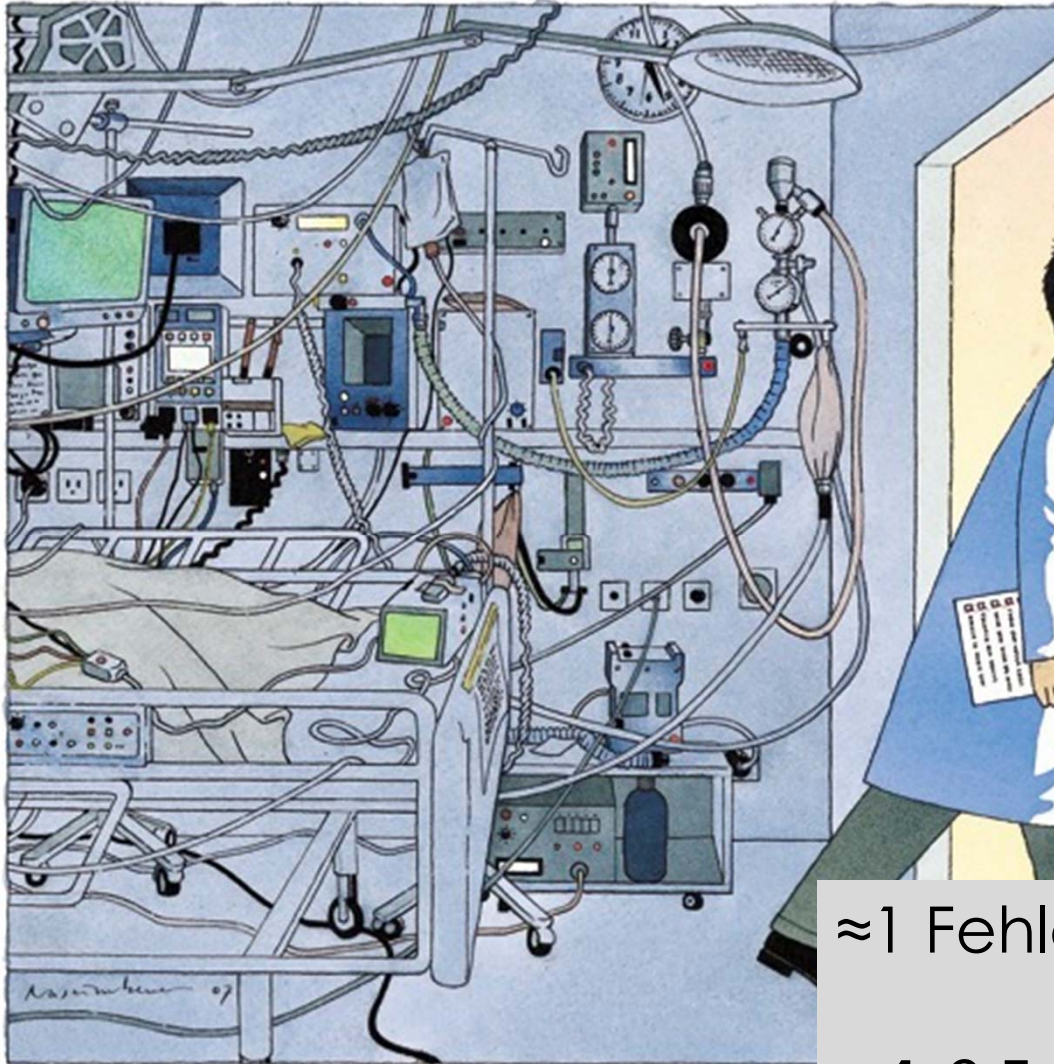


Intensivmedizin & Prävention: ein messbares Potential

M. Hiesmayr

Komplexes Umfeld?



178 Tätigkeiten
pro Patient & Tag

jeweils mit typischem
Risiko

≈1 Fehler auf 100 Tätigkeiten

.. 1-2 Fehler pro Patient & Tag

Problemstellung

- Vorbeugung
 - Individuell
 - Weniger unerwünschte Ereignisse
 - Kürzere Aufenthaltsdauer
 - Kollektiv
 - Weniger unerwünschte Beeinflussungen
 - Stabilität des Teams
- Messen
 - Machbarkeit
 - Reproduzierbarkeit
 - Vergleichbarkeit



SCOTTISH PATIENT SAFETY PROGRAMME

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Welcome to the Scottish Patient Safety Programme

The Scottish Patient Safety Programme is being implemented in every acute hospital in the country. The initial goals are to drive improvements in:

