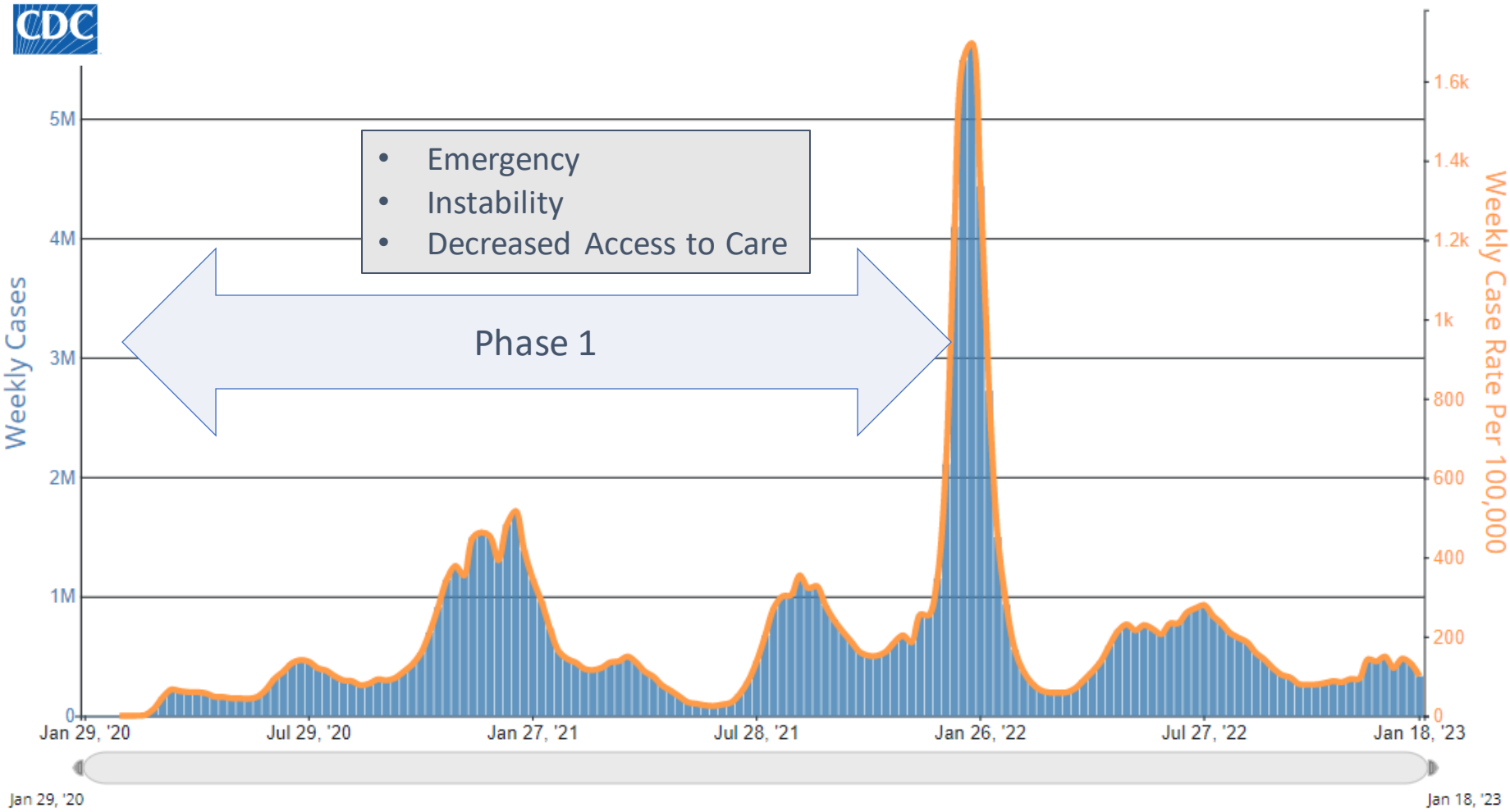
UWTASP tele-antimicrobial stewardship program | echo

January 31st, 2023

Recharge and Re-cap: Infection Prevention

Weekly Trends in Number of COVID-19 Cases and Weekly Case Rate in The United States Reported to CDC, per 100,000 population.



