2023-04/ICN_Nurse_prescribing_guidelines_EN.pdf

Models of Nurse Prescribing

Independent/ Autonomous

- Clinical assessment
- Establishment of a diagnosis
- Decisions about appropriateness
- Prescription

Supplementary/ Dependent

- Voluntary partnership with an independent prescriber
- Initial assessment and diagnosis by an independent prescriber
- Prescription in consultation with an independent prescriber

Structured arrangement/ Protocol

- Specific group of patients and conditions
- Pre-determined protocol or clinical management plan

Prescribing to administer

(Time and dose prescribing)

Within model differences

- Formulary
- Nurse educational levels
- Experience in clinical practice
- Extra training
- Patient group
- Collaboration agreements

Nurse prescribing in Europe – update 2025

Country	IP	DP	Prot
UK			
Norway			
France			
Finland			
Lithuania			
Poland			
Spain			
Switzerland			
Republic of Ireland			
The Netherlands			
Sweden			
Estonia			

Marie Blondeel, Laura Mortelmans, Tinne Dilles

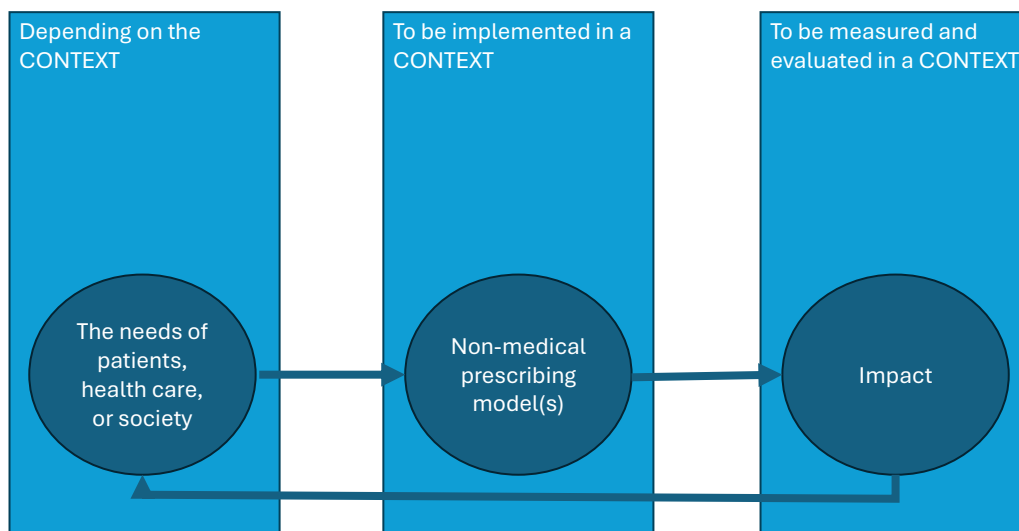
- Large international interview study
- Errors in literature
- In the table, are not considered:
 - Variations within nurse prescribing models
 - Variations between regions within countries

Implementation of nurse prescribing

Processes, challenges, and expectations.
 Literature review and the Belgian case.

References

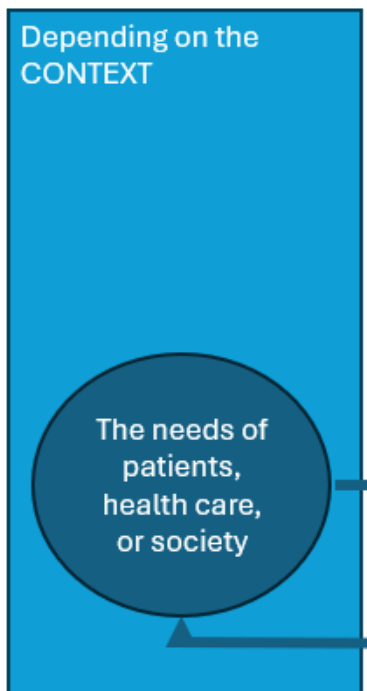
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The needs

- More patient-centered care
- Improved access to care and continuity of care
- Care efficiency
- Legal protection for nurse prescribers
- Shortage of medical prescribers/ reduce workload of medical prescribers
- Labour costs



The context

More effective if:

