Verso un gruppo di valutazione europeo?

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- Department of Intensive Care Medicine, Academical Medical Centre, University of Amsterdam, The Netherlands
- Chair NICE (National Intensive Care Evaluation),
- Member of LOGIC (Linking of Global Intensive Cares)

Conflict of interest

- None, related to this talk

Overview this talk

Introduction NICE National intensive Care

Our countries…….
What does NICE do (overview)

Confrontare	excess mortality
Confrontare	possibilities
Collaboration	between our countries
Collaboration	internationally LOGIC

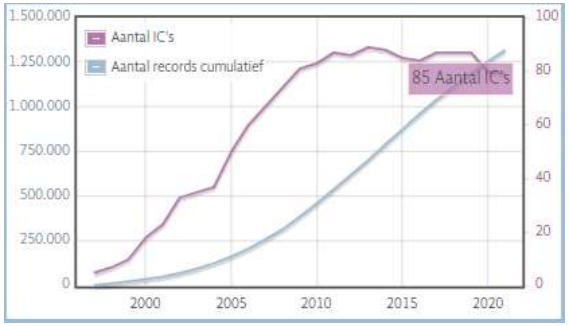
Italia- Paesi Bassi

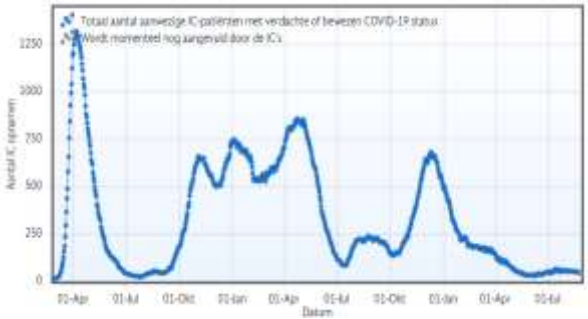
- 59 million people
- 900 hospitals

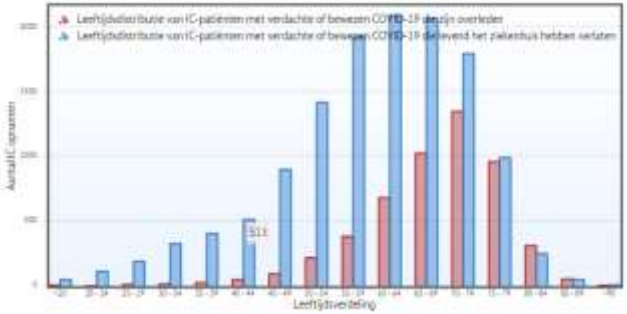
- 17 million people
- 100 hospitals

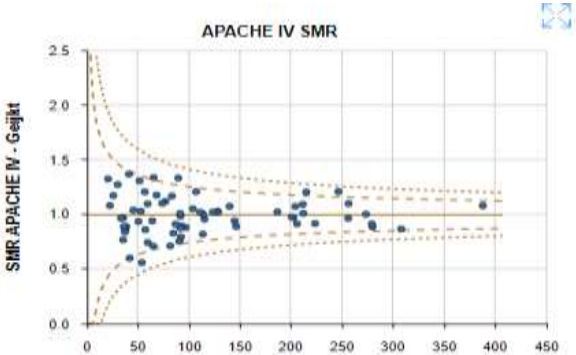
- 85 ICUs
  - All mixed ICUs
  - 8 university hospitals
  - All units participate in registry

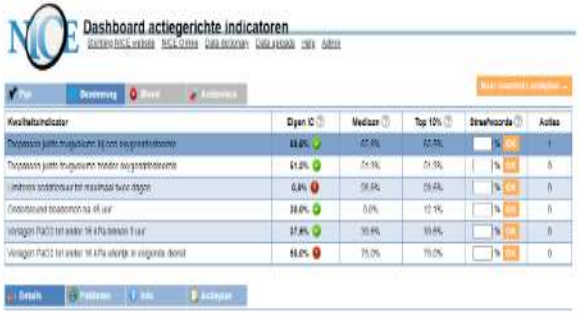
National Intensive Care Evaluation (NICE)











van de Klundert N, Holman R, Dongelmans DA, de Keizer NF. Data Resource Profile: the Dutch National Intensive Care Evaluation (NICE) Registry of Admissions to Adult Intensive Care Units. Int J Epidemiol. 2015 Dec;44(6):1850-1850

Transparancy: Funnel plots

De funnelplot

Om variaties in gecorrigeerde uitkomsten tussen de verschillende deelnemende IC's te illustreren wordt gemaakt van funnelplots.
Deze plots beelden elke IC als stip af met op de X-as het aantal opnamen en op de Y-as de waarde van de indicator, b.v. de SMR of de gestandaardiseerd heropnameratio. De horizontale lijn geeft het gemiddelde weer voor Nederland, de kromme lijnen vormen de bijbehorende 95%- en 99,8%-betrouwbaarheidsintervallen.

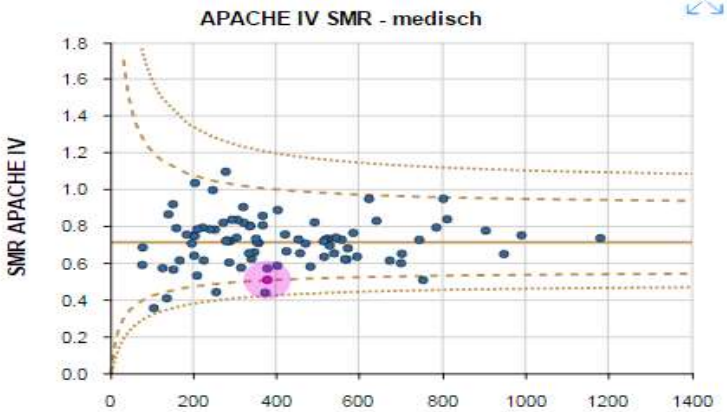
Meer

In verband met statistische en privacy aspecten tonen deze grafieken alleen de ziekenhuizen met meer dan 5 opnamen voor de betreffende patiëntengroep.

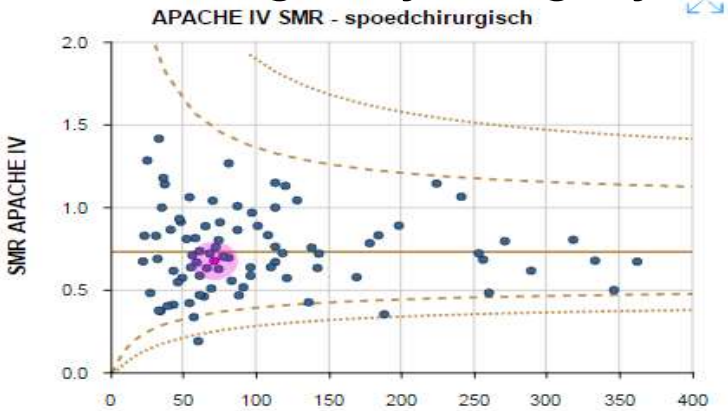
De data die hier worden gepresenteerd zijn zorgvuldig verzameld en verwerkt. De stichting NICE en de afdeling klinische informatiekunde (KIK) van het AMC doen hun uiterste best om met de huidige kennis van zaken over de mogelijkheden en beperkingen van beschikbare methoden en technieken een zo waarheidsgetrouw mogelijk beeld te laten zien.