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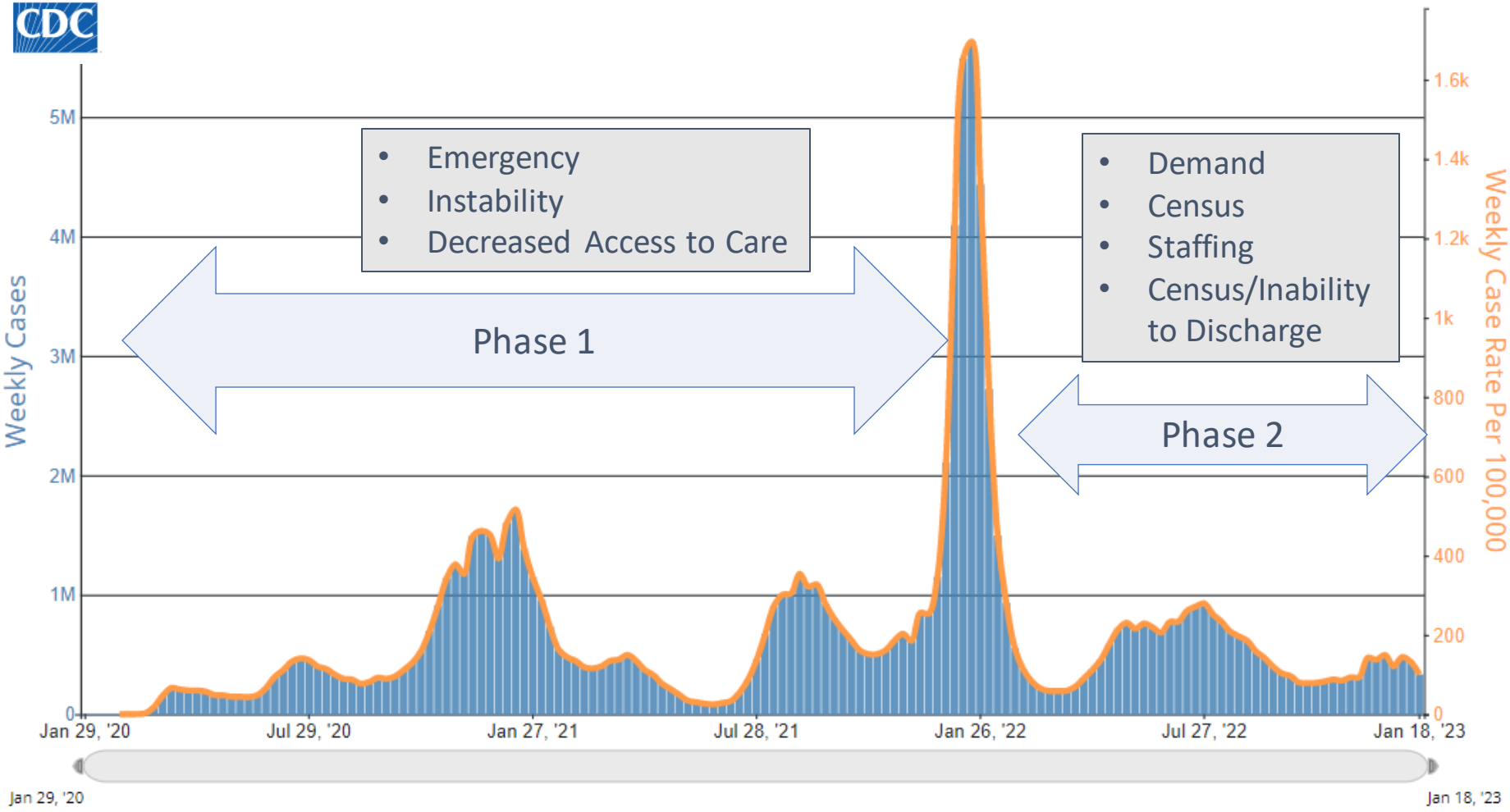


National Action Plan to Prevent Health Care-Associated Infections: Road Map to Elimination

Table 4. *HHS Action Plan to Prevent Health Care-Associated Infections (2009)* Priority Areas and Five-Year Goals

