Universität Basel
Medizinische Fakultät
Departement Public Health

Pflegewissenschaft
Nursing Science

UNCLE: Unfinished Nursing Care in internaL medicinE and the Association with Nurse Staffing

A Retrospective Analysis of Routine Data

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Symposium Nursing Data 2023
28. Juni 2023

Agenda

1	Organisatorisches
2	Hintergrund
3	Methode
4	Resultate
5	Diskussion

UNCLE: Unfinished Nursing Care in internaL medicine

Characteristics, frequencies and predictors of unfinished nursing care on general medical units in a Swiss regional hospital using retrospective chart review

Association between missed care and nurse staffing in medical inpatients: A retrospective data analysis

Projektteam

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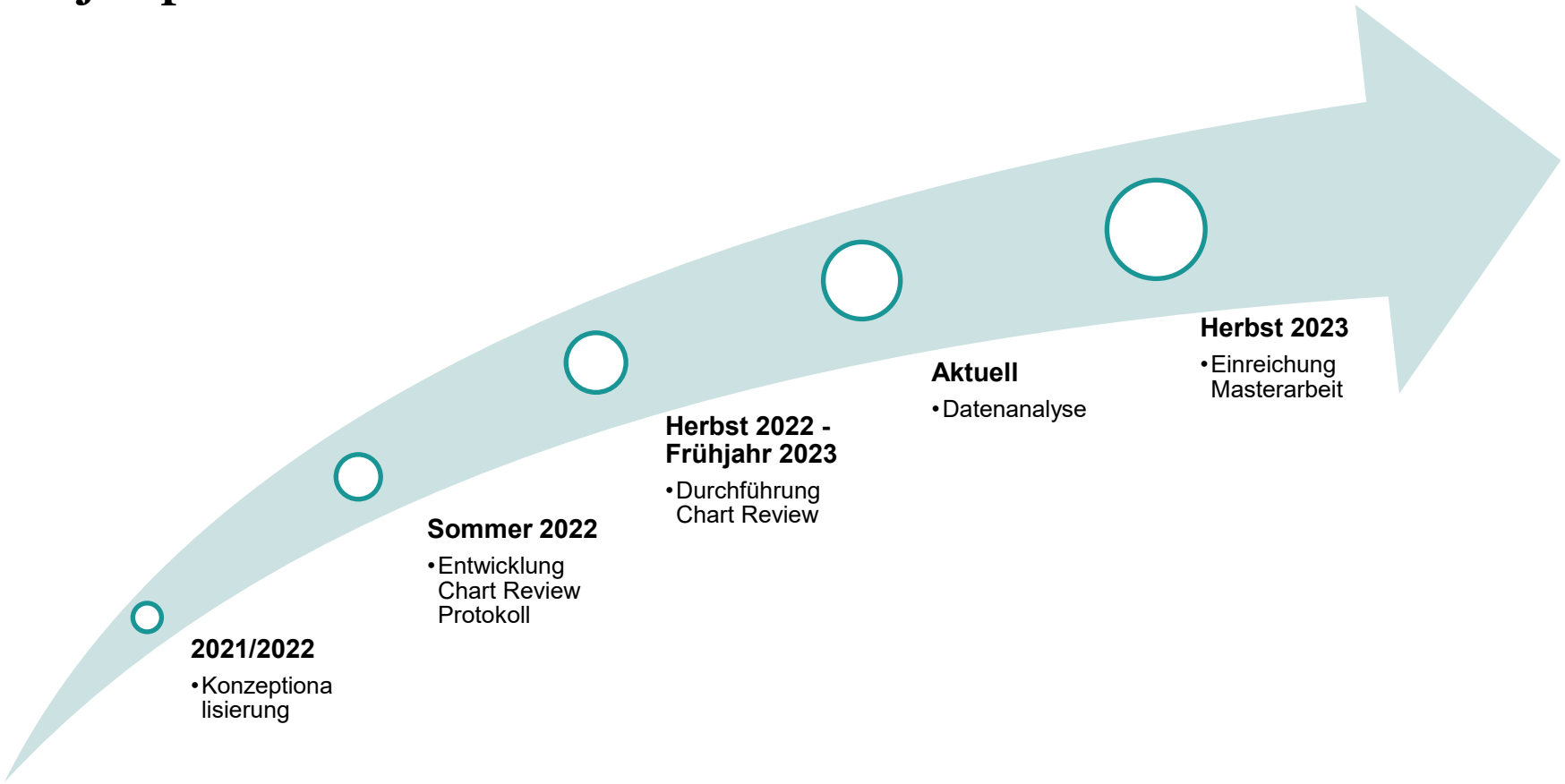
- Prof. Dr. Maria Unbeck *(Associate Professor an der Universität Falun & Stockholm, Schweden)*
- Dr. Sarah Musy *(Postdoc an der Universität Basel)*
- Prof. Dr. Michael Simon *(Associate Professor an der Universität Basel)*