Meer

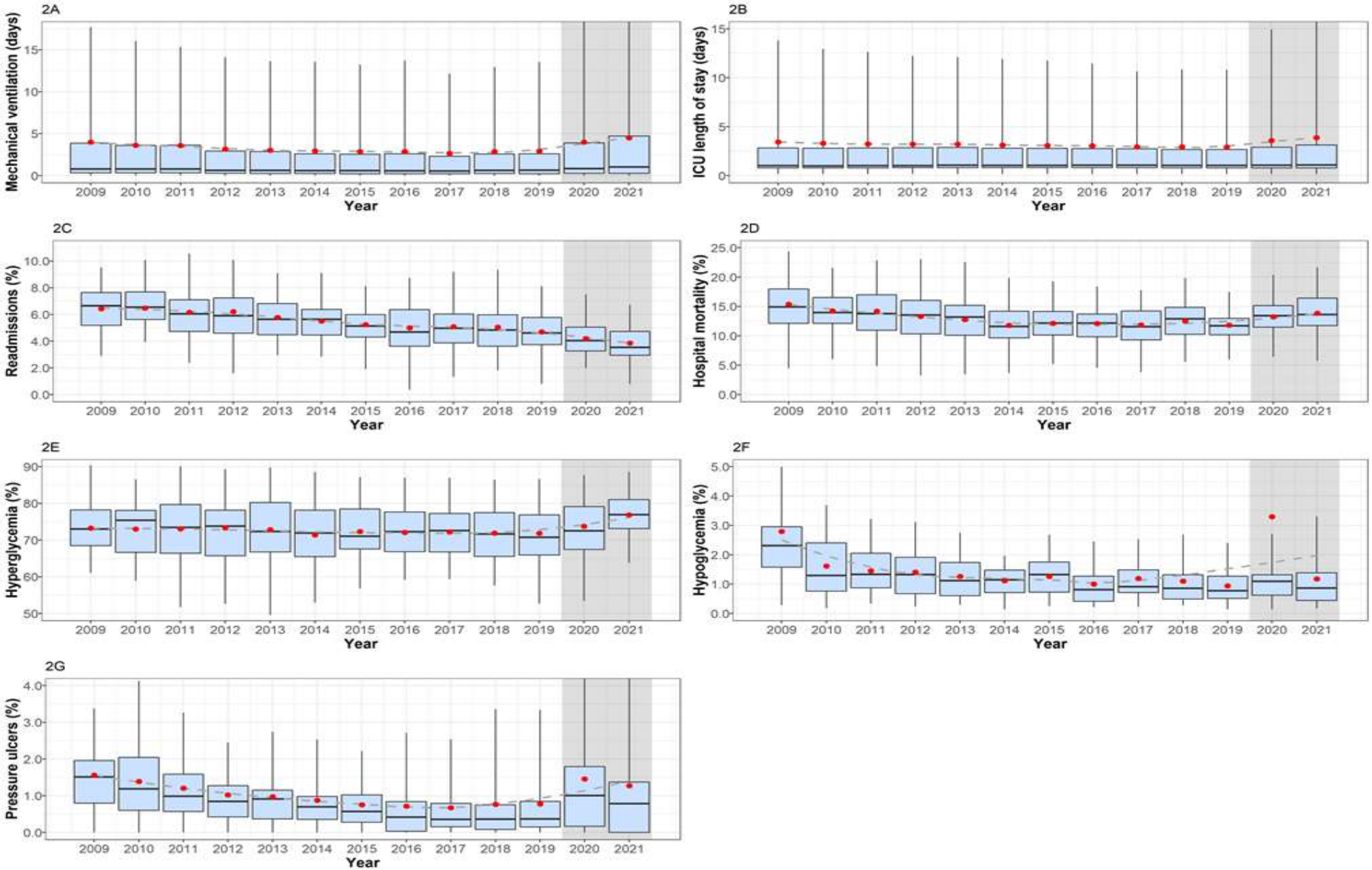
Medical



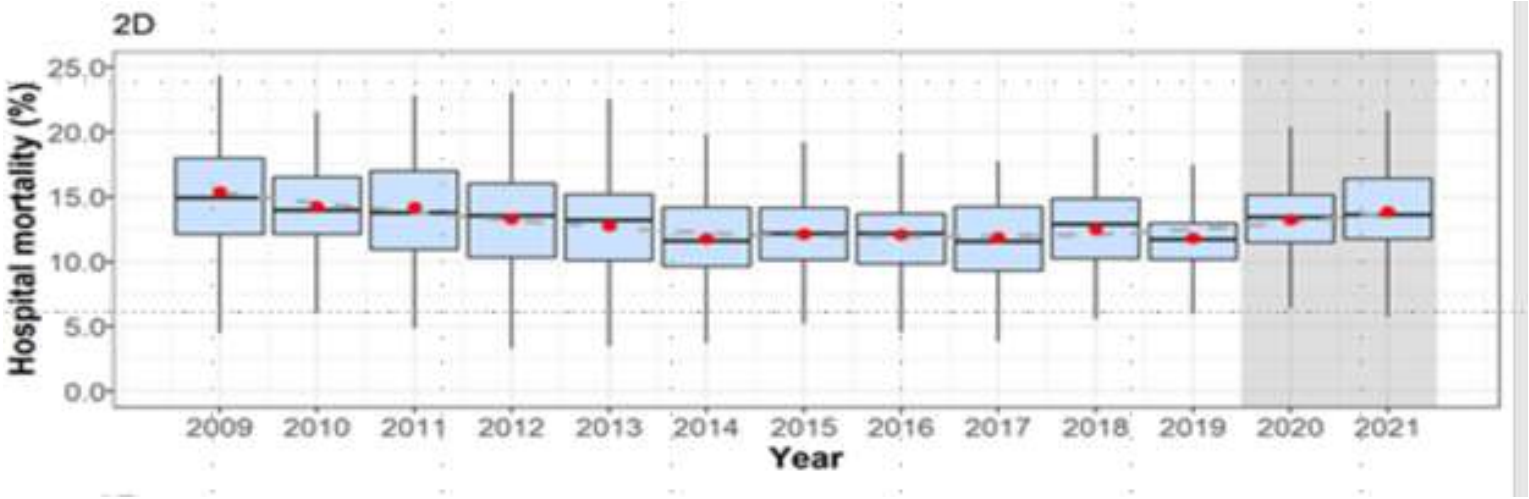
Emergency surgery



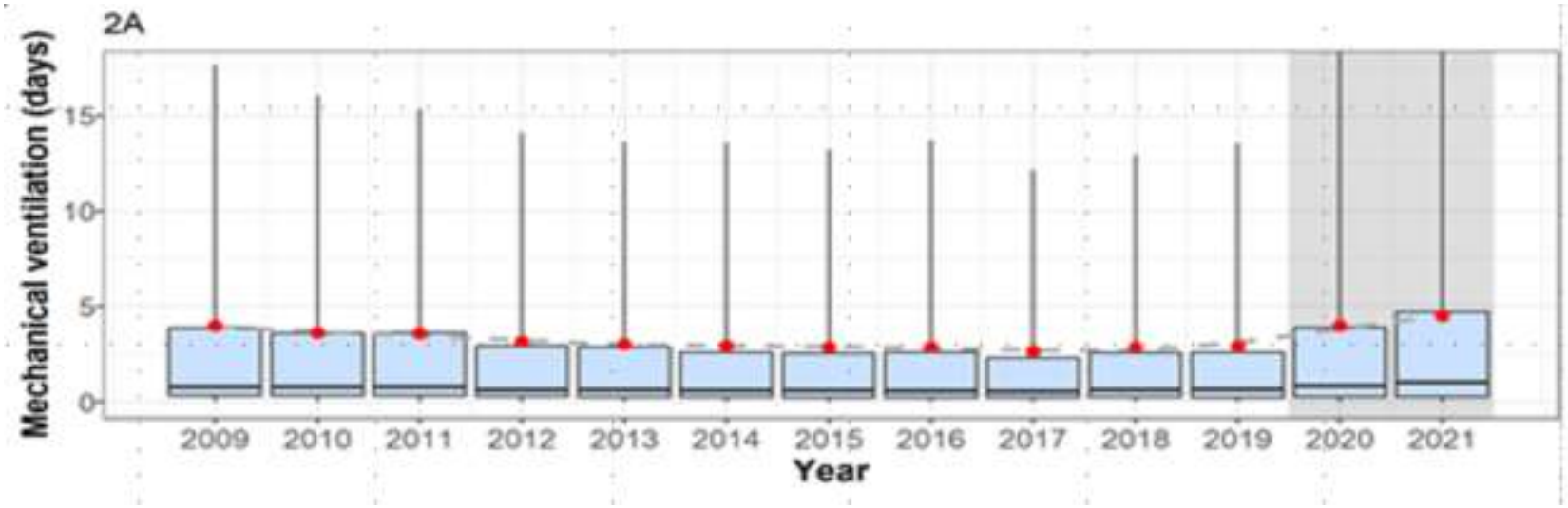
Quality Indicators over time



Hospital mortality

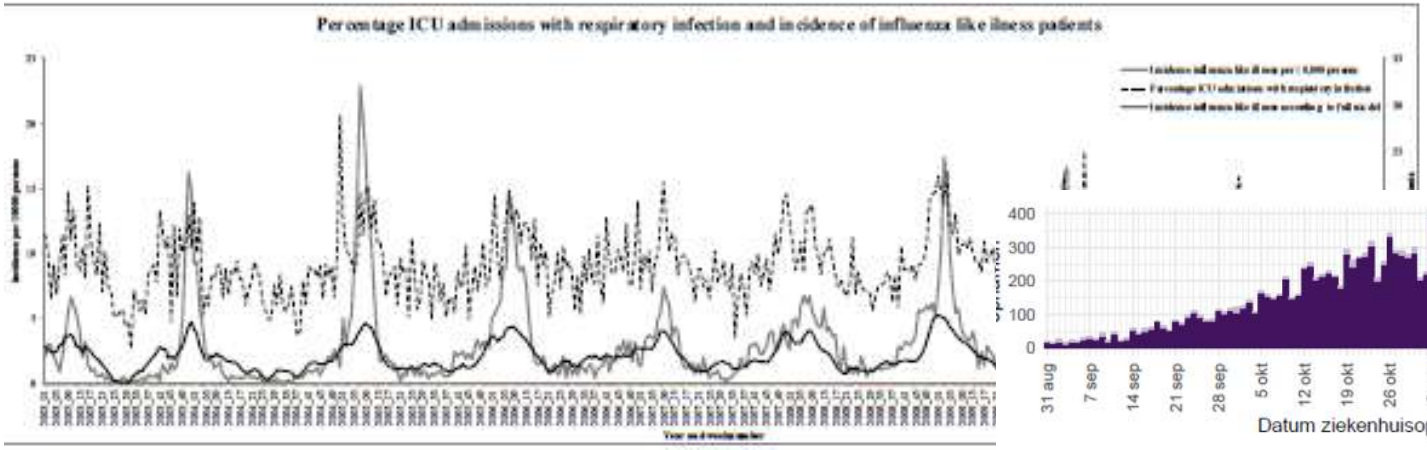