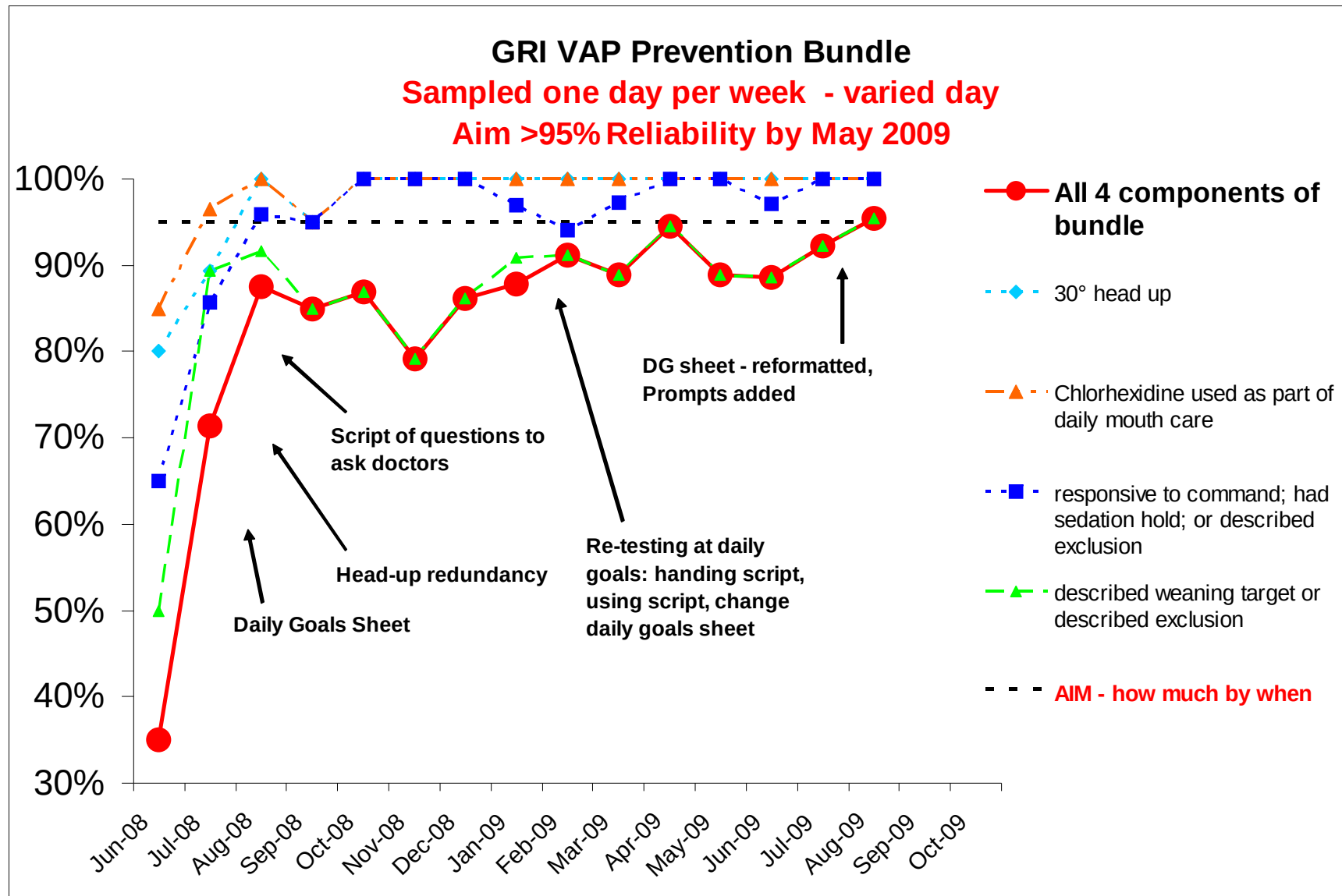
- [Leadership](#)
- [Critical Care](#)
- [General Ward](#)
- [Medicines Management](#)
- [Peri-operative](#)

As the Programme develops it will encompass other service areas, including Paediatrics and Primary Care services. The national drive for excellence will eventually involve the whole of NHSScotland.

Click to read more about the [Scottish Patient Safety Programme](#).



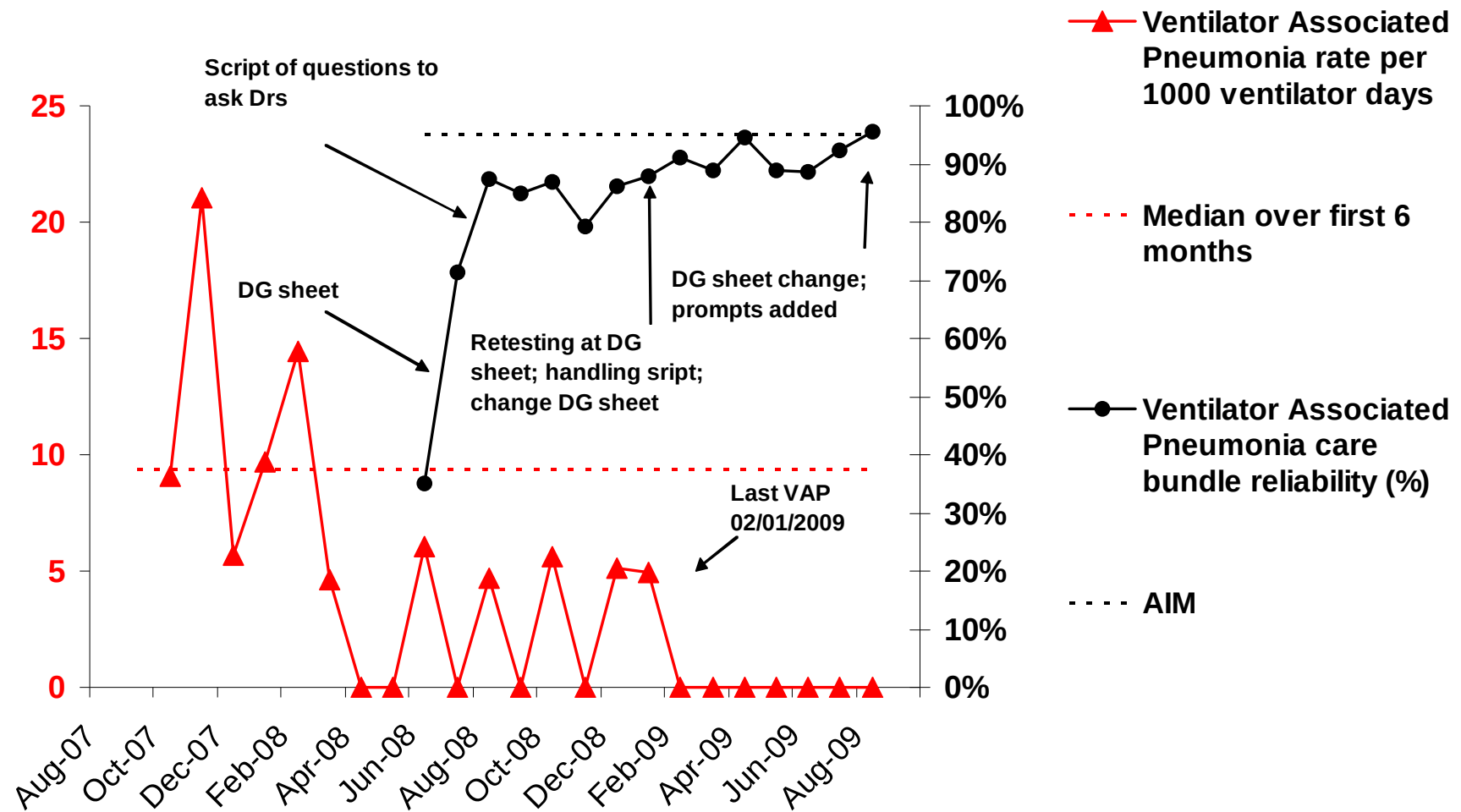
Please note the SPSP Toolkit has been removed for rebranding. Please contact the SPSP team if you require any materials.