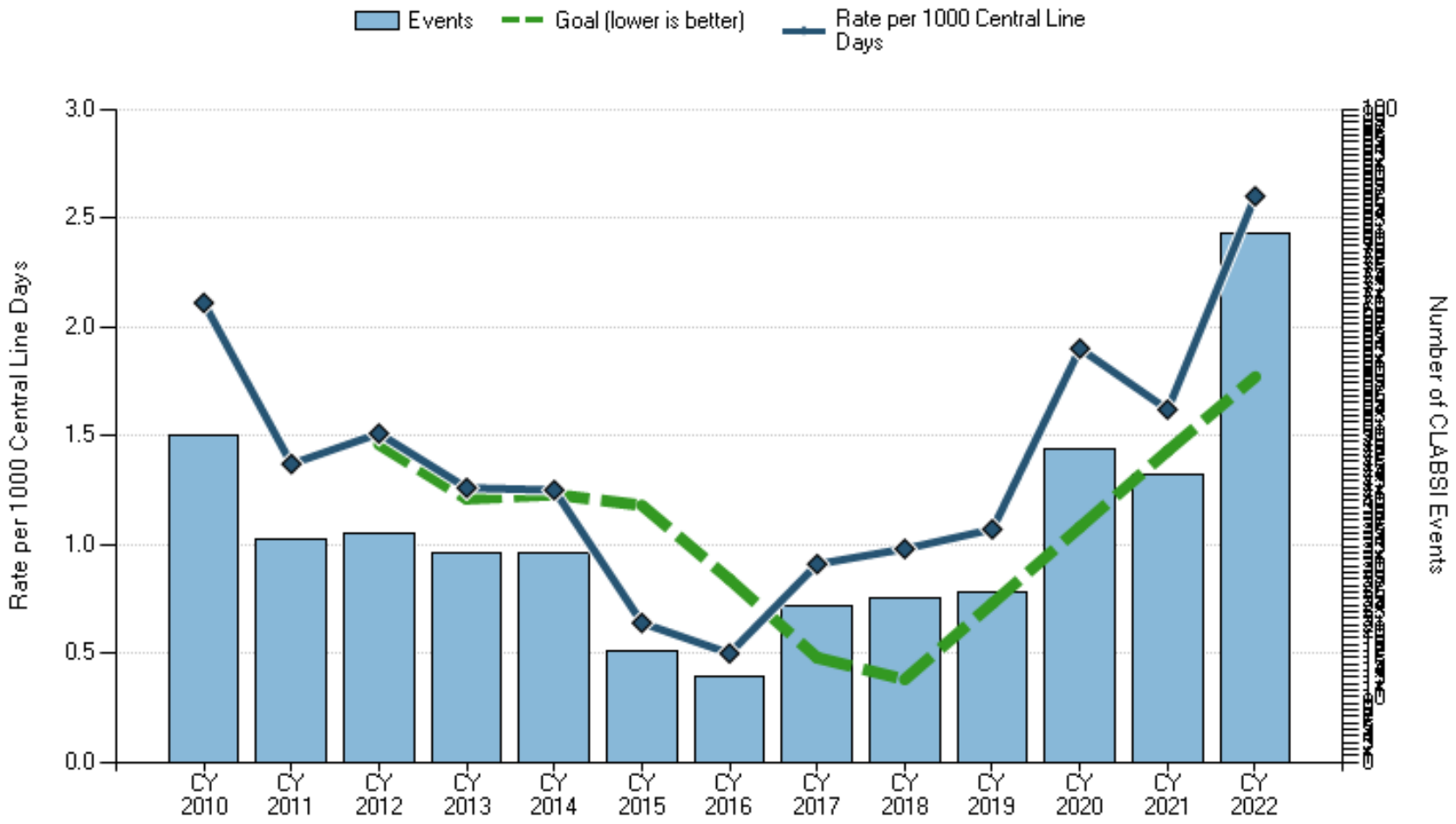
Priority Area	Measure/Metric	Five Year (2013) Goal	National Baseline Period
Catheter-Associated Urinary Tract Infection	Catheter-associated urinary tract infections	25% reduction	2009
***Clostridium difficile* Infection**	Hospitalizations with *Clostridium difficile*	30% reduction	2008
	Clostridium difficile infections	30% reduction	2010-2011
Central Line-Associated Bloodstream Infection	Central line-associated bloodstream infections	50% reduction	2006-2008
MRSA Infection	MRSA invasive infections (population)	50% reduction	2007-2008
	MRSA bacteremia (hospital)	25% reduction	2010-2011
Surgical Site Infection	Surgical site infections	25% reduction	2006-2008
	Adherence to CMS Surgical Care Improvement Project (SCIP) processes	95% adherence	2006-2008
Ventilator-Associated Events (formerly VAP)	-	-	-

Progress: National Acute Care Hospital HAIs

Measure (and data source)	Progress made 2016 (from 2015 baseline)	Progress made 2019 (from 2015 baseline)	2020 Target (from 2015 baseline)
CLABSI (NHSN)[1]	11% reduction	31% reduction	50% reduction
CAUTI (NHSN)[1]	7% reduction	26% reduction	25% reduction
Invasive MRSA (NHSN/EIP)[1, 2]	8% reduction	5% increase[4]	50% reduction
Hospital-onset MRSA (NHSN)[1]	6% reduction	18% reduction	50% reduction
Hospital-onset CDI (NHSN)[1]	8% reduction	42% reduction	30% reduction
SSI (NHSN)[1]	6% reduction	7% reduction	30% reduction
Clostridioides difficile-*related* hospitalizations (HCUP)[3]	4% reduction	29% reduction	30% reduction

HMC Central Line Associated Bloodstream Infections (CLABSI) (per 1000 cath days)