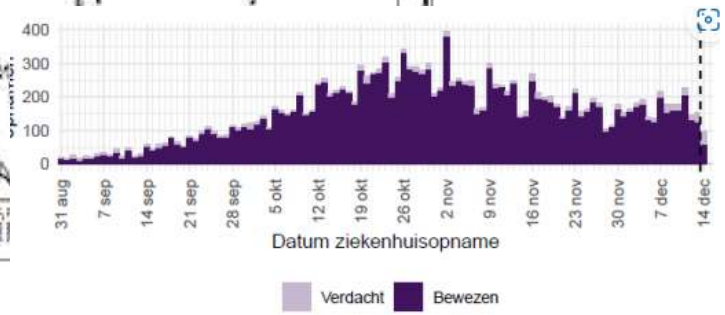
Mechanical ventilation

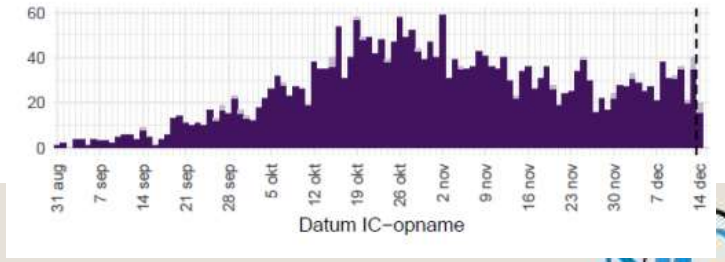


Public health, realtime data

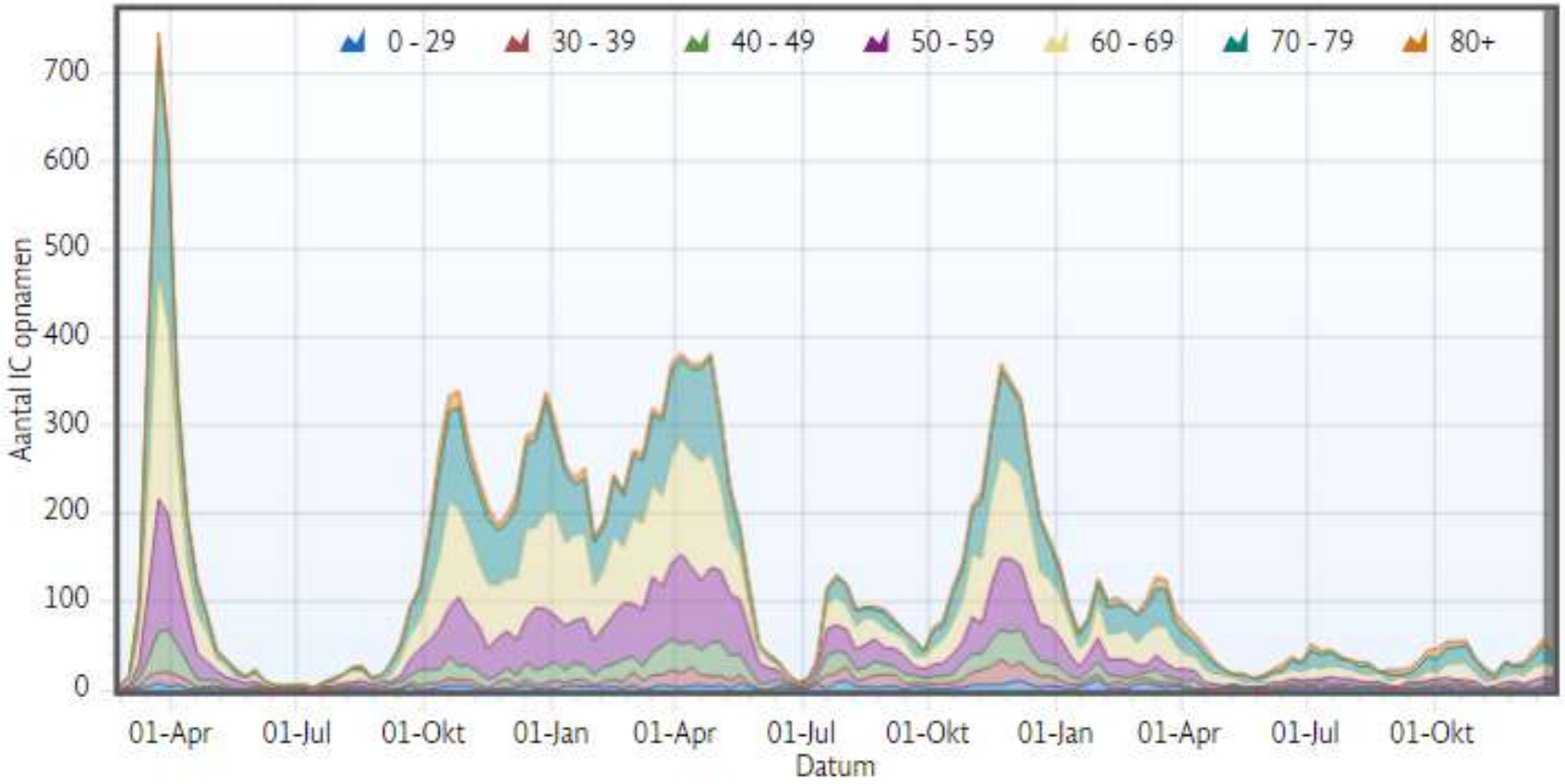
- Surveillance (influenza, COVID-19, SARI)