(personal communication: M. Booth, Royal Infirmary, Glasgow)

GRI VAP Prevention Bundle Reliability and VAP rate per 1000 ventilator days

Aim: > 95% reliability by March 2009



(personal communication: M. Booth, Royal Infirmary, Glasgow)

Prävention

● UNGEWÜNSCHTES

■ Tod

→ Richtig beobachten/ richtig interpretieren/
situationsbezogen handeln **üben**

■ Infektion (Mortalität +, LOS +++)

→ Pneumonie

→ Katheter

→ Wunde (OP..)

■ Dekubitus

■ Muskelschwäche (Mortalität + & LOS++ & LQ--)

■ Mangelernährung

■ Thrombosen / Embolien

■ Delirium (LOS ++)

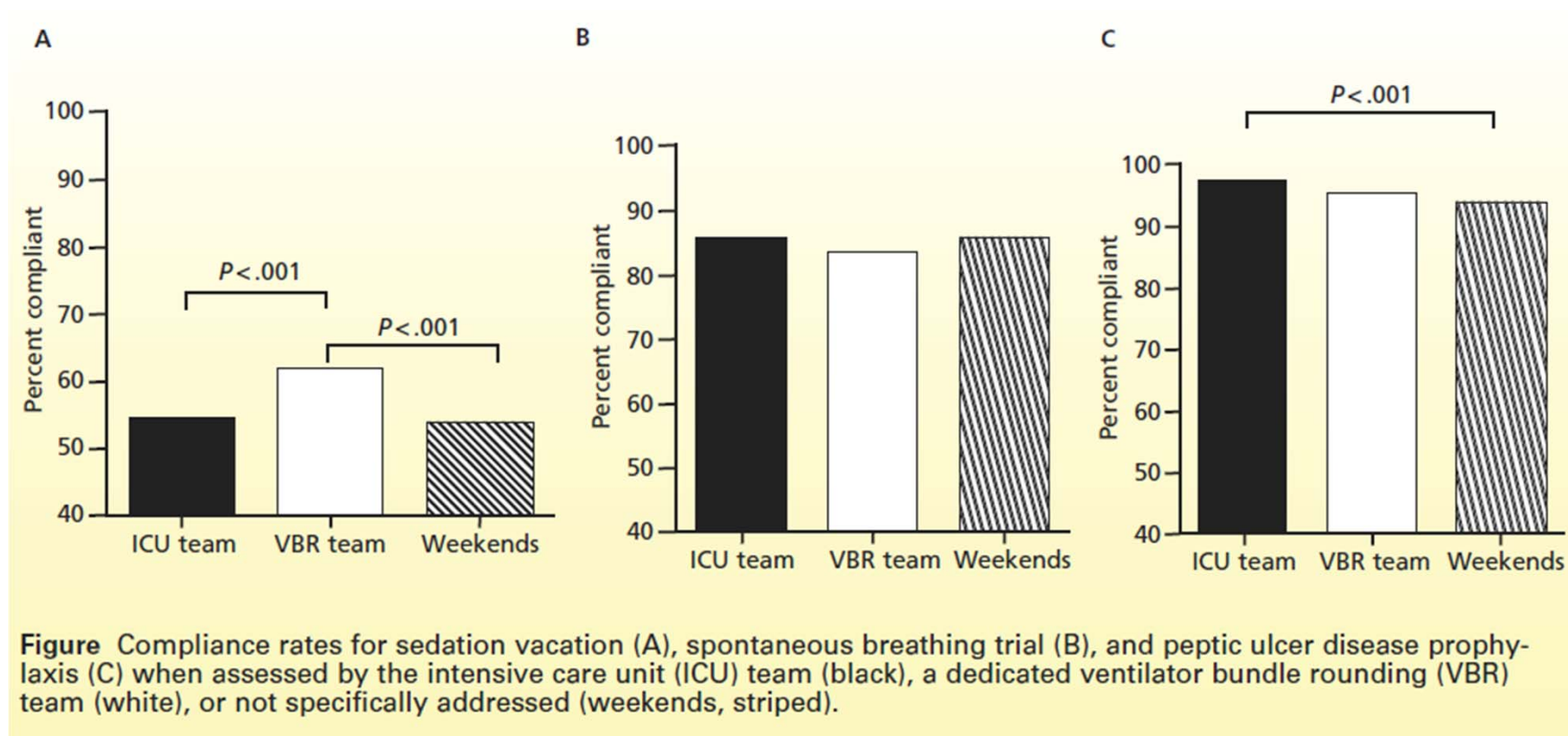
■ Posttraumatic Stress Syndrome (LQ--)

■ Depression (LQ--)