[CLABSI] - Yearly



Continued increases in the incidence of healthcare-associated infection (HAI) during the second year of the coronavirus disease 2019 (COVID-19) pandemic

Published online by Cambridge University Press: **20 May 2022**

Lindsey M. Lastinger, Carlos R. Alvarez, Aaron Kofman, Rebecca Y. Konnor, David T. Kuhar, Allan Nkwata, Prachi R. Patel, Vaishnavi Pattabiraman, Sunny Y. Xu and Margaret A. Dudeck

				2021-Q1				2019-Q1			
HAI Type	No. of Hospitals[a]	% Change in SIR[b]	95% CI	No. of HAIs Reported	No. of HAIs Predicted	Device/Patient Days or Procedures[c]	SIR	No. of HAIs Reported	No. of HAIs Predicted	Device/Patient Days or Procedures[c]	SIR
CLABSI[e]	3,394	45.3[d]	(38.6 to 52.2)	4,505	4,515.37	4,489,151	0.998	2,924	4,256.41	4,244,791	0.687
CAUTI[f]	3,389	11.5[d]	(6.7 to 16.6)	4,318	5,174.38	4,429,547	0.834	3,593	4,801.64	4,125,335	0.748
VAE[g]	1,440	50.9[d]	(42.5 to 52.5)	10,270	7,176.85	1,055,497	1.431	5,047	5,322.98	764,599	0.948
SSI, colon surgery[h]	2,776	−5.3	(−11.3 to 1.3)	1,693	2,063.48	78,726	0.820	1,805	2,085.28	82,523	0.866
SSI, abdominal hysterectomy[h]	2,424	5.4	(−7.5 to 20.2)	429	439.33	63,251	0.976	468	505.40	77,481	0.926
LabID MRSA bacteremia[i]	3,477	39.2[d]	(31.7 to 47.2)	2,999	2,573.38	39,791,227	1.165	2,087	2,493.46	40,214,206	0.837
LabID CDI[j]	3,476	−15.6[d]	(−17.6 to −13.5)	11,534	21,765.23	37,024,548	0.530	15,061	23,996.48	37,149,384	0.628

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https://doi.org/10.1017/ice.2022.116

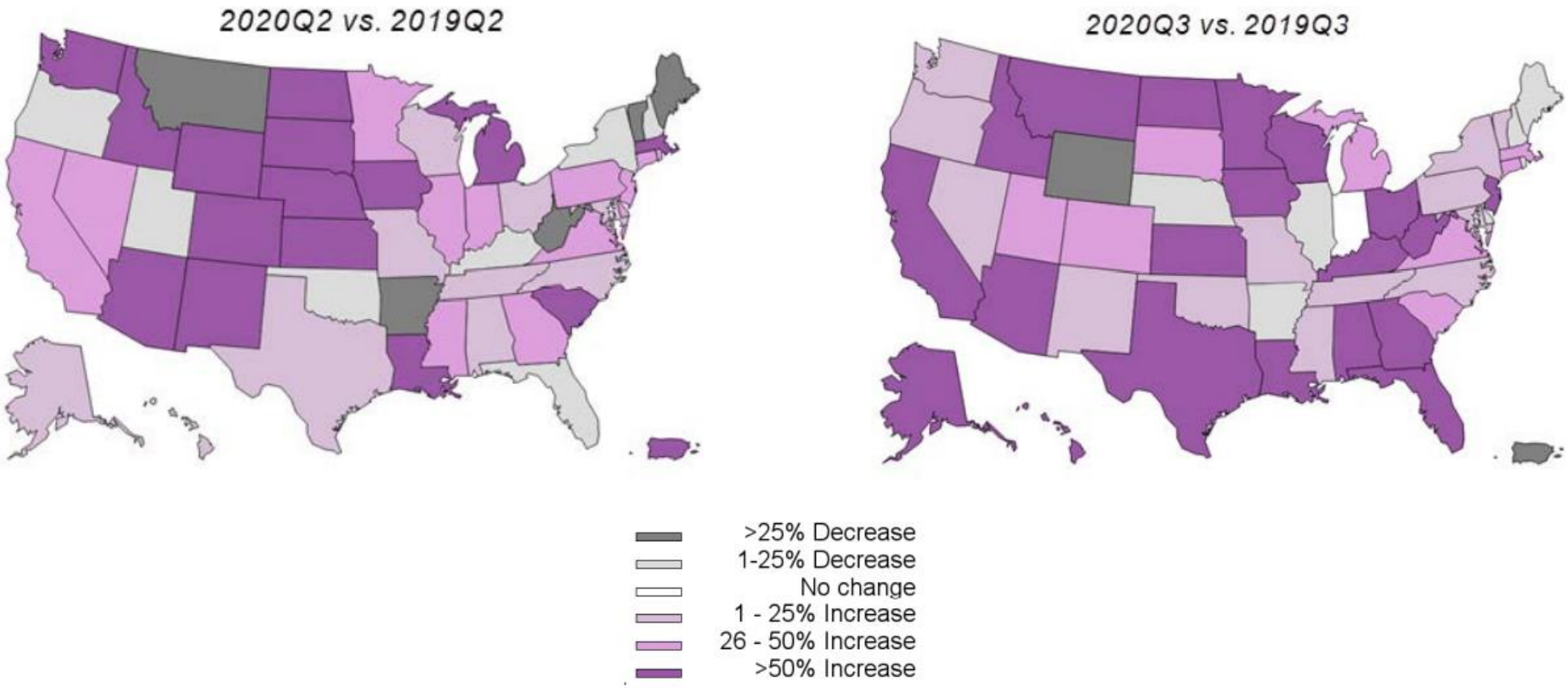
Nationally, among acute care hospitals, the 2021 annual highlights in this report include:

- Overall, 7% increase in CLABSI between 2020 and 2021
  - Largest increase in ICUs (10%)
- Overall, 5% increase in CAUTI between 2020 and 2021
  - Largest increase in ICUs (9%)
- Overall, there was a 12% increase in VAE between 2020 and 2021
  - Observed a 12% increase in ICUs
  - Observed a 16% increase in non-ICUs
- Overall, there were no significant changes in SSI related to the 10 select procedures tracked in the report between 2020 and 2021.
  - The 10 select procedures are Surgical Care Improvement Project (SCIP) procedures. Note: The initial set of acute care hospital targets and metrics included a measure on SCIP processes. That measure is no longer part of the HAI Action Plan because these processes are now widely accepted as standards of practice. For details, please see: https://health.gov/our-work/health-care-quality/health-care-associated-infections/targets-metrics
  - Observed an 11% increase in abdominal hysterectomy SSIs
  - No significant changes in colon surgery SSIs
- There was 14% increase in hospital onset MRSA bacteremia between 2020 and 2021
- There was a 3% decrease in hospital onset *C. difficile* infections between 2020 and 2021

Current HAI Progress Report | HAI | CDC

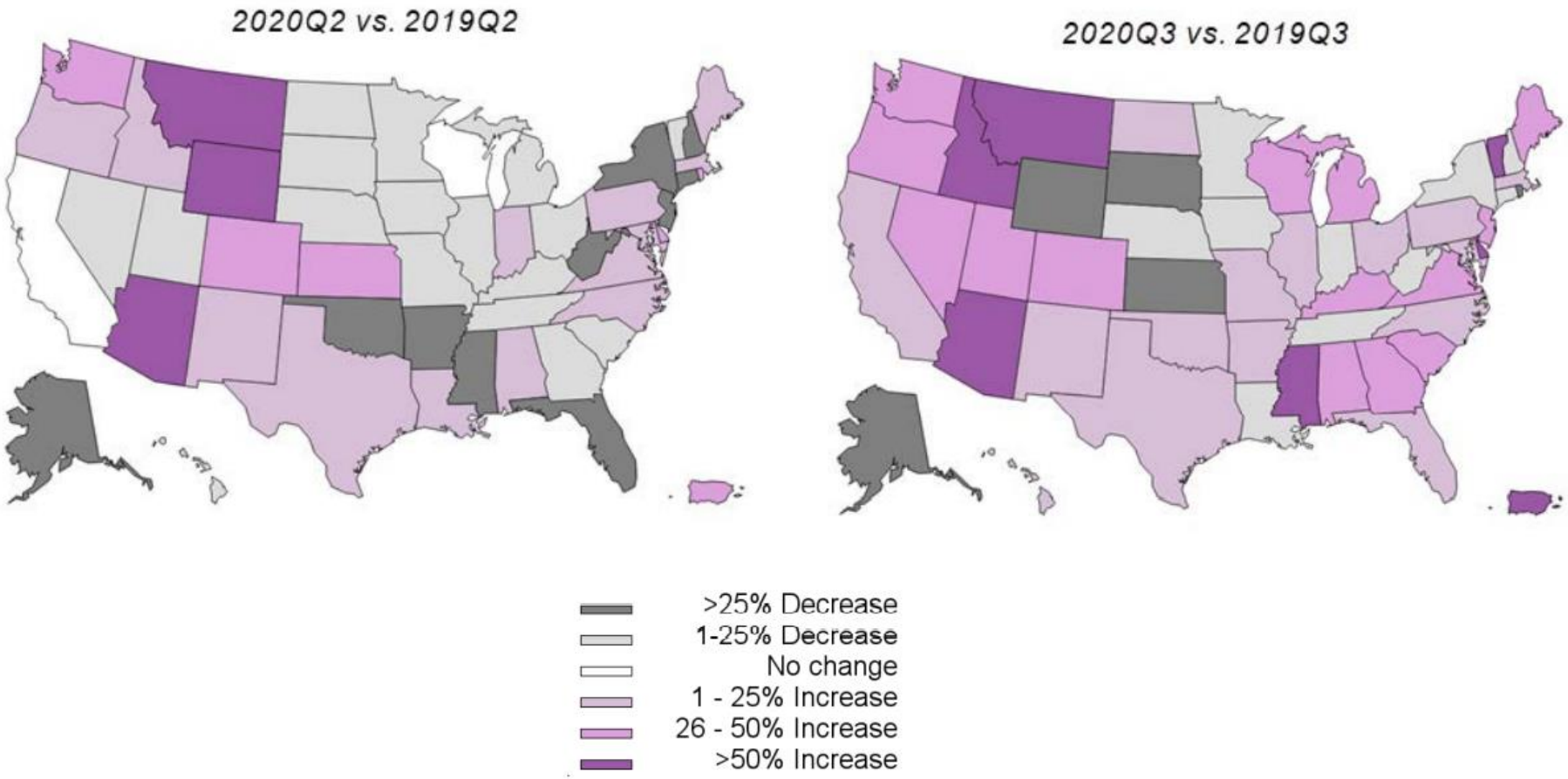
Percent Change in CLABSI SIRs, by state: 2020 vs 2019