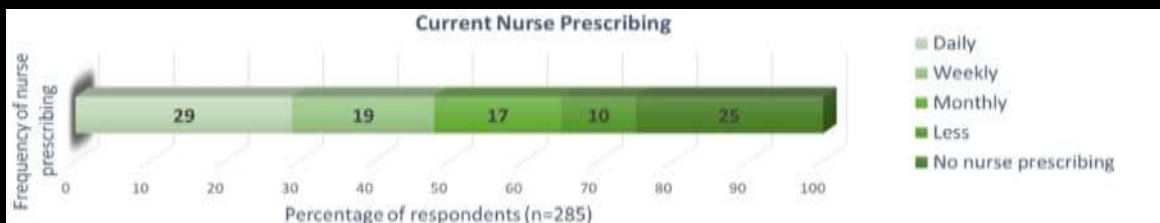
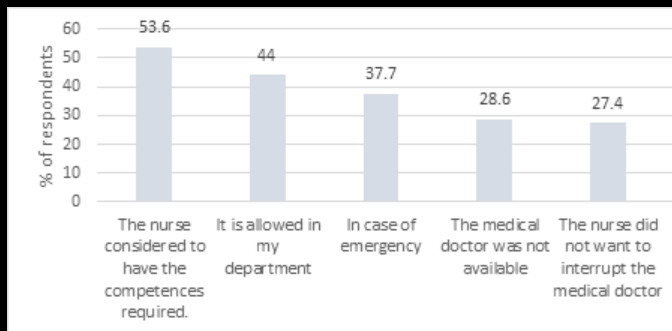
- Low availability of MDs (Remote areas)
- Emergencies
- Chronic care
- Established teams
- (Specialized care with clear protocols)
- (Low medication literacy)

Example: Belgium

Exploring Nurse Prescribing Practices and Preferences in Belgian Hospitals: A Multicentre Cross-Sectional Survey on Healthcare Providers' Perspectives and Expected Impact

Maria Blomdort^{1,2}, Laura Monemans^{1,2}, Elisabeth De Sitter¹, Kelly Sabbe^{1,2}, Eva Goossens¹, Lieve Dierckx^{1,2}

- Cross-sectional survey design
- n=303
- (86% nurse, 10% MD, 4% pharmacist)
- Hospitals
- Large variety of departments
- Nurse prescribing not legally allowed



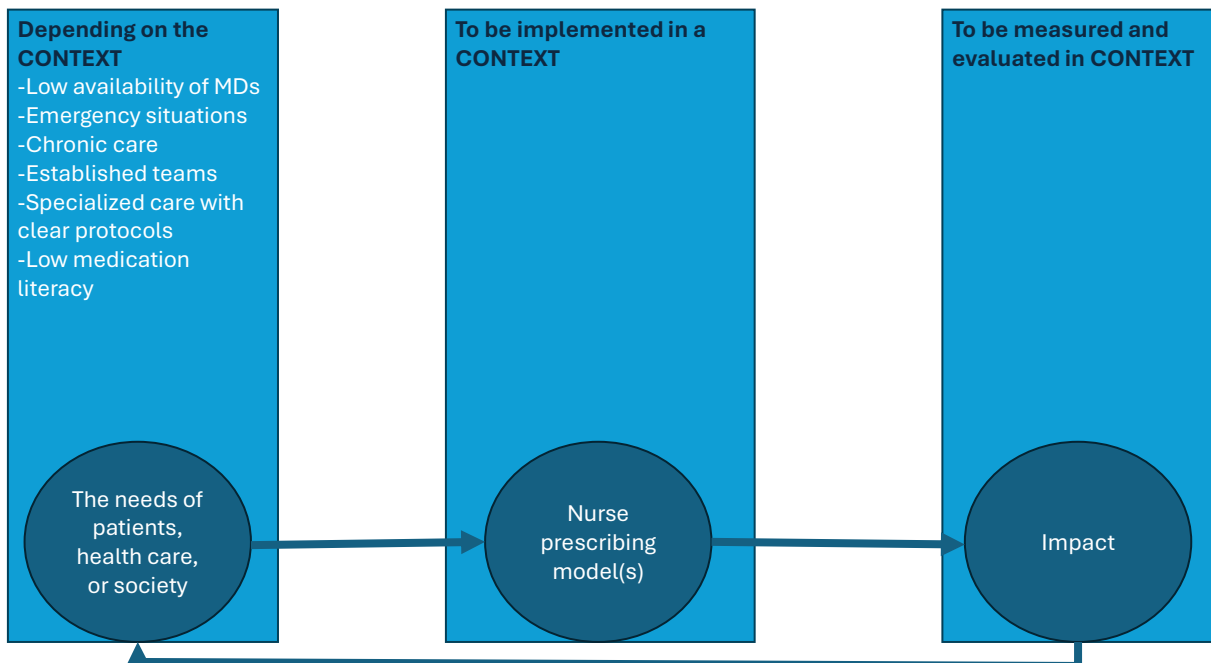
- Limited to prescription-only drugs: 22% daily nurse prescribing
- 17% only repeat prescriptions, 83% also initiation of new