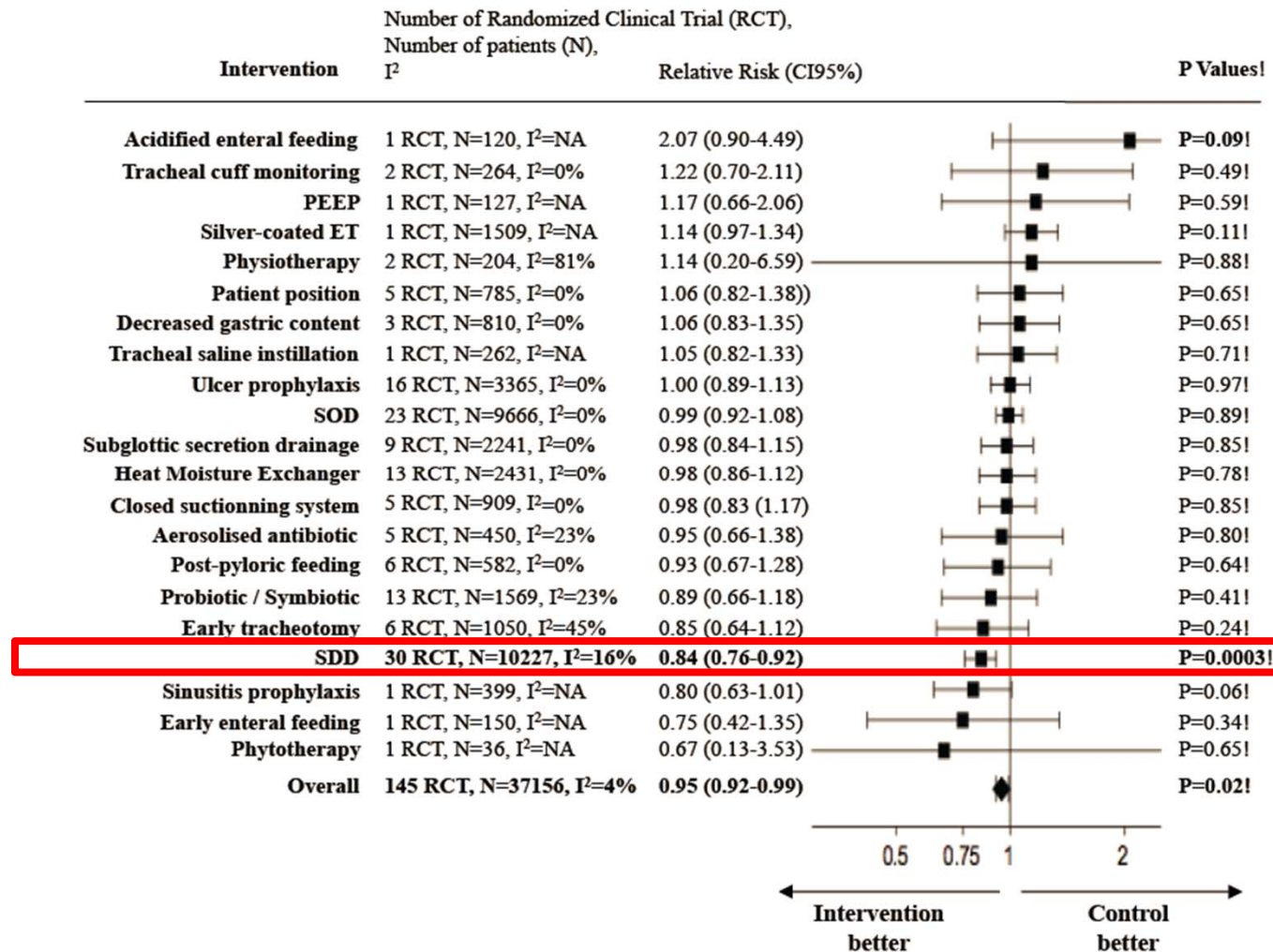
z.B. Pneumonie

- Kurze Beatmung
 - Sedierungspause
 - Schonende Beatmung
 - Realistische Beatmungsziele
- Sekretion
 - Absaugen
 - Hand Hygiene
- Orale Quelle
 - SOD/SDD??
 - Schlucken/Aspirieren
 - Lagerung 30° ?
- Genügend Ernährung
- Mobilisation/Physiotherapie
- AB Strategie

Sedierungspause



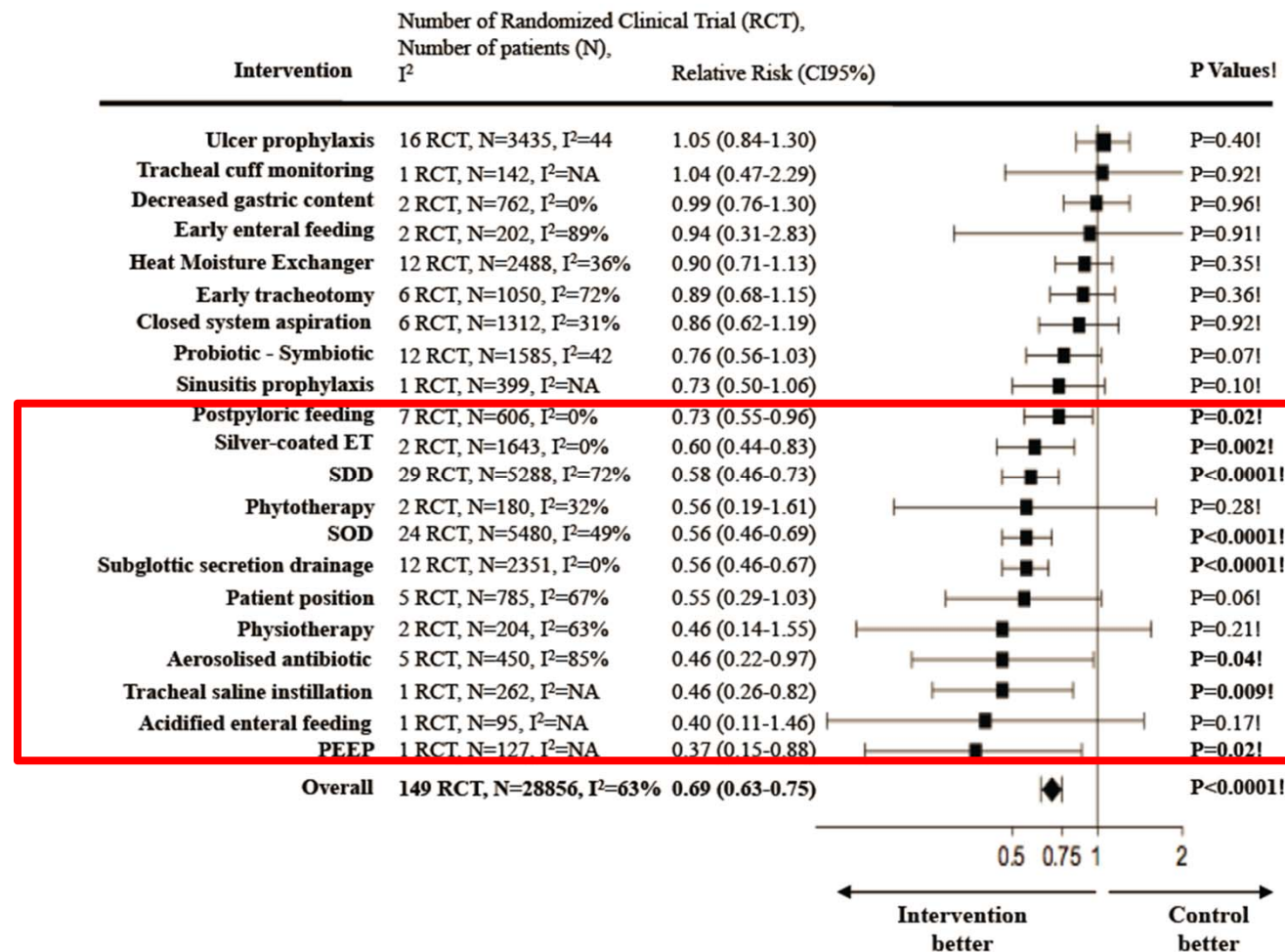
Viele VAP Komponenten?