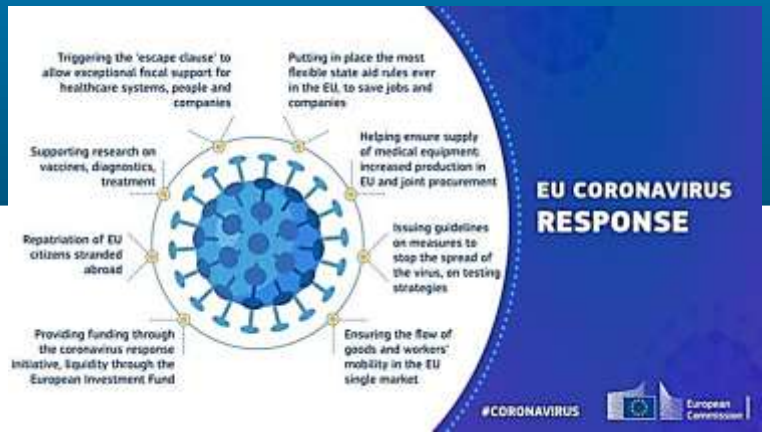
COVID-19


0 - 29
30 - 39
40 - 49
50 - 59
60 - 69
70 - 79
80+
Aantal IC opnamen
700
600
500
400
300
200
100
0
01-Apr
01-Jul
01-Okt
01-Jan
01-Apr
01-Jul
01-Okt
01-Jan
01-Apr
01-Jul
01-Okt
Datum

How about comparing between countries?

Confrontare le mele con le pere

Could we benefit from comparing?



EXAMPLE: Excess mortality in Europe in 2020 and 2021: relationship with socioeconomic indicators

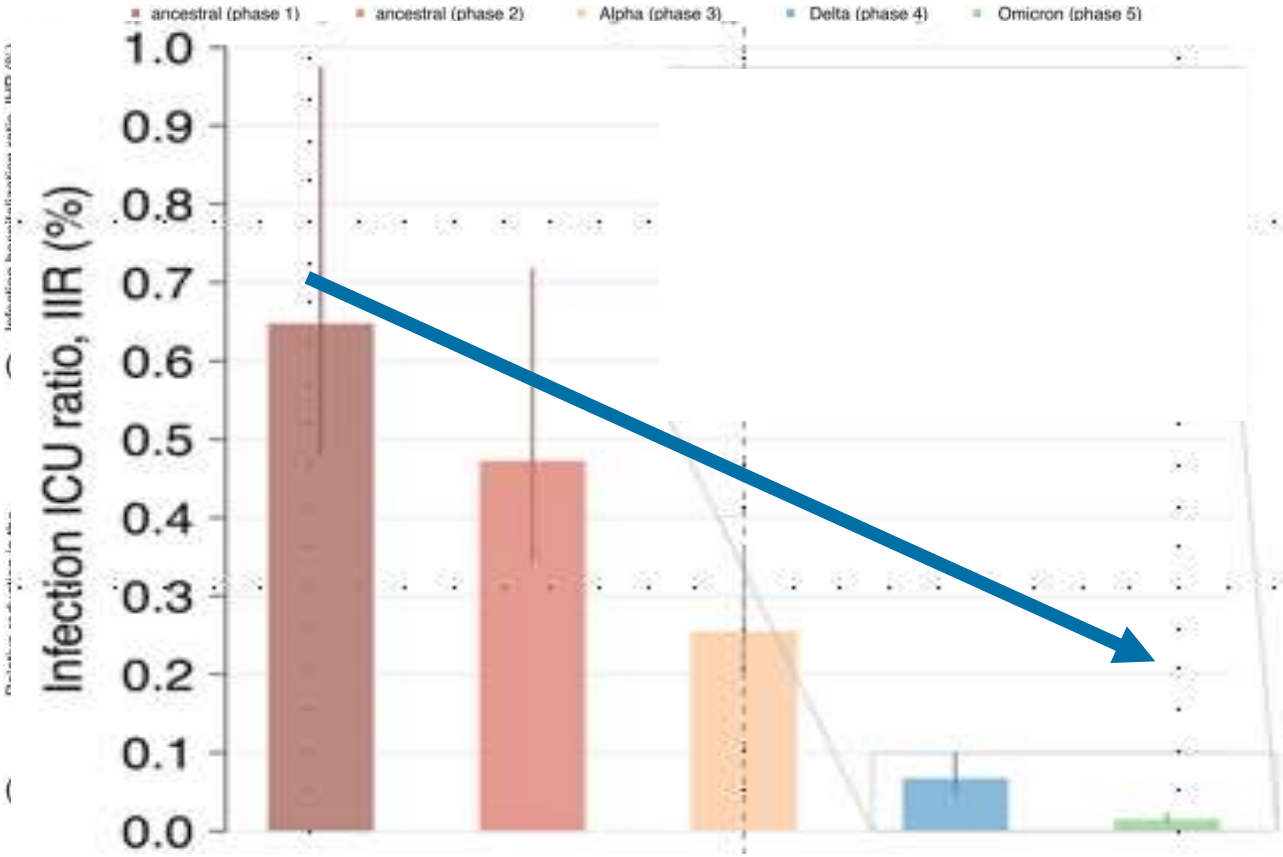
Among 22 European countries cumulative number of excess deaths during 2020 and 2021 was 800,011 (11%)

In 2020, the highest excess mortality occurred in Spain, UK, Italy, and France. In 2021, the countries with the highest excess mortality were Hungary, the Netherlands, France, and Germany.

There is a certain consensus worldwide regarding the need to strengthen health information and registration systems to generate higher-quality data so as to facilitate comparisons and make better decisions

López-Gigosos R, Vegas-Romero M, Mariscal A, Mariscal-López E, Fang J, Gutiérrez-Bedmar M.
Excess mortality in 22 European countries in 2020 and 2021: relationship with socioeconomic indicators.
Perspect Public Health. 2023 Jul 26:17579139231180800. doi: 10.1177/17579139231180800. Epub ahead of print. PMID: 37496392.

Estimating SARS-CoV-2 infections and associated changes in COVID-19 severity and fatality:
HOW MANY INFECTED PATIENTS IN ICU