Projektplan



Hintergrund

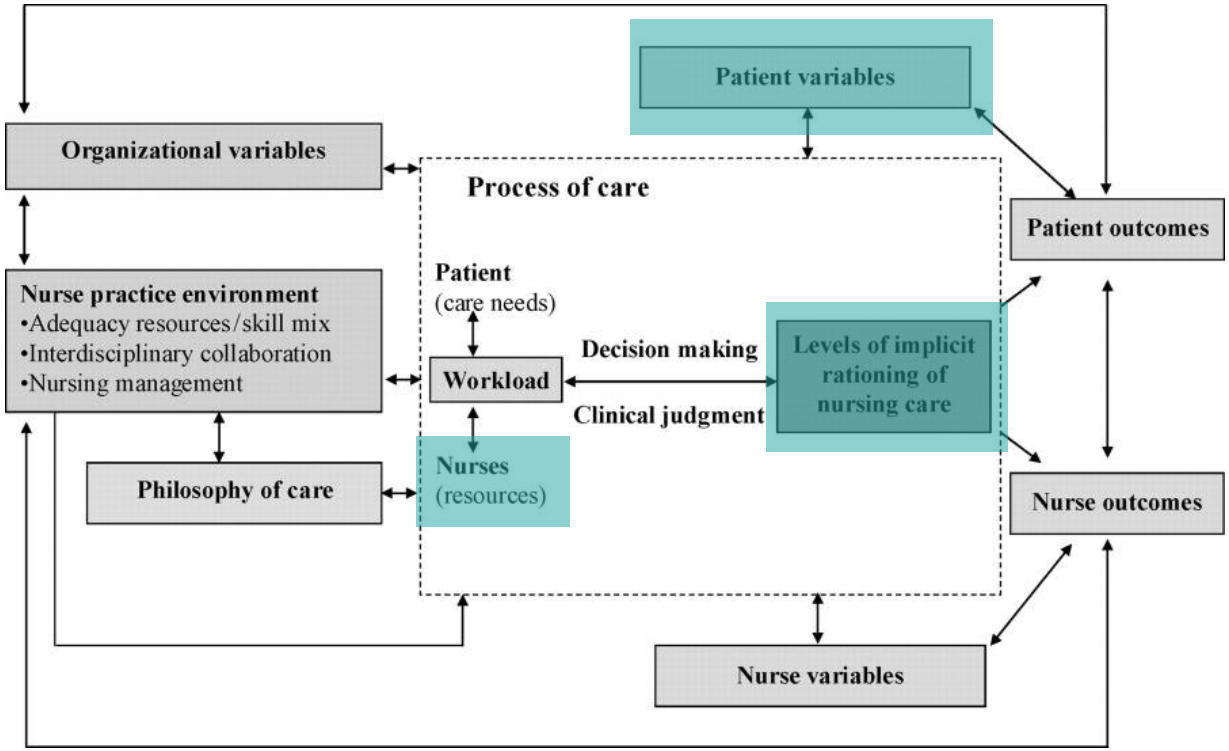
– knapp 20 Jahre Forschung zu "unfinished nursing care" [1,2]

– Bis zu 90% der befragten Pflegefachpersonen konnten nicht alle pflegerischen Tätigkeiten in der letzten Schicht durchführen [3-7]

– Auswirkungen / Folgen von "unfinished nursing care" [6,8-15]

– Gründe für "unfinished nursing care" [1,4,7,12,16-20]

Theoretischer Bezugsrahmen



Conceptual framework for the RICH nursing study [24]

Forschungslücke

– Bisherige Forschung: Befragung von Pflegenden mittels Umfrage [3,23]
– Div. Nachteile [16,21-23]
  - Verzerrungen (*engl*. bias)
  - fehlende Patientenzentriertheit

– Fehlende Daten zu "unfinished nursing care" auf Patientenebene [8,23]

– Alternative: Chart review [23,25,26]
  - Verwenden von bereits vorhandenen Routinedaten
  - Erlaubt die Untersuchung von grossen Datenmengen

Ziele

1) Beschreibung von Charakteristika und Häufigkeit von "unfinished nursing care";
2) Identifizierung von Prädiktoren auf der individuellen Patientenebene;
3) Beschreibung der Patient-to-Nurse-Ratio von Patient/-innen, welche "unfinished nursing care" erleben;
4) Beschreibung des Zusammenhang zwischen Patient-to-Nurse-Ratio und "unfinished nursing care"