Hospital mortality

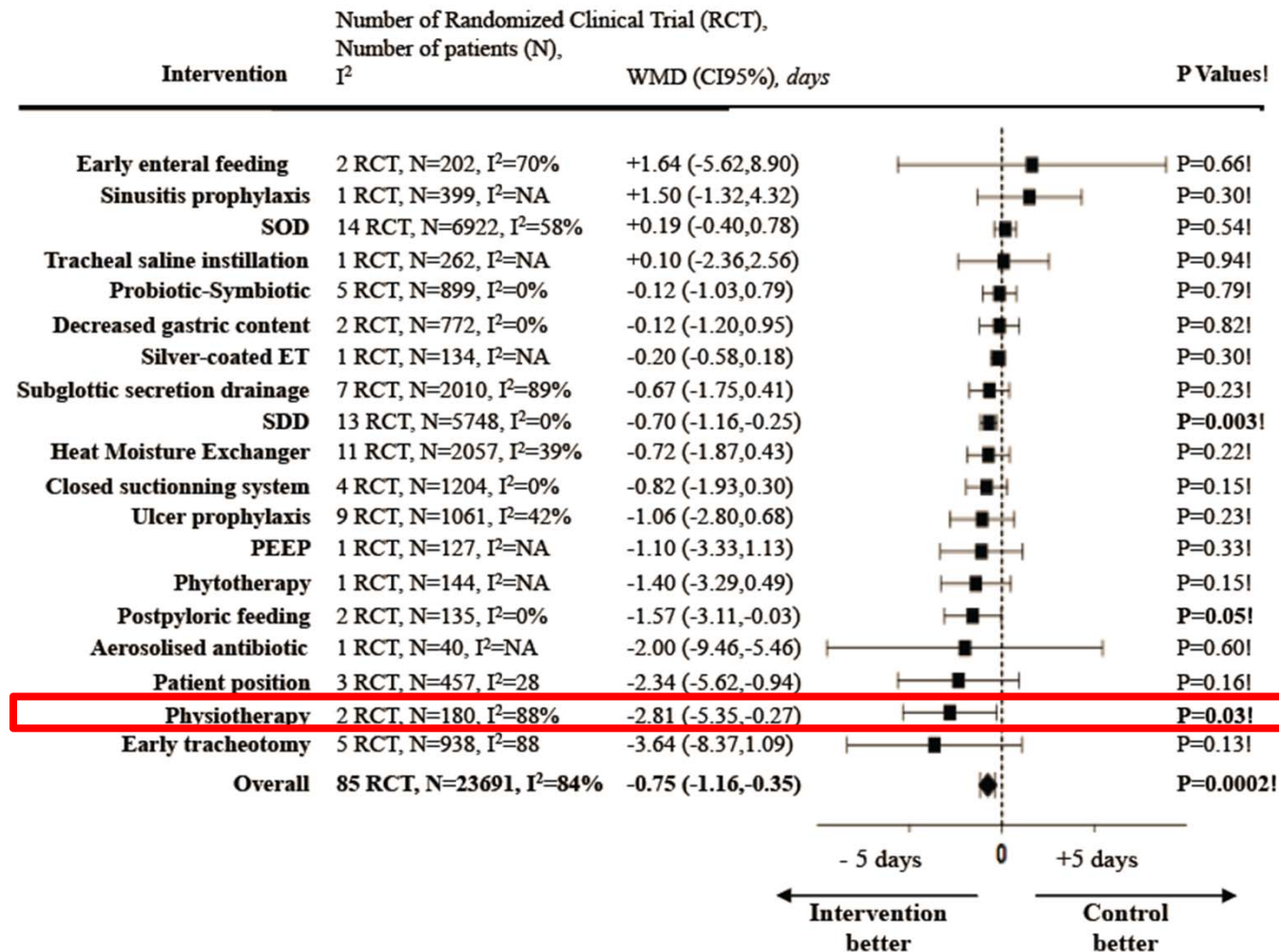
Viele VAP Komponenten?