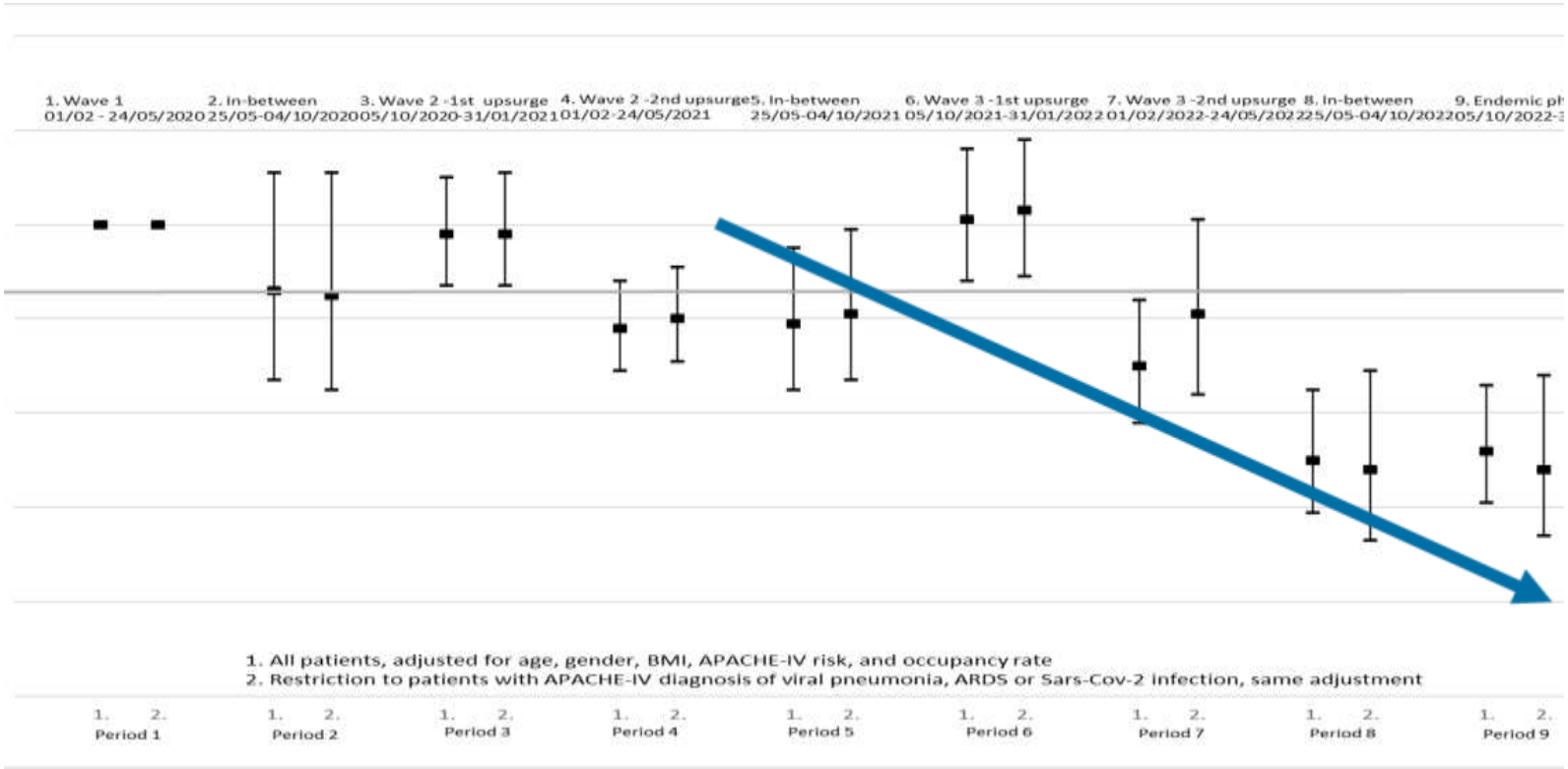


Changes in SARS-CoV-2 infection hospitalization ratio, intensive care unit (ICU) ratio and fatality ratio. (A) Infection hospitalization ratio (IHR). (B**) Infection ICU ratio (IIR).** (C) Infection fatality ratio (IFR). (D) Estimated relative reductions in the IHR compared with the first ancestral phase (%). (E) As D but for the IIR. (F) As D but for the IFR. Bars: mean estimates; vertical lines: 95% CI; *n* = 300 stochastic model realizations.

Influenza Resp Viruses, Volume: 17, Issue: 8, First published: 16 August 2023, DOI: (10.1111/irv.13181)

Multivariable logistic regression analysis: Odds ratios of Hospital mortality among ICU patients with Covid-19 during subsequent waves of Covid-19

HOW MANY ICU PATIENTS DIE IN HOSPITAL

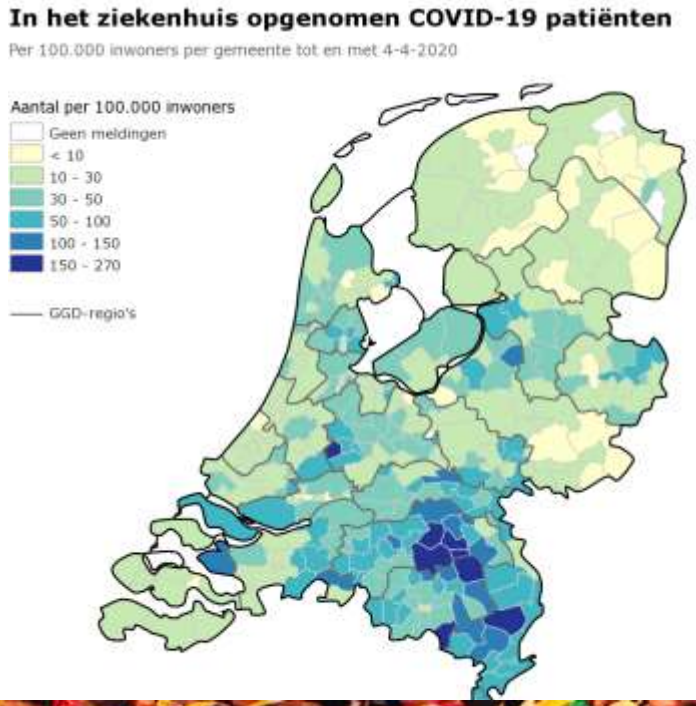


1. all patients (N=18,772) and
2. with restriction to patients with APACHE-IV diagnosis indicative of Covid-19 as main reason for ICU admission (N=16,187) (submitted)

SOURCE NICE

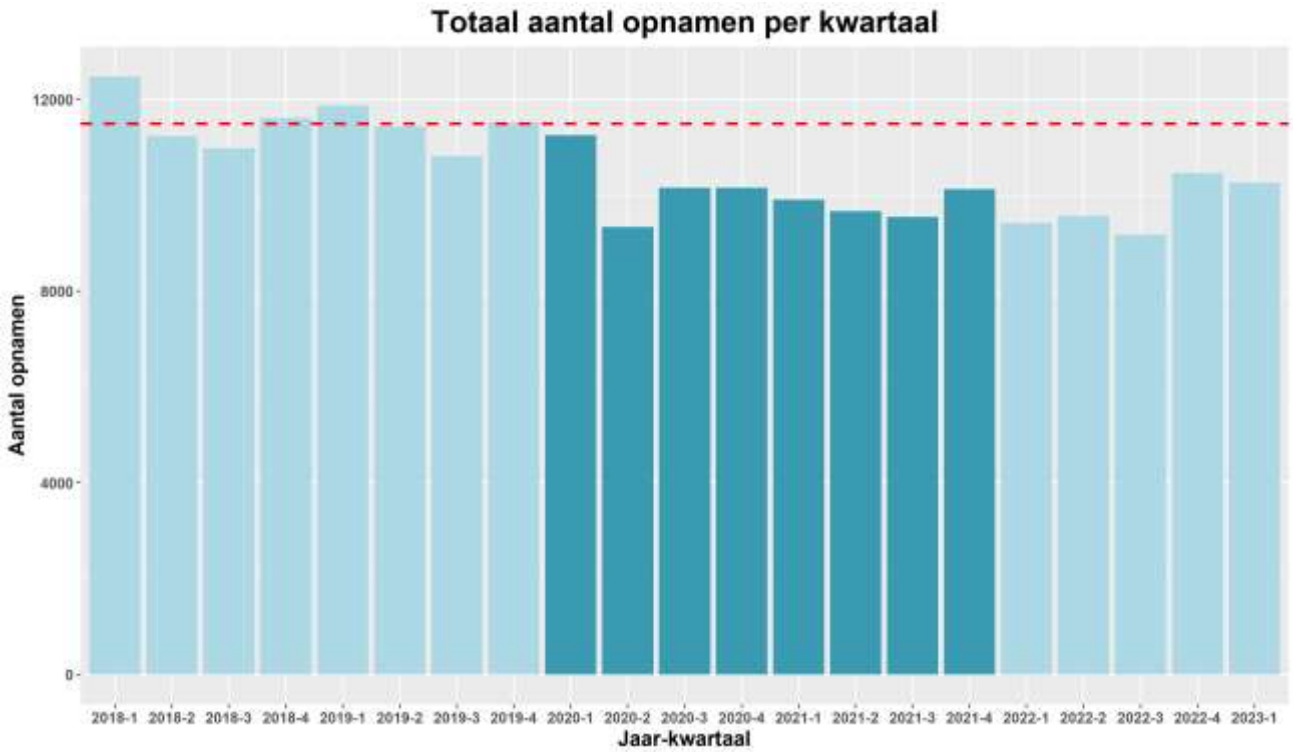
What could we compare?