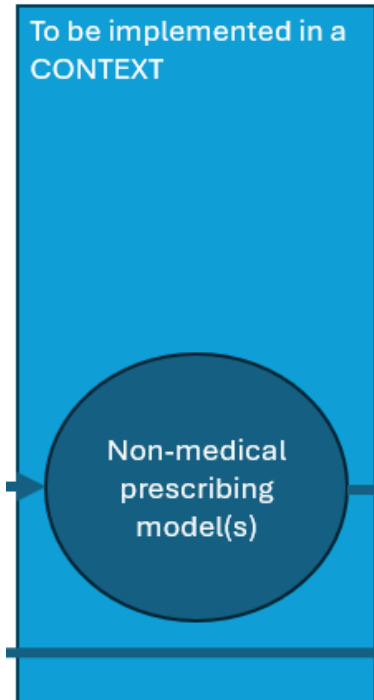
PREFERRED MODEL		n	No nurse prescribing	Supplementary prescribing	Independent prescribing	Pearson Chi ²
Profession	Nurse	107	16.2	38.2	45.6	0.414
	MD	29	24.1	37.9	37.9	
	Pharm.	12	33.3	41.7	25.0	
Leadership position	Yes	71	28.2	39.4	32.4	0.013
	No	174	13.8	37.9	48.3	
Nurse prescribing in respondents' work context	Daily	66	12.1	27.3	60.6	<0.001
	Weekly	42	7.1	35.7	57.1	
	Monthly	41	22.0	29.3	48.8	
	Less	84	23.8	52.4	23.8	
Intensive/ medium care emergency/ recovery	yes	71	4.2	32.4	63.4	<0.001
	no	162	22.8	40.7	36.4	
Operating theatre	yes	16	50.0	37.5	12.5	<0.001
	no	217	14.7	38.2	47.0	

Often reported, also in primary care:

- Medical doctor:

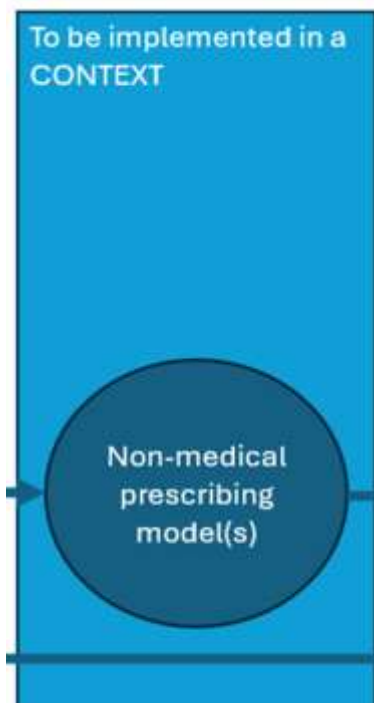
“That nurse is competent and decides on starting, adjusting, or stopping medicines’ prescriptions regularly. The nurse knows what to do. I trust the nurse. There is strong communication and collaboration. The nurse assesses the patients’ health and evaluates the pharmacotherapy. The nurse can invest more in patient-centered care. At the end of the day, I just sign all prescriptions. I don’t check anymore.”