HAI VAP rate

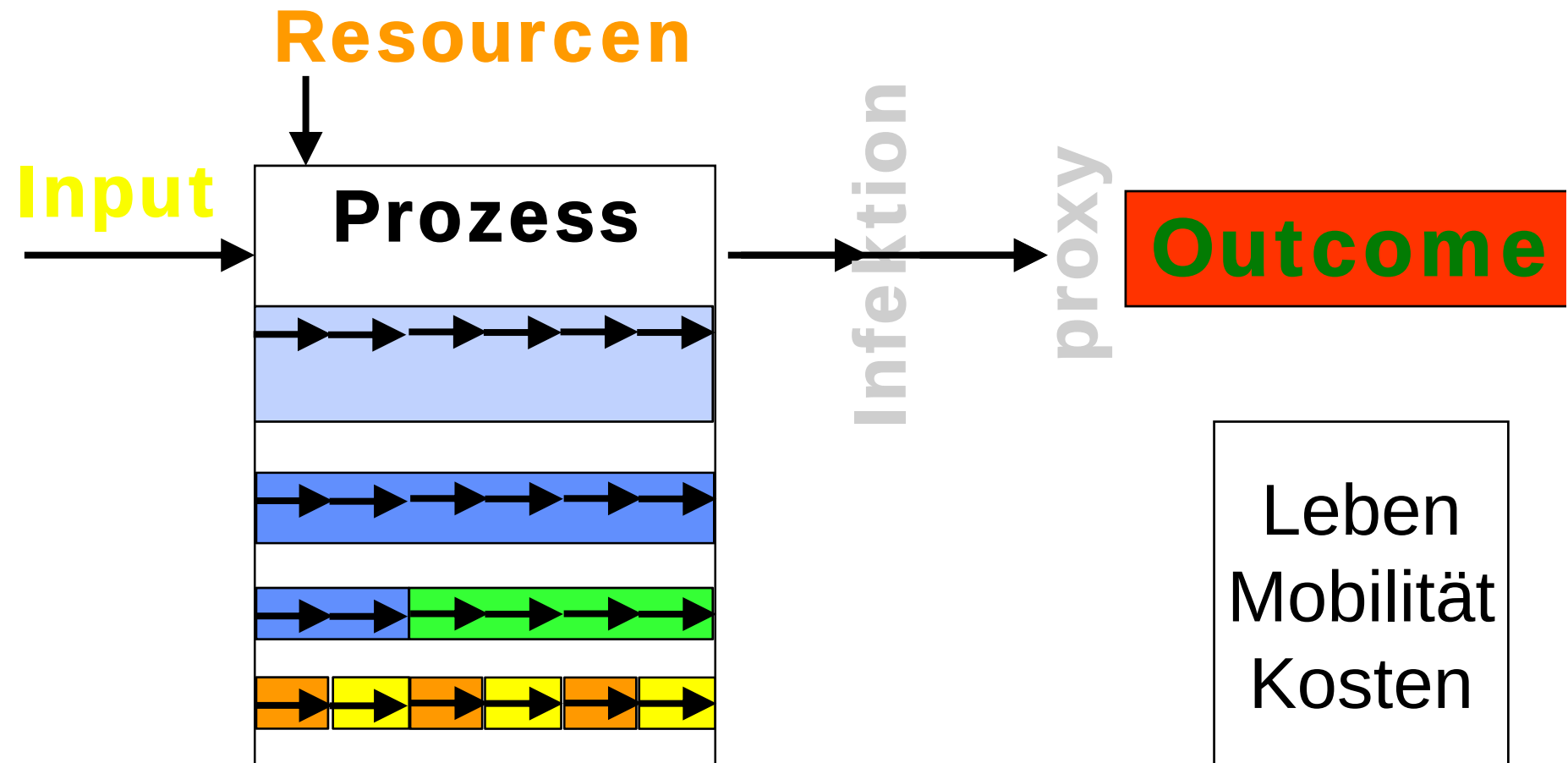


Roquilly et al. Clin Inf Dis 2014 Epub 24.9.2014

Viele VAP Komponenten?



Leistung eines Prozesses?



Was messen? Wie messen?

- Outcome oder **Prozess**
- Problem der seltenen Ereignisse
 - Lärm & Delirium
 - zB Infektion & Hand-hygiene
 - Medikamentenfehler
- Technische Messung schwierig / „Big Brother“
- Problem des Beobachtens / Hawthorne Effekt!!!
- Kultur der Unterstützung/gegenseitiges Bemerkens

Die Schwierigkeiten

- Zeitverzögerung zwischen Maßnahme (HH) und Effekt (Infektion)
 - Inkubation
 - Surveillance
- Bei der Durchführung der Maßnahme passiert gar nichts.
- Die erfolgreiche Maßnahme hat keinen Effekt. Die Unterlassung schon!
- Komplexe Maßnahme
- Zeitmangel
- Integration in einen Ablauf nicht klar/explicit
- Ergonomie nicht ideal

Teaching hospital medical staff to handwash

James Tibballs

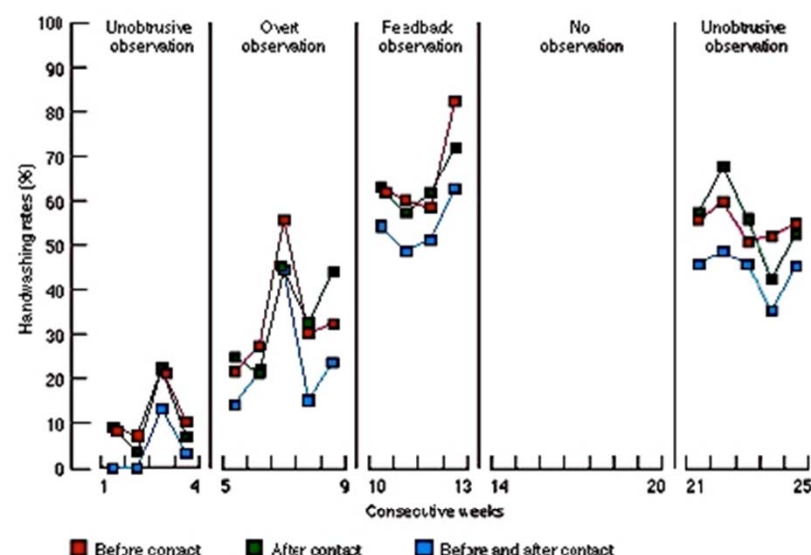
MJA 1996; 164: 14-17

19 medical officers estimated their own hand washing rate before patient contact

- Their mean estimate was 66% (range, 30%-95%)
- Several commented that other medical officers washed their hands infrequently!

Fourteen of 19 subjects participated in the entire program

- Among this cohort, the mean self-estimated hand washing rate was 73% (range, 50%-95%)
- The covertly observed rate for this cohort of 8.6% before and 10.8% after patient contact, with an individual mean rate of 10% (range, 0-33%).