Hospital admission in time period



Total number of admissions

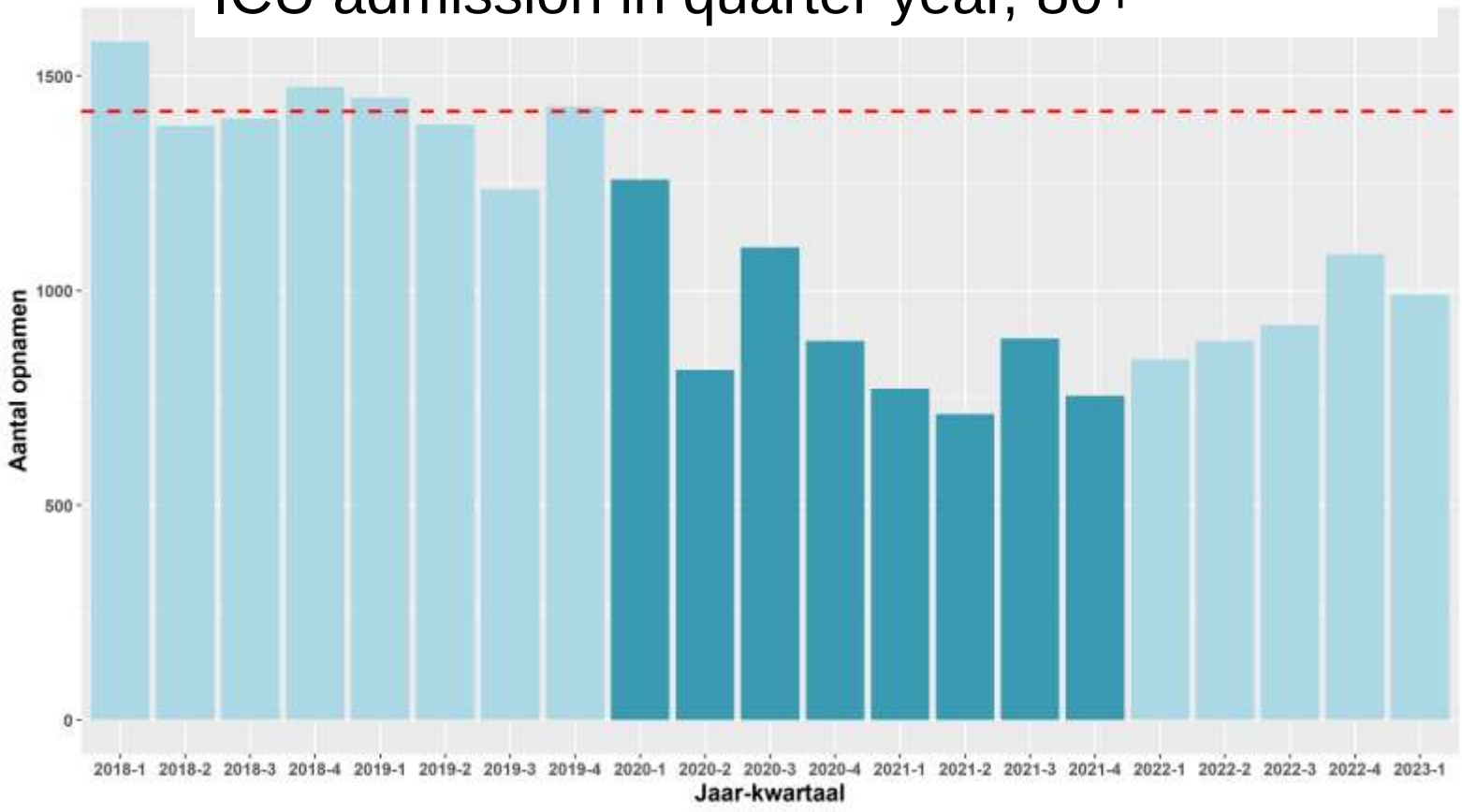
ICU admission in quarter year: all patients



- Trend red dots: mean 2018 and 2019
- COVID-19 “dark” blue

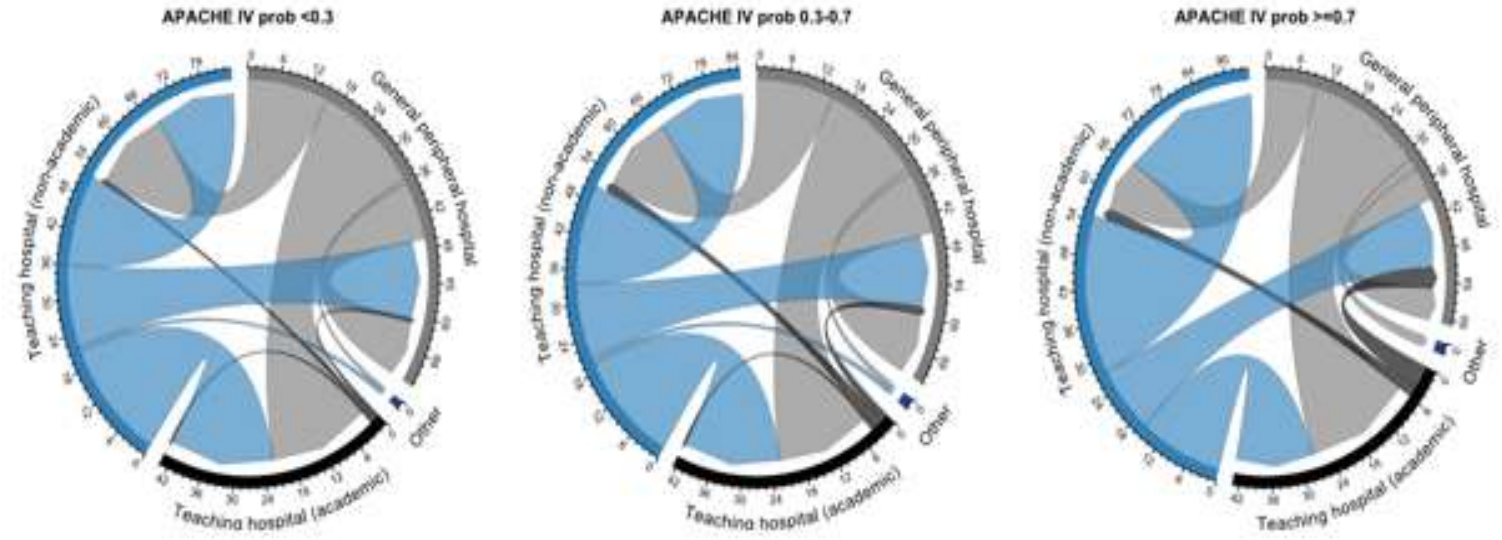
Admission octogenerians

ICU admission in quarter year, 80+



Apache survival probability and transfers

Figure S4: Proportions of intra-hospital transfers of COVID-19 patients between hospital types stratified by APACHE IV mortality probability groups <0.3, between 0.3 and 0.7 and >=0.7



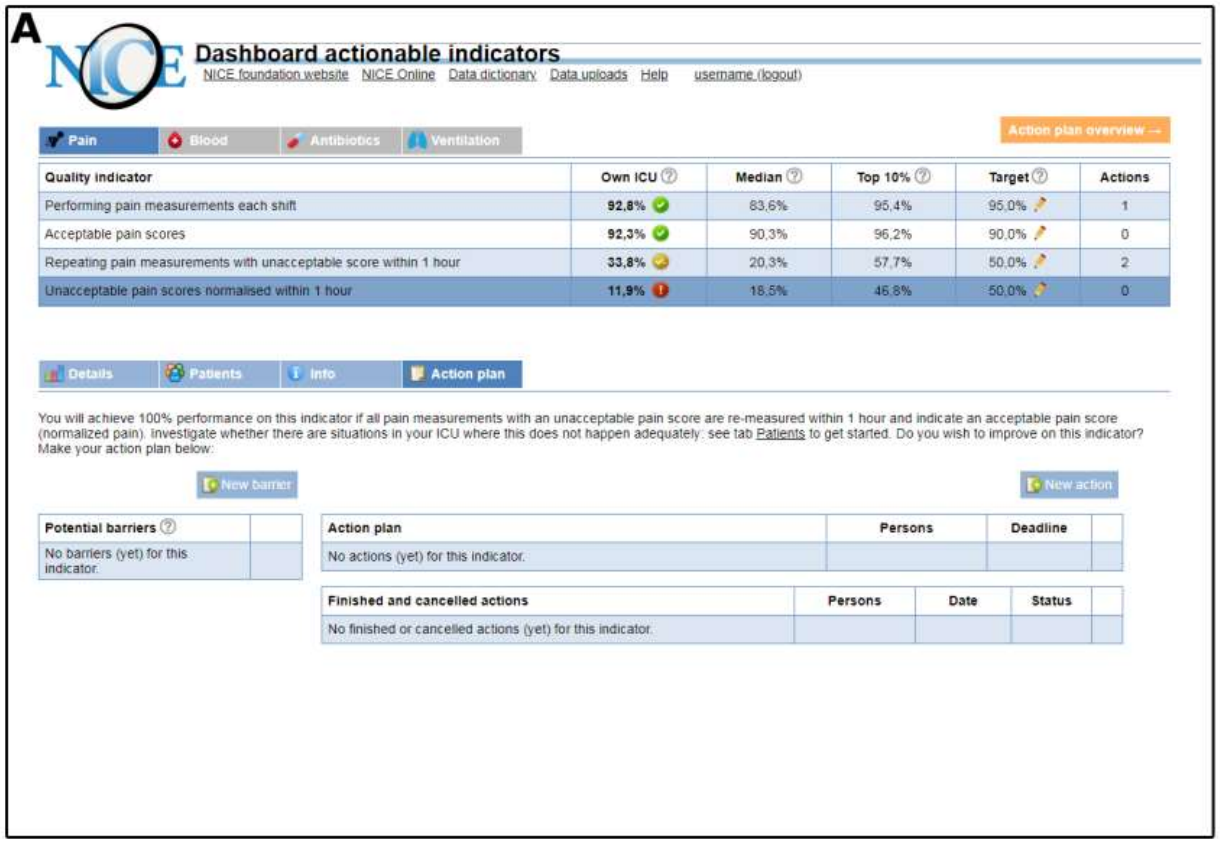
Transfers from general peripheral hospitals