Methode

Setting: 5 interdisziplinäre Abteilungen eines Schweizer Regionalspitals

Sample: 240 medizinische Patienten

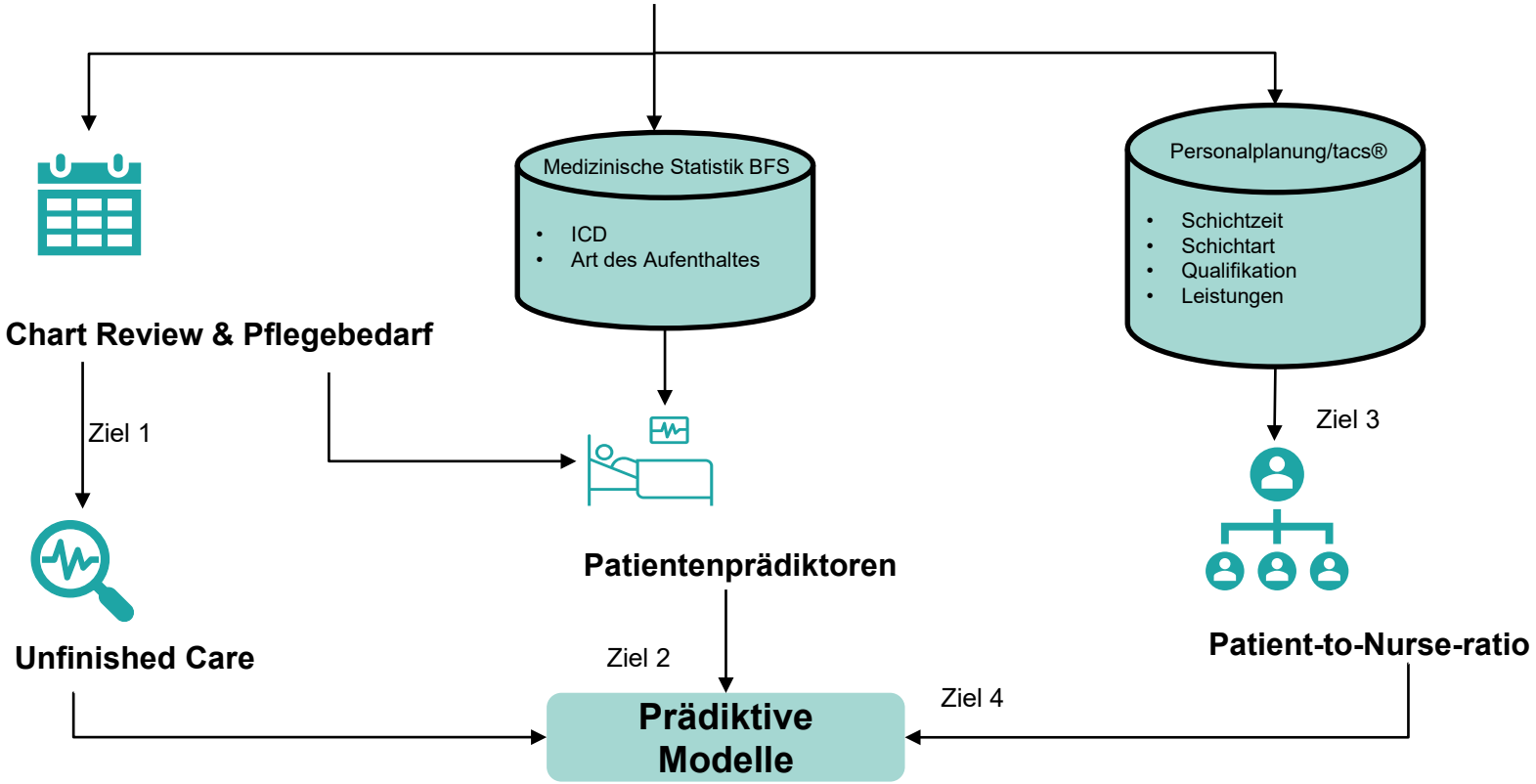
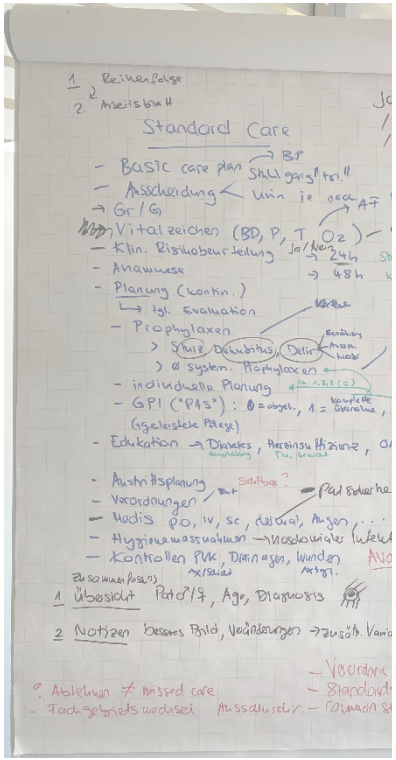