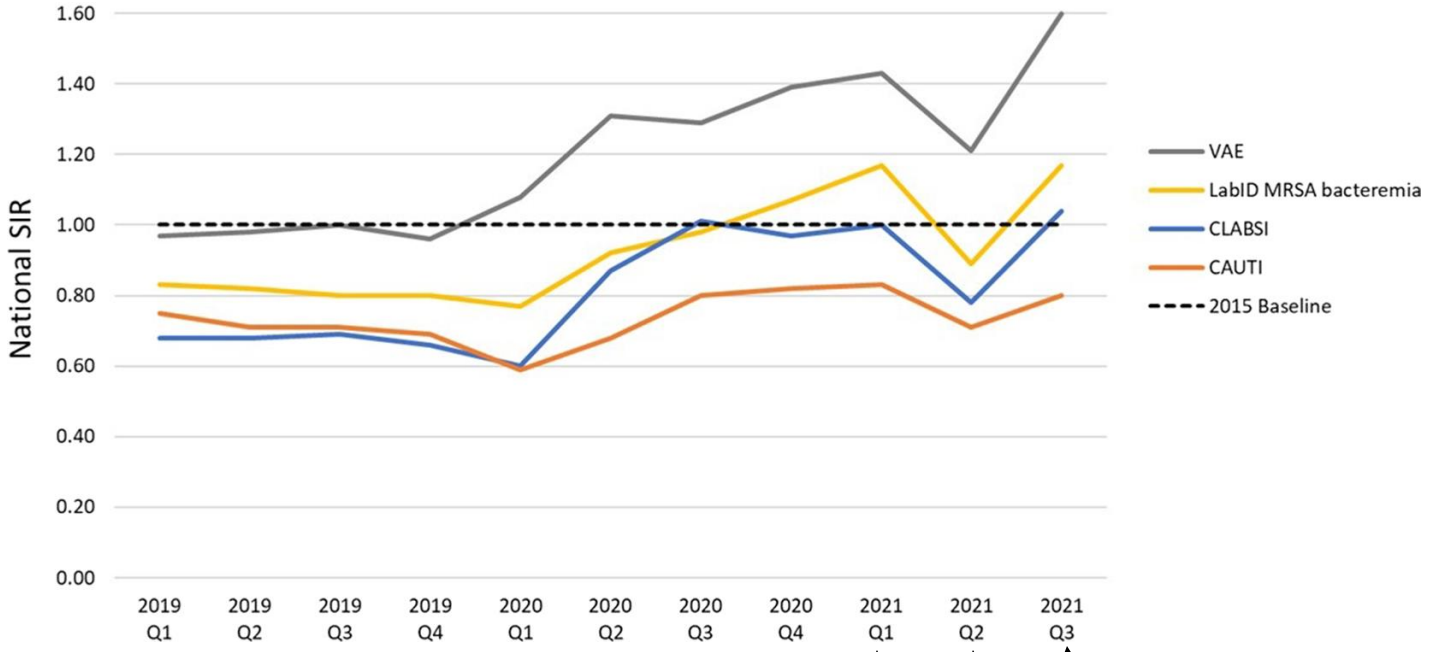
Data table available at: https://www.cdc.gov/nhsn/pdfs/datastat/supplements/sup3-statedata.xlsx