Transfers from teaching hospitals (academic)

Transfers from teaching hospitals (non-academic)

Possible Collaboration

Actionable indicators



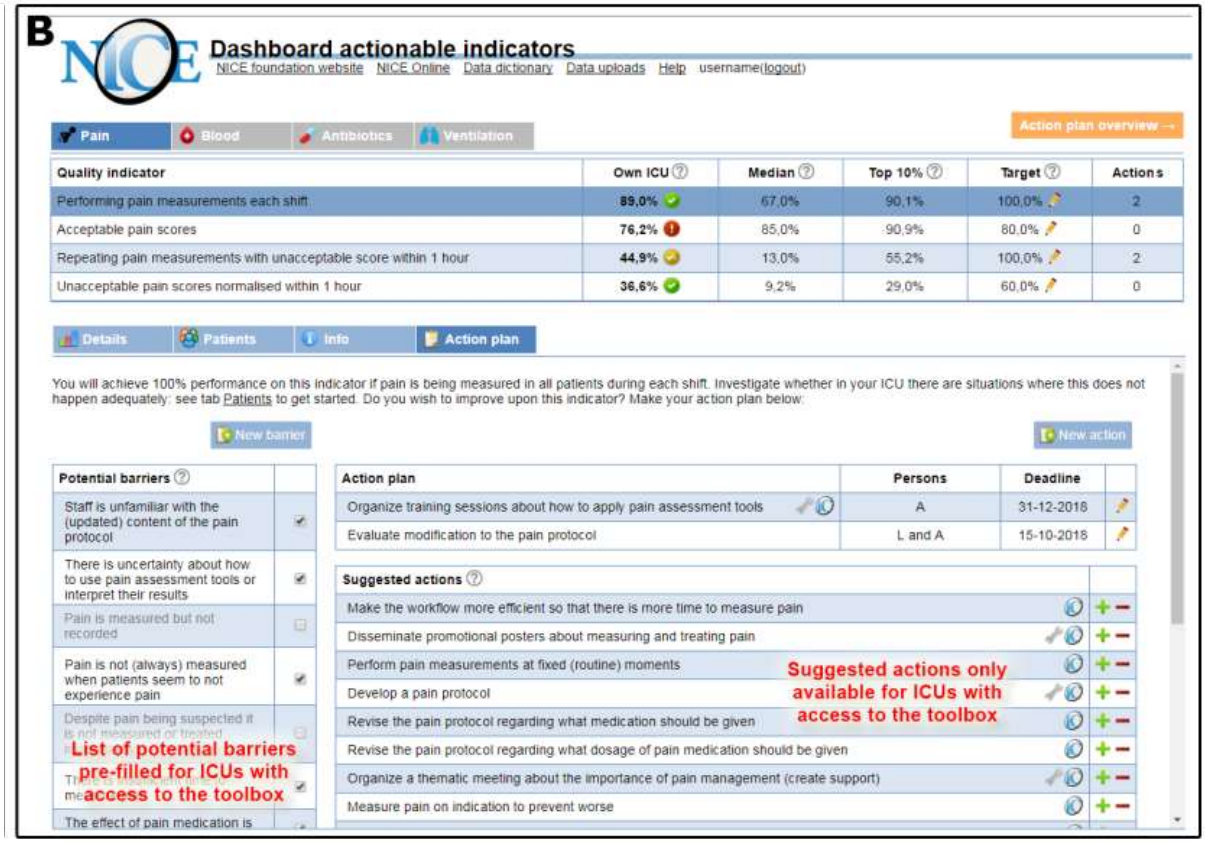
Data should be available in EHR

There should be variation

There should be room for improvement

Roos-Blom MJ, Gude WT, de Jonge E, Spijkstra JJ, van der Veer SN, Peek N, Dongelmans DA, de Keizer NF.
mpact of audit and feedback with action implementation toolbox on improving ICU pain management: cluster-randomised controlled trial. BMJ Qual Saf. 2019 Dec;28(12):1007-1015. doi: 10.1136/bmjqs-2019-009588.

Actionable indicators



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Toolbox

C. Barriers relating to professional interactions (Work system or structure – Organization)

Barrier 13. There is no culture in which measuring pain is considered important Relevant to indicator: 1 – 3		
Improvement action	**Description of improvement action**	**Material**
18. Appoint a pain coordinator or team to ensure pain policy	Pain policy and quality improvement initiatives can be ensured by appointing a role model or specific team with pain management as special responsibility[19, 20].	
19. Organize a special meeting on the importance of pain management (create social support)	By organizing an interactive (theme) meeting on the consequences of not measuring pain and prejudices against medication administration, can lead to a better social culture of pain measurement[15]. It can be helpful to point out a pain coordinator, pain nurse or manager as being responsible for the educational sessions[12].	
Actions 8+9+10+21		

		Material
	essed when mple, on a a link to it EHR) or PDMS)[11].	
	n be pocket card n the	Standard format flowchart or pocket card
8. Spread a digital newsletter with details or updates on the pain protocol	Information spread by email is an effective way to introduce people to (updates of) the antibiotic protocol[12].	
9. Provide promotional posters on specific topics relating to pain management	Promotional posters that indicate when and with what instruments pain should be measured, can stimulate familiarity with the protocol and serve as a reminder[13].	Standard format posters

outcomes

	Feedback only			Feedback with toolbox		
	Crude pre-intervention performance*	Crude performance after 6 months†	OR (95% CI) at 6 months	Crude pre-intervention performance*	Crude performance after 6 months†	OR (95% CI) at 6 months
Adequate pain management (primary outcome)	69.3% (25 436/36 713)	74.1% (27 128/36 617)	**1.04 (1.00 to 1.09)**	59.8% (18 728/31 334)	74.5% (19 789/26 551)	**1.13 (1.06 to 1.22) ‡**
Secondary outcomes						
Performing pain measurements	79.3% (29 115/36 713)	82.7% (30 269/36 617)	**1.04 (1.00 to 1.09)**	67.5% (21 138/31 334)	83.1% (22 062/26 551)	**1.24 (1.15 to 1.34) §**
Re-measuring unacceptable pain within 1 hour	18.6% (804/4318)	23.7% (903/3811)	**1.15 (1.06 to 1.25)**	14.3% (390/2735)	24.7% (714/2889)	**1.26 (1.08 to 1.47)**

Possible International Collaboration

International Benchmarking

Logic – Linking of Global Intensive Care (icubenchmarking.com)