Chart Review (Aktenanalyse)



Review Protocol – Missed Nursing Care
Version 1 – 24.03.2022

luzerne

Overview

Study	Partici...
Hospital Stay	Admis...
Demographics	Age
Main Diagnosis	

Review Protocol – Missed Nurs...
Version 1 – 24.03.2022

Missed Nursing Care

Routine Care Activity	Applicable?	Missed?	
Blood pressure	☐ Yes ☐ No	☐ Fully	☐ Partly ☐ Delayed
"Pflegeanamnese" within 48h	☐ Yes ☐ No	☐ Fully	☐ Partly ☐ Delayed
Defecation documented every day	☐ Yes ☐ No	☐ Fully	☐ Partly ☐ Delayed
Urinary excretion documented	☐ Yes ☐ No	☐ Fully	☐ Partly ☐ Delayed
	☐ Yes ☐ No	☐ Fully	☐ Partly ☐ Delayed

Respiratory rate

* must provide value

- ○ fully
- ○ partly
- ○ delayed
- ○ no
- ○ not necessary

Nursing anamnesis

* must provide value

- ○ fully
- ○ partly
- ○ no
- ○ unable to assess

Topic	Variable	Definition	Notes
Vital signs, pain & deterioration			
Vital signs (VS)	Blood pressure (BP) Heart rate (HR) ...ature (T) ...on (Sat)	Fully = BP, HR, T and Sat were never measured. Partly = ≥ 1 VS wasn't measured during stay. Delayed = ≥ 1 VS was measured with a delay of > 1h. No = BP, HR, T and Sat were always measured and in time.	Mandatory to be measured within 4h since admission, afterwards according to orders (08:00 / 13:00 / 18:00 / 22:00. Each ±1h). If a value out of ordinary wasn't re-measured, it's not unfinished care in "vital signs", but unfinished care in "reaction to deterioration". When administering blood products: Measurement of bp, hr, t & sat at beginning, 5-10' after beginning (cut-off: 20') and at the end (internal policy).
	...ory rate (Rr)	Fully = Rr was never measured. Partly = Rr wasn't measured ≥ once during stay. Delayed = Rr was measured with a delay of > 1h. No = Rr was always measured and in time. Not necessary = Measurement was not ordered.	Must be measured within 4h since admission. If it was measured in the ED and was within the limits, it hasn't be measured.
	Weight	Fully = Weight was never measured. Partly = Weight wasn't measured ≥ 1 times according to orders. Delayed = Weight was measured after ≥ 24h since admission. Or wasn't measured prior to morning visit (09:15) if it was ordered. Or was measured with a delay of ≥ 1h since ordered. No = Weight was always measured according to order ...l in time.	Mandatory to be measured (not asked or guessed) within 24h since admission, afterwards according to orders. Mustn't be measured at discharge day. If pat. wasn't weighted because she/he couldn't be mobilized, it's NOT unfinished nursing care.
		...y = Height was never measured or confirmed. ...ayed = Height wasn't measured within 24h since ...nission. ... = Height was measured within 24h since admission.	Only once necessary during admission.
		...y = Pain level (NRS) was never assessed. ...tly = Pain wasn't assessed at ≥ 1 shifts (only ES & LS) ...here was no re-assessment within 1h since ...nistering of painkillers (or other intervention). ... = Pain was assessed every shift (only ES & LS).	ES = Early Shift / LS = Late Shift In the night shift, it's not necessary to assess pain systematically. But it's necessary to document pain during night shifts if pat. expresses pain.
		...y = There was never any reaction to pain. ...tly = There was no reaction to pain at ≥ 1 expression ...ain.	
	Reaction to pain	Delayed = Reaction to pain took ≥ 1h. No = Reaction to pain was always in time and appropriate. NA = Pat. didn't suffer any pain.	
Deterioration	Reaction on deterioration	Fully = There was never any reaction to a deterioration. Partly = There was an inadequate reaction to deterioration and/or there were more than one deteriorations and ≥ 1 reaction was inappropriate or completely unfinished. No = There was an approopriate reaction on (every) deterioration. Not necessary= Pat. didn't suffer a deterioration.	Examples of deterioration: Emesis, delirium, psychological deterioration, fall, pain exacerbation, wound healing disturbance, somnolence, dyspnea, anxiety. Also: deterioration in vital signs and/or vigilance. If a value out of ordinary wasn't re-measured, it's not unfinished care in "vital signs", but unfinished care in "reaction to deterioration".