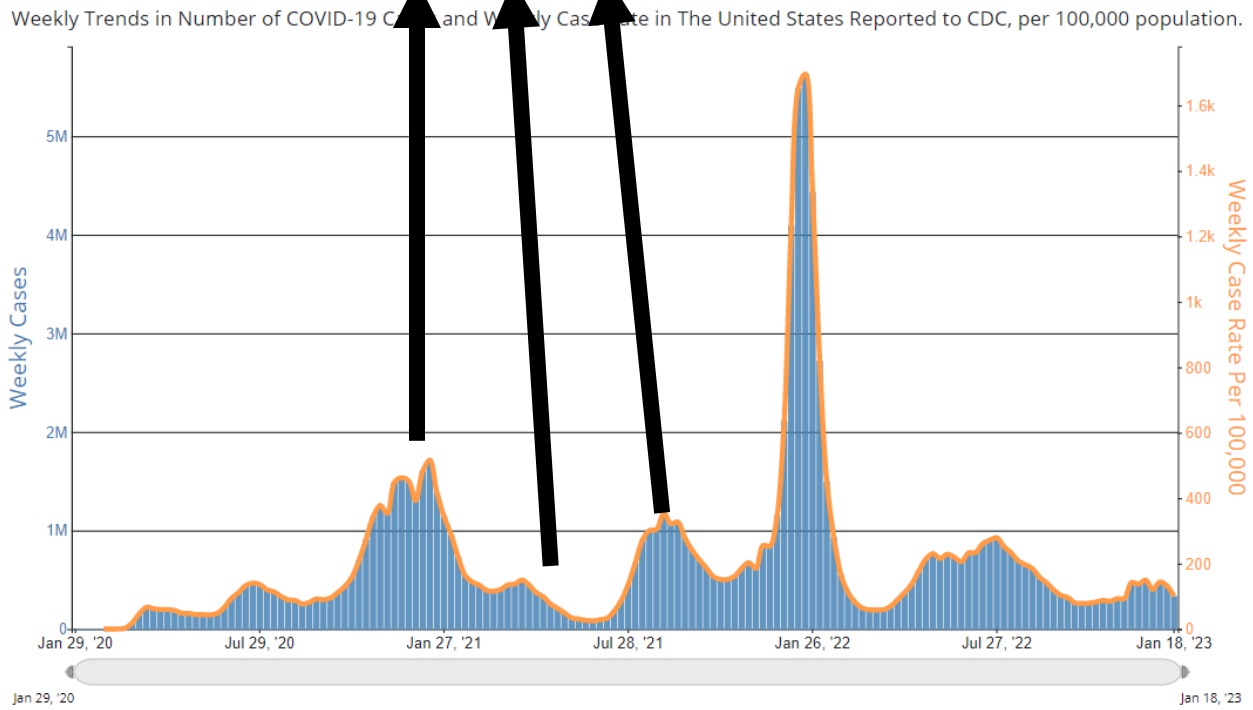


Percent Change in CAUTI SIRs, by state: 2020 vs 2019

Data table available at: https://www.cdc.gov/nhsn/pdfs/datastat/supplements/sup3-statedata.xlsx