International benchmarking

International Benchmarking — Endorsed by LOGIC — Powered by Epimed — English

Report: Consolidated / Evolutive

Patient Groups: All — Apply

« Previous — year: 2020 — Next »

Admissions	Age	Readmission <48h	SOFA	Renal Replacement Therapy
931,157	61.1 years	1.79% / 16,663	4.5 Points	2.40% / 22,344

Mechanical Ventilation		LOS		Mortality	
Patients	Mean	ICU	Hospital	ICU	Hospital
25.01% / 232,912	4.9 Days	4.2 Days	14.3 Days	11.67% / 108,668	15.04% / 140,089

Registry	Country	Admissions	Age	Readmission <48h	SOFA	Renal Replacement Therapy	Mechanical Ventilation	Mechanical Ventilation Duration (days)	ICU LOS (days)	Hospital LOS (days)	ICU Mortality	Hospital Mortality
ANZICS Australia	Australia	166,696	62.2	1.32% | 2,207	3.7	3.37% | 5,621	30.57% | 50,953	2.6	2.8	12.4	4.33% | 7,213	6.77% | 11,293
ANZICS New Zealand	New Zealand	13,984	58.5	1.64% | 230	6.5	4.18% | 584	45.91% | 6,420	2.5	2.8	13.8	7.80% | 1,091	10.72% | 1,499
Brazilian ICUs	Brazil	532,005	63.3	1.76% | 9,389	2.2	1.74% | 9,276	17.94% | 95,447	9.2	5.7	15.5	13.98% | 74,393	20.06% | 106,741
CCA	CCA Countries	55,996	54.0	0.21% | 119	0	1.38% | 773	27.43% | 15,361	3.0	3.0	8.0	17.82% | 9,979	5.36% | 3,001
IRIS India	India	7,784	60.0	0.87% | 68	0	3.40% | 265	21.76% | 1,694	3.0	2.0	12.0	12.63% | 983	4.01% | 312
JIPAD Japan	Japan	44,744	70.0	5.10% | 2,283	4.0	8.00% | 3,580	39.19% | 17,534	0	2.0	21.0	4.01% | 1,795	8.64% | 3,865
MICA Project	Belgium	19,046	64.6	1.66% | 317	4.1	1.07% | 203	18.79% | 3,579	7.6	4.9	20.3	9.66% | 1,840	14.59% | 2,779
NICE Netherlands	Netherlands	69,170	62.7	2.15% | 1,484	6.1	2.38% | 1,648	51.34% | 35,512	4.2	3.9	13.5	10.34% | 7,152	13.98% | 9,669
SATI-Q Argentina	Argentina	15,524	57.4	3.47% | 539	4.7	2.00% | 311	32.00% | 4,967	9.8	8.3	0	22.19% | 3,445	0% | 0
Uruguayan ICUs	Uruguay	6,208	58.1	0.43% | 27	0	1.34% | 83	23.28% | 1,445	7.1	6.8	12.4	12.52% | 777	14.98% | 930

NL-Belgium

International Benchmarking — Endorsed by LOGIC — Powered by Epimed — English

Report: Consolidated / Evolutive

Patient Groups: All — Apply

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NL-New zealand

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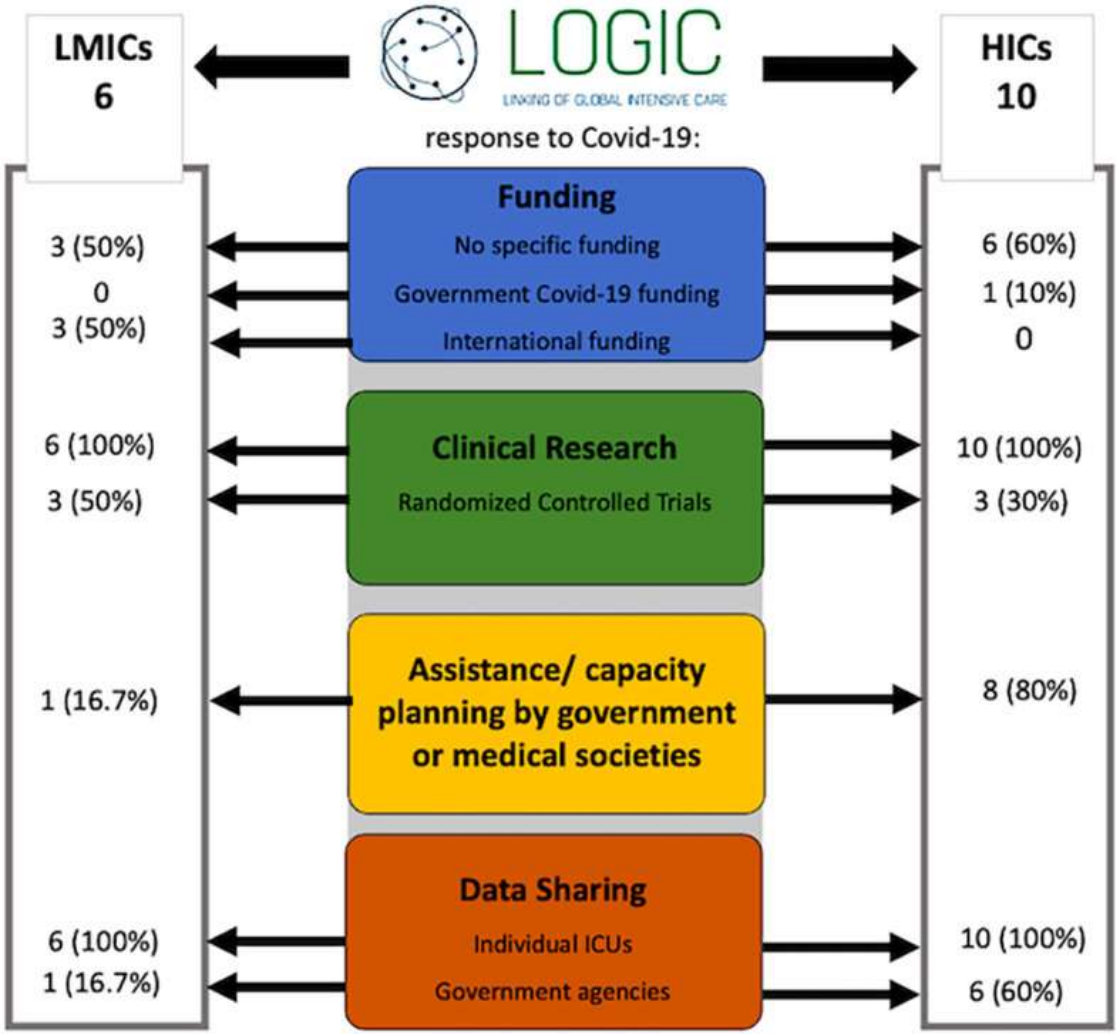
IRIS India	India	7,784	60.0	0.87% | 68	0	3.40% | 265	21.76% | 1,694	3.0	2.0	12.0	12.63% | 983	4.01% | 312
JIPAD Japan	Japan	44,744	70.0	5.10% | 2,283	4.0	8.00% | 3,580	39.19% | 17,534	0	2.0	21.0	4.01% | 1,795	8.64% | 3,865
MICA Project	Belgium	19,046	64.6	1.66% | 317	4.1	1.07% | 203	18.79% | 3,579	7.6	4.9	20.3	9.66% | 1,840	14.59% | 2,779
NICE Netherlands	Netherlands	69,170	62.7	2.15% | 1,484	6.1	2.38% | 1,648	51.34% | 35,512	4.2	3.9	13.5	10.34% | 7,152	13.98% | 9,669
SATI-Q Argentina	Argentina	15,524	57.4	3.47% | 539	4.7	2.00% | 311	32.00% | 4,967	9.8	8.3	0	22.19% | 3,445	0% | 0
Uruguayan ICUs	Uruguay	6,208	58.1	0.43% | 27	0	1.34% | 83	23.28% | 1,445	7.1	6.8	12.4	12.52% | 777	14.98% | 930

Worldwide clinical intensive care registries response to the pandemic: An international survey



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