2: Handwashing rate among 14 medical officers: cohort performance

	Phase of handwashing program			
	Weeks 1-4 Unobtrusive observation (93)*	Weeks 5-9 Overt observation (95)	Weeks 10-13 Feedback observation (136)	Weeks 21-25 Unobtrusive observation (89)
Handwashing				
Before contact	8.6%	31.6%	72.8%	66.3%
After contact	10.8%	32.6%	67.6%	68.5%
Before and after contact	3.2%	18.9%	56.6%	60.7%

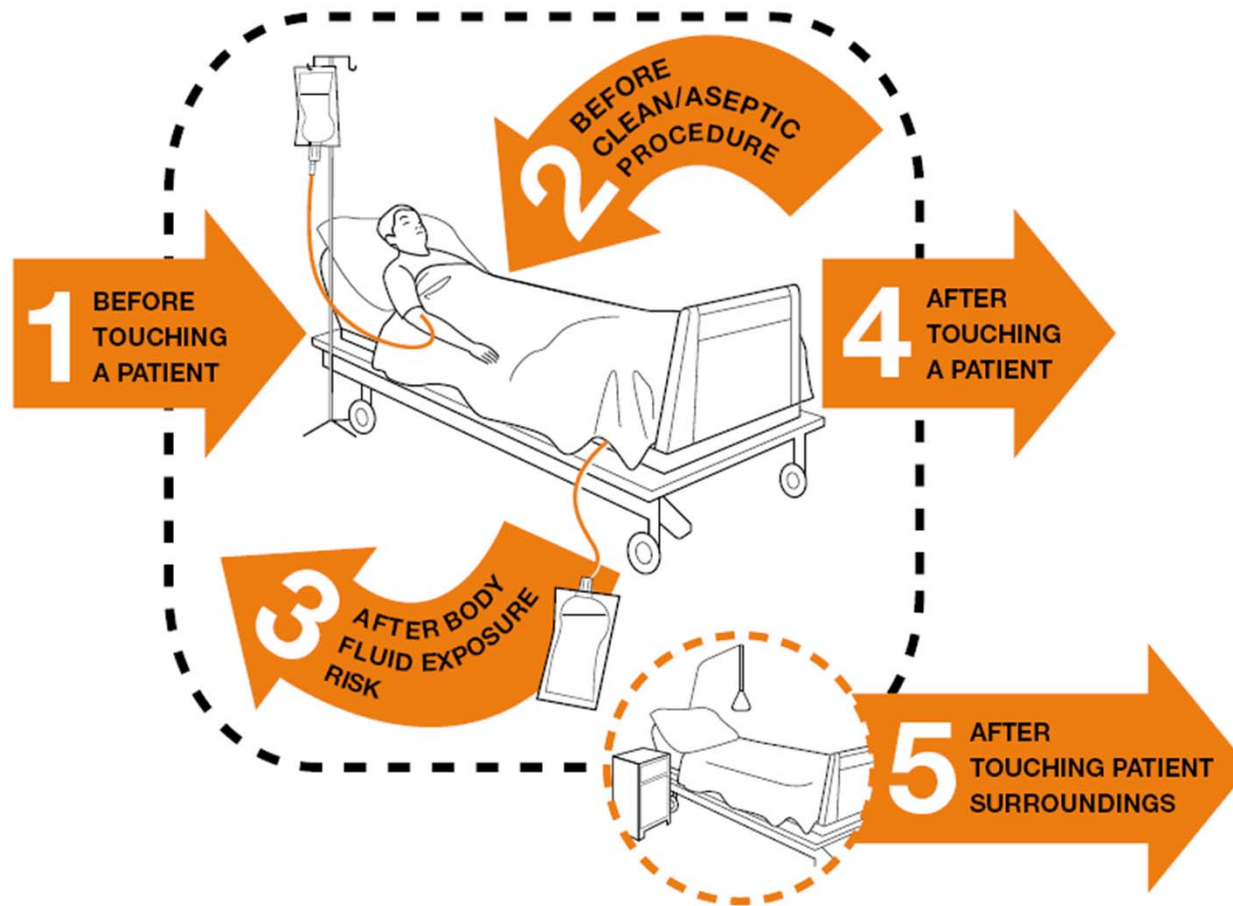
*Numbers in parentheses = number of observations.

ECDC Vorschlag zu HAI-ICU

- Hand Hygiene
 - L Alkohol-hältiges HD Produkt/1000 Pat tage
 - Beobachtung von „Opportunities“
- Staff 1:1/1:2/1:3 ect.
- AB Strategie
 - Reevaluierung / Carbapenem Verbrauch
 - Beratung
- Intubation
 - Cuffdruck/Lagerung/Sedierungspause.....
- Katheter
 - 20-30 Verbandbeobachtung

WHO Hand Hygiene Kampagne

My five moments for hand hygiene





Patient Safety

SAVE LIVES
Clean **Your** Hands

Observation Form

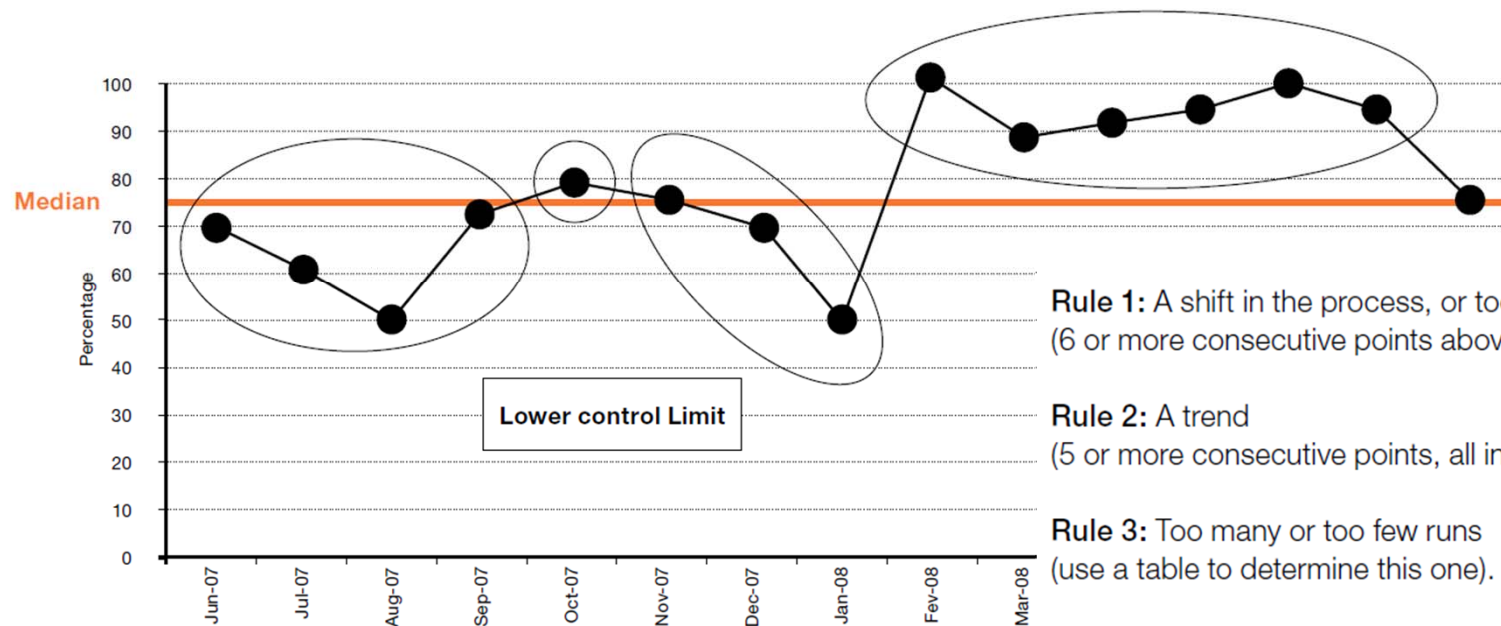
Facility:		Period Number*:		Session Number*:	
Service:		Date: (dd/mm/yy)	/ /	Observer: (initials)	
Ward:		Start/End time: (hh:mm)	: / :	Page N°:	
Department:		Session duration: (mm)		Country**:	
City**:					