The context of implementation: challenges

- Nurses' prescribing competencies
 - Educational levels, extra training, life-long learning, experience
 - Supervision and mentorship
- Nurses' willingness to prescribe medicines
- Accountability and insurance
- Interprofessional collaboration and communication
 - Avoid missed care and overlapping care
- Deontology and ethics
- Monitoring, review, and deprescribing
- Medication safety – DRPs



The context of implementation: challenges

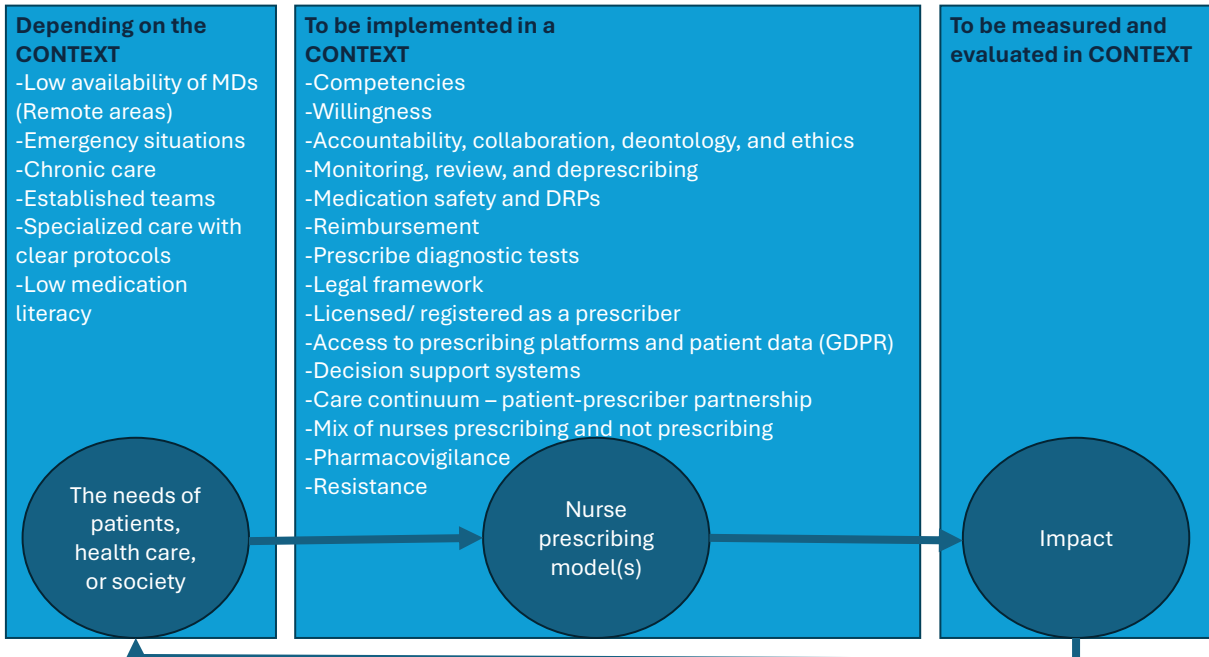
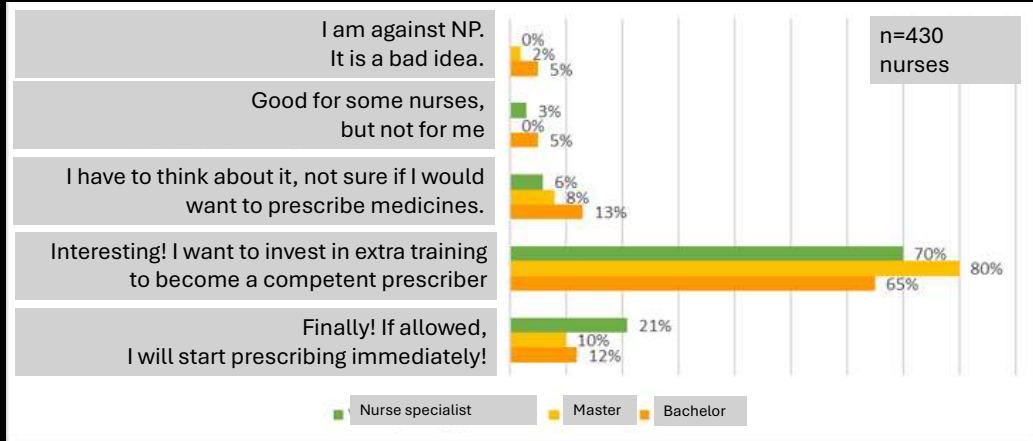
- Reimbursement
- Prescribe diagnostic tests
- Legal framework
- Licensed/ registered as prescriber
- Access to prescribing platforms and patient data (GDPR)
- Decision support systems
- Pharmacovigilance
- Care continuum – patient-prescriber partnership
- Mix of nurses who prescribe and nurses who do not prescribe?
- Patient acceptance and awareness
- Resistance by some pharmacists and physicians
- Innovation cost