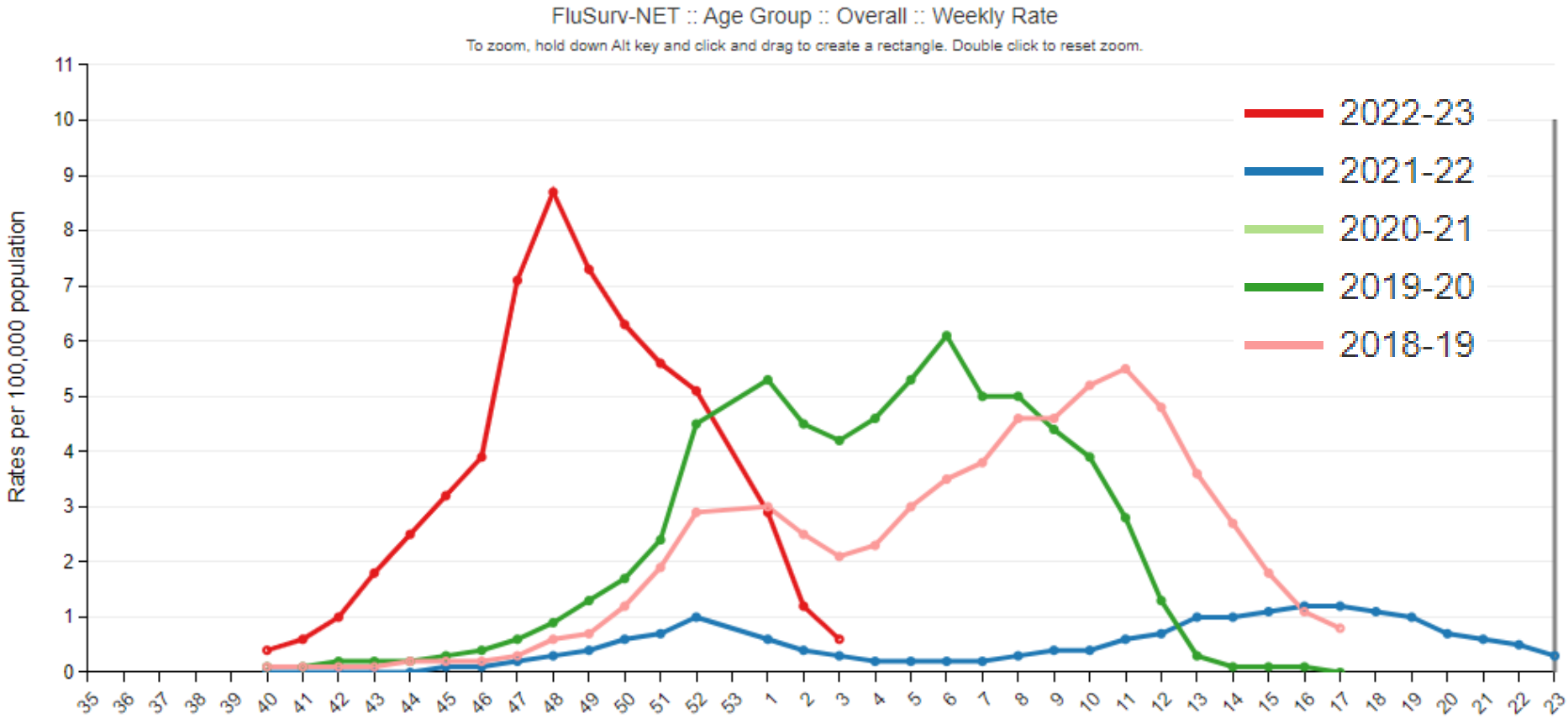


https://doi.org/10.1017/ice.2022.116

Why?

- Different patient populations/health disparities
- Severity of illness/LOS
- COVID vs non-COVID inpatients
- Disruption in hospital practices
  - Less universal decolonization
  - Alterations in line care
  - Less scrub the hub, etc.
- Staffing/overwork/burnout
- Supply chain challenges
- IPC activities sidelined
- Blood culture contamination/misclassification

https://doi.org/10.1017%2Fice.2021.70



[Laboratory-Confirmed Influenza Hospitalizations (cdc.gov)]

The NEW ENGLAND JOURNAL of MEDICINE

Perspective

Health Care Safety during the Pandemic and Beyond — Building a System That Ensures Resilience

Lee A. Fleisher, M.D., Michelle Schreiber, M.D., Denise Cardo, M.D., and Arjun Srinivasan, M.D.

February 17, 2022
N Engl J Med 2022; 386:609-611
DOI: 10.1056/NEJMp2118285

The fact that the pandemic degraded patient safety so quickly and severely suggests that our health care system lacks a sufficiently resilient safety culture and infrastructure. We believe the pandemic and the breakdown it has caused present an opportunity and an obligation to reevaluate health care safety with an eye toward building a more resilient health care delivery system, capable not only of achieving safer routine care but also of maintaining high safety levels in times of crisis.

Audio interview with author Lee Fleisher:
https://www.nejm.org/doi/do_file/10.1056/NEJMdo006389/NEJMdo006389.mp3?area=

Viewpoint

We're all in this together: how COVID-19 revealed the co-construction of mindful organising and organisational reliability FREE

Timothy J Vogus [1], Amy D Wilson [2], Kelly Randall [2], Mary C Sitterding [2]

On this brittle foundation, as it has with so many aspects of life and care delivery, COVID-19 provided a brutal audit.[5] A brutal audit commences "at a moment's notice, everything that was left unprepared becomes a complex problem, and every weakness comes rushing to the forefront"

Surveys of safety culture during the pandemic makes this weakness evident as data from 54 US hospitals gathered by Press Ganey and 160 hospitals by the Agency for Healthcare Research and Quality provide initial evidence of a significant erosion of safety culture—leadership commitment to safety, prevention and reporting, and communication and collaboration.[6 7]

http://dx.doi.org/10.1136/bmjqs-2021-014068

Definition of Patient Safety Culture

[What Is Patient Safety Culture? | Agency for Healthcare Research and Quality (ahrq.gov)]

IDEAS?