Prof.cat			Prof.cat			Prof.cat			Prof.cat		
Code			Code			Code			Code		
N°			N°			N°			N°		
Opp.	Indication	HH Action	Opp.	Indication	HH Action	Opp.	Indication	HH Action	Opp.	Indication	HH Action
1	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ☐ missed ☐ gloves	1	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ☐ missed ☐ gloves	1	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ☐ missed ☐ gloves	1	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ☐ missed ☐ gloves
2	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ☐ missed ☐ gloves	2	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ☐ missed ☐ gloves	2	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ☐ missed ☐ gloves	2	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ☐ missed ☐ gloves
3	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ☐ missed ☐ gloves	3	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ☐ missed ☐ gloves	3	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ☐ missed ☐ gloves	3	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ☐ missed ☐ gloves

Einfache Control Chart

25 Beobachtungen jeweils

Figure 1.
Hand hygiene run chart



Rule 1: A shift in the process, or too many data points in a run (6 or more consecutive points above or below the median).

Rule 2: A trend (5 or more consecutive points, all increasing or decreasing).

Rule 3: Too many or too few runs (use a table to determine this one).

Rule 4: An “astronomical” data point, which is a point that visually is dramatically higher or lower than all the other data points. This is a judgement call when using the run chart and should be used not to determine statistical significance but rather as a signal that more rigorous analysis with a control chart is needed.

How many checklists are too much ?

	IMPRESSION/PLAN	☐ Better ☐ Unchanged ☐ Worse	
Patient care	NEURO Pain mgt / Sedation	Pain goal ____/10 w/ ☐ Daily lightening of sedation	☐ Wean sedation for extubation in AM
	RESP - Pulmonary: - Ventilator: (vent bundle: HOB elevated), RTW/Weaning)	☐ OOB/ pulm toilet/ambulation ☐ Maintain current support ☐ FIO ₂ < ____ PEEP < ____ ☐ Wean as tol ☐ Swallow eval ☐ PS/Trach trial ____h x ____ ☐ Mechs before/after	☐ Wean vent ☐ Mechanics by ____a.m. ☐ Plan to extubate
	CARD Cardiac Review EKGs	HR goal ____ ☐ at goal ☐ ↑ ☐ ↓ & block ____	
	GI GI / Nutrition / Bowel regimen (TPN line, NDT, PEG needed?)	☐ NPO ☐ TF type ____ goal ____ ☐ TPN INSULIN REQ ____ Adj needed y/n	
	GU Volume status Net goal for midnight	☐ Net even ☐ Net positive ☐ Net neg: ____ w/ ____ ☐ Pt determined	
	ID SIRS/infection/sepsis Evaluation SIRS criteria ☐ Temp. >38°C or <36°C ☐ HR >90 bpm ☐ RR >20 breaths/min or PaCO ₂ <32 torr ☐ WBC >12K <4K or >10% bands	☐ No current SIRS/sepsis issues ☐ Known/suspected infection: ☐ PAN Cx ☐ Bld x2 ☐ Urine ☐ Sputum ☐ Other ☐ ABx changes: Initiate / D/C ☐ AG levels: ☐ Sepsis bundle	
	Can catheters/tubes/lines be removed/rewired?		☐ Y ☐ N
	Is this patient receiving DVT/PUD prophylaxis? Is the patient receiving PT/OT/ROM		DVT: ☐ Hep q8 / q12 / gtt (protocol?) PUD: ☐ PPI ☐ TEDS/SCDs ☐ H ₂ B ☐ LMWH PT/OT ☐ ROM ☐ Contraindication if any ☐
	Anticipated LOS >2 days: TGC 3 days: fluconazole PO, KCl SS		☐ TGC ☐ Fluc ☐ KCl ☐ N/A
	Can any meds be discontinued, converted to PO, adjusted?		☐ N/A ☐ D/C: ☐ PO: ☐ Renal: ☐ Liver:
To do:	Tests / Procedures / OR today	☐ N/A ☐ Consents needed/obtained	☐ Line change
	Scheduled labs (Reassess need q12 hrs)	☐ N/A	
	AM lab needed CXR?	☐ CMP ☐ BMP ☐ H8 ☐ Coags ☐ ABG ☐ Lactate ☐ Core 4 ☐ CXR Wed: ☐ Transferrin ☐ Iron ☐ Prenalb ☐ 24-hr urine	

Prävention

- Einfache klare anerkannte Maßnahmen eventuell logisches Bündel
- Effekt ist das „Nicht-Sein“!!
- Messen & Beobachten verbessert die Compliance
- **Outcome** messen gehört dazu