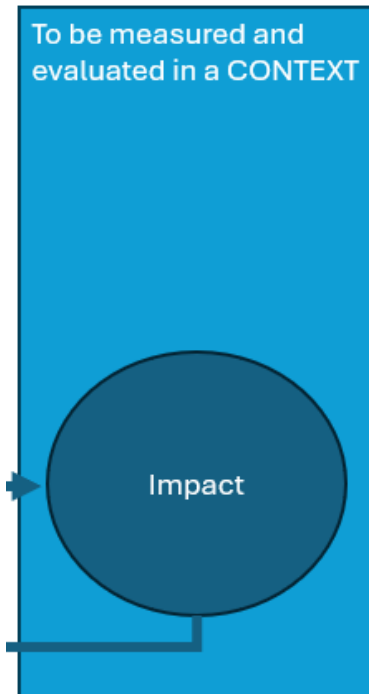


network
verpleeg
kunde

Example: Belgium

Legal framework for nurse specialists to prescribe. Implementation postponed.
Debates about authorizing bachelors to prescribe.



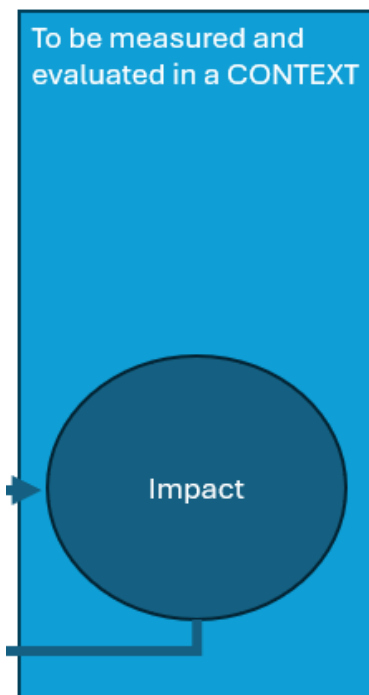


The impact

- Qualitative research
- Perceptions
- Comparative studies with risk of bias
- Need for more evidence

Main source:

Gielen SC, Dekker J, Francke AL, Mistiaen P, Kroezen M. The effects of nurse prescribing: a systematic review. *Int J Nurs Stud*. 2014 Jul;51(7):1048-61. doi: 10.1016/j.ijnurstu.2013.12.003. Epub 2013 Dec 16. PMID: 24398118.



The impact

	Worse	Comparable	Better
Quality medication type and dose			
Number of prescriptions			
Clinical Parameters*			
Healthcare consumption**			
Patient information & support			
Medication adherence			

*HbA1c, cholesterol levels, asthma control, blood pressure, urine albumin, pharyngitis, health status, mortality, ...

**Consultation time, referrals, follow-up visits, ...

To be measured and
evaluated in a CONTEXT

Measured and evaluated in a context

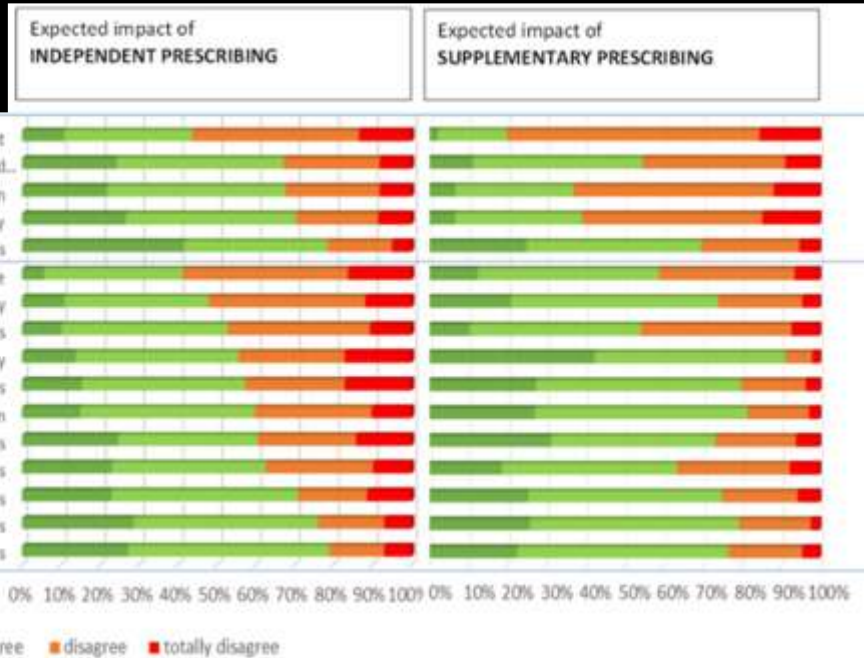
- Availability of data
- Identification of nurse prescribers
- Comparable control groups
- Diversity in prescribing models
- Spontaneous evolution in prescribing patterns
- Many context-dependent, relevant outcomes
- Seldom interprofessional/ collaborative