Patient-to-Nurse-ratio

Quelle	Variablen
EHR	Patientenbewegungen pro Fall aller Patient/-innen, welche auf den untersuchten Abteilungen hospitalisiert waren → *Anzahl Patienten*
Personal-planungstool	Schichtzeit, -art, Qualifikation aller Pflegenden auf den untersuchten Abteilungen → *Anzahl Pflegende*
Leistungserfassung	

$$\text{Nurse staffing 1} = \frac{n\ patients\ per\ 30\ \text{min}\ intervall}{n\ nurses\ per\ 30\ \text{min}\ intervall}$$

$$\text{Nurse staffing 2} = \frac{n\ patients\ accumulated\ per\ shift}{n\ nurses\ accumulated\ per\ shift}$$

Vorläufige Resultate
Soziodemographische Daten / Prädiktoren

Alter, Mean (±SD)	70.25 (±16.7)
Geschlecht, n (%)	
Weiblich	128 (53.33)
Männlich	112 (46.67)
Aufenthaltsdauer, Mean (±SD)	5.42 (± 3.07)
Isolation, n (%)	
Nein	182 (75.83)
Ja	58 (24.17)
Eintrittstyp, n (%)	
Notfallmässig	231 (96.25)
Elektiv	9 (3.75)
Aufenthalsort vor Spitaleinweisung, n (%)	
Unabhängig zu Hause	195 (81.26)
Alters- und Pflegeheim	23 (9.58)
Zu Hause mit Spitex	17 (7.08)
Andere/unbekannt	5 (2.08)

Vorläufige Resultate
auf Ebene der kategorisierten Aktivitäten

Kategorien (n= #Aktivitäten)	Erwartete Aktivitäten n (%)	Verspätete Aktivitäten n (%)	Teilweise unterlassene Aktivitäten n (%)	Vollständig unterlassene Aktivitäten n (%)	Summe aller unterlassener Aktivitäten n (%)
Assessment & Management von Wunden, Zu- und Ableitungen (n=6)	715 (9.5)	0 (0)	115 (16.1)	2 (0.3)	117 (16.4)
Unterstützung in ATLs (n=9)	893 (11.9)	0 (0)	74 (8.3)	26 (2.9)	100 (11.2)
Bio-psycho-soziale Aktivitäten (n=8)	1009 (13.4)	4 (0.4)	337 (33.4)	65 (6.4)	406 (40.2)
Edukation (n=8)	149 (2)	-	3 (2)	48 (32.2)	51 (34.2)
Pflegeprozess (n=8)	1516 (20.1)	11 (0.7)	321 (21.2)	65 (4.3)	397 (26.2)
Risikoassessments und Prävention (n=7)	927 (12.3)	23 (2.5)	110 (11.9)	66 (7.1)	199 (21.5)
Überwachung (n=8)	1723 (22.9)	234 (13.6)	406 (23.6)	90 (5.2)	730 (42.4)
Behandlungspflege (n=4)	598 (7.9)	35 (5.9)	65 (10.9)	0 (0)	100 (16.7)
TOTAL ALLE AKTIVITÄTEN (n=58)	**7530**	**307 (4.1)**	**1431 (19)**	**362 (4.8)**	**2100 (27.9)**

Diskussion & Ausblick

- **Dokumentationsabhängigkeit**
  - Dokumentation nicht 100% exakt
  - dokumentierte Aktivitäten ≠ durchgeführte Aktivitäten
  - durchgeführte Aktivitäten ≠ dokumentierte Aktivitäten
- **Chart review: Rückschaufehler**
  - Reviewer sahen den gesamten Spitalverlauf. Pflegefachpersonen handelten in Momentaufnahmen.

Ausblick

– **Nächste Schritte**:
  - Analyse zu Prädiktoren
  - Zusammenhangsanalyse Personalausstattung
– **Ausblick**:
  - Stärkere Einbindung bzw. Entwicklung von klinischen Guidelines

    → könnte die strukturierte Erfassung und Auswertung begünstigen

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Vielen Dank
für Ihre Aufmerksamkeit.

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