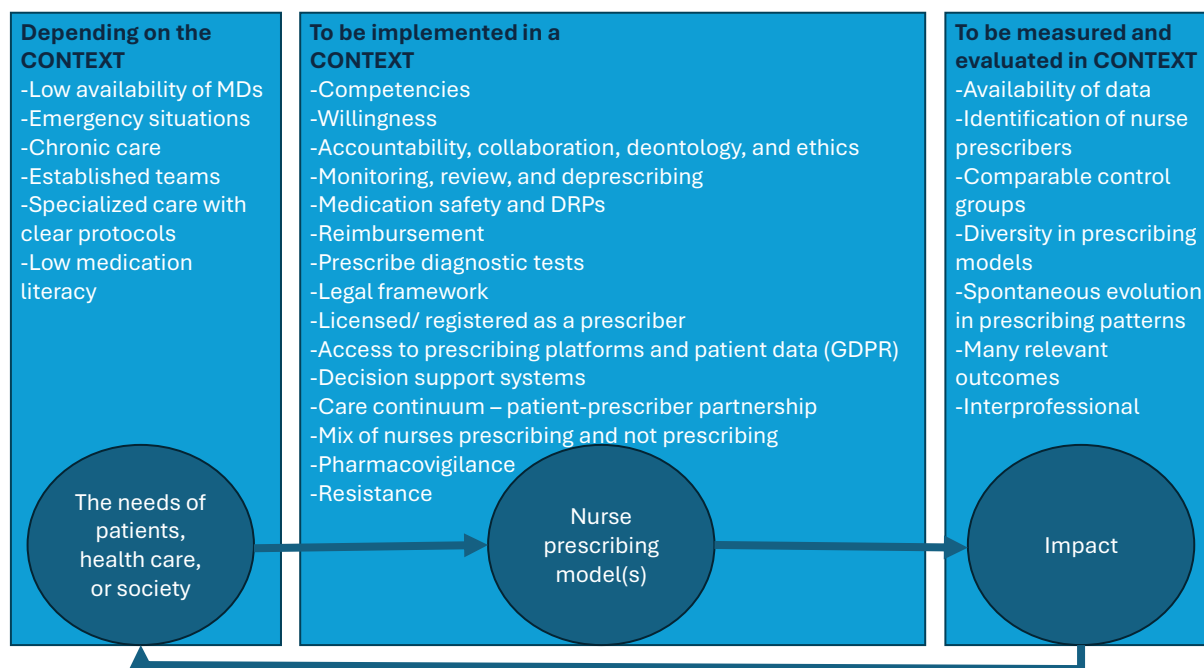
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31 Aug 2020, 10:11:11 (GMT+02:00). Online ahead of print.

Exploring Nurse Prescribing Practices and Preferences in Belgian Hospitals: A Multicentre Cross-Sectional Survey on Healthcare Providers' Perspectives and Expected Impact

Maria Willekens^{1,2}, Lucie Monette^{3,4}, Elisabeth De Sitter⁵, Jolke Lubbe^{6,7}, Eline Goossens⁸, Tine Olters^{9,10}





Opportunities for interprofessional collaboration

Prescribing as a small part of the process towards quality of medicines use



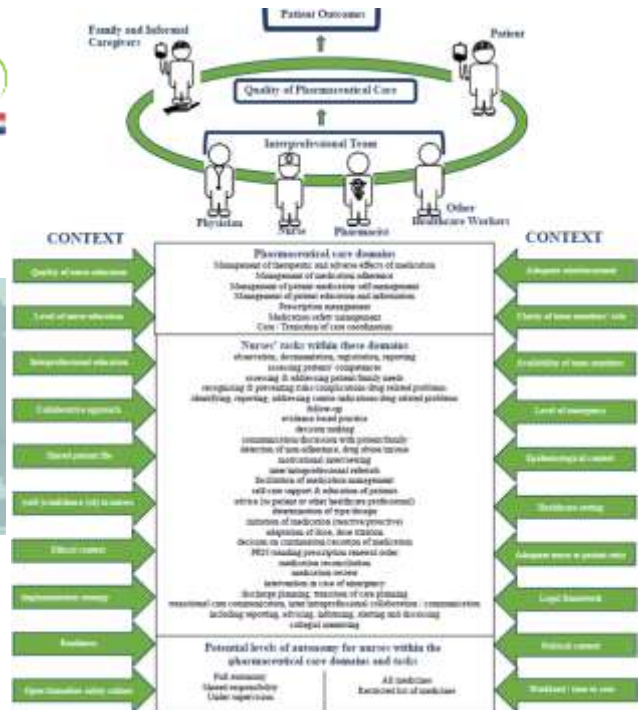
DeMoPhaC
2017-2021
14 - 17 European countries
De Baetselier E, Dilles T. The NUPhAC-EU Framework for Nurses' Role in Interprofessional Pharmaceutical Care: Cross-Sectional Evaluation in Europe. Int J Environ Res Public Health. 2021 Jul 25;18(15):7862. doi: 10.3390/ijerph18157862. PMID: 34360162; PMCID: PMC8345454.

Process to achieve high quality medicines use

Complementary and shared responsibilities

Value of nurse-pharmacist collaboration

Collaborative research



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Process to achieve high quality medicines use

Complementary and shared responsibilities

Value of nurse-pharmacist collaboration

Collaborative research



Collaboration

- Patient information and education
- Self-management support
- Adherence monitoring
- Monitoring of therapeutic effects
- Managing drug-related problems
- Safety of medication management processes

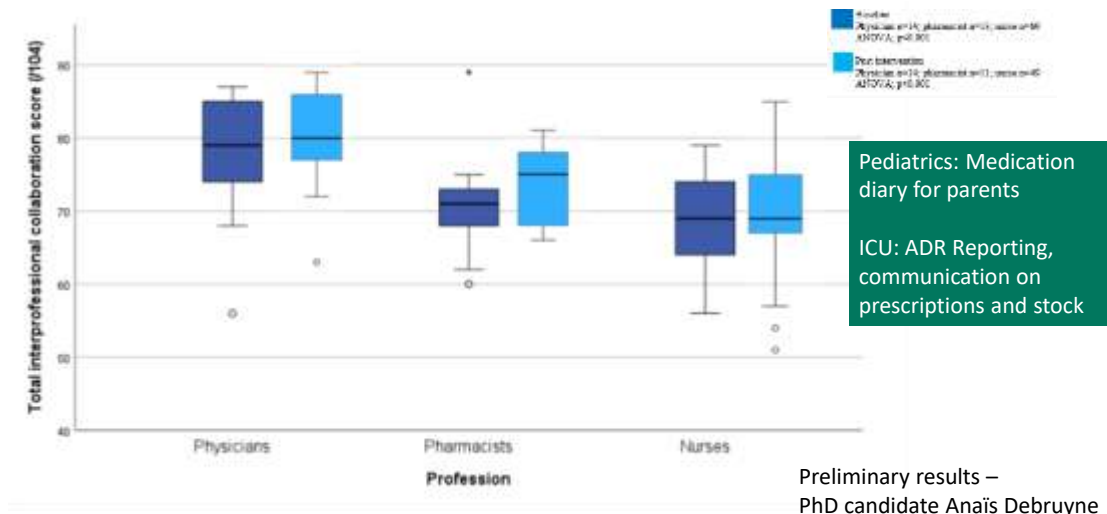
Pharmacist information and education on:

- Galenic formulations
- Risks for DRP
- Availability
- Safety for health care providers
- ...

Nurse information on:

- Health behavior
- Medication-taking behavior
- Alternative and complementary treatments
- Observed effects
- Patient goals and preferences
- ...

Interprofessional collaboration on pharmaceutical care in hospital



Conclusion

Nurse-pharmacist collaboration

- Low quality
- Lack of research
- Many opportunities for care quality
- Collaborative models and research

Nurse prescribing

- Context-specific implementation and evaluation
- Complex interventions/ processes
- Challenging research
- Generally positive findings
- Collaborative models and research