SUPPLEMENTARY FIGURES

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eTable 1: Participating healthcare systems.The 170 US Veterans Affairs (VA) hospitals were grouped into 5 regional healthcare systems [1].

Healthcare system	Acronym	Country	City	Hospitals	Beds	Inpatient discharges/ year
Assistance Publique - Hôpitaux de Paris	APHP	France	Paris	39	20 098	1 375 538
Beth Israel Deaconess Medical Center	BIDMC	USA	Boston, MA	1	673	40 752
Bordeaux University Hospital	FRBDX	France	Bordeaux	3	2 676	130 033
Hospital Universitario 12 de Octubre	H12O	Spain	Madrid	1	1 256	45 035
ICSM Hospitals	ICSM	Italy	Pavia/Milan/Lumezzane/Brescia	3	775	12 344
Mass General Brigham (Partners Healthcare)	MGB	USA	Boston, MA	10	3 418	163 521
Northwestern University	NWU	USA	Chicago, IL	10	2 234	103 279
University of California, LA	UCLA	USA	Los Angeles, CA	2	786	40 526
University of Kansas Medical Center	KUMC	USA	Kansas City, KS	1	794	54 659
University of Freiburg, Medical Center	UKFR	Germany	Freiburg	1	1 660	71 500
University of Michigan	UMICH	USA	Ann Arbor, MI	3	1000	49 008
University of Pennsylvania	UPENN	USA	Philadelphia, PA	5	2 469	118 188
University of Pittsburgh	UPITT	USA	Pittsburgh, PA	39	8 085	369 300
VA North Atlantic	VA1	USA		49	3 594	151 075
VA Southwest	VA2	USA		29	3 115	156 315
VA Midwest	VA3	USA		39	2 686	145 468
VA Continental	VA4	USA		24	2 110	113 260
VA Pacific	VA5	USA		29	2 296	114 569
			Total	288	59 725	3 254 370

eFigure 1.Schematic of the federated EHR-based study involving healthcare systems from five countries. (created with BioRender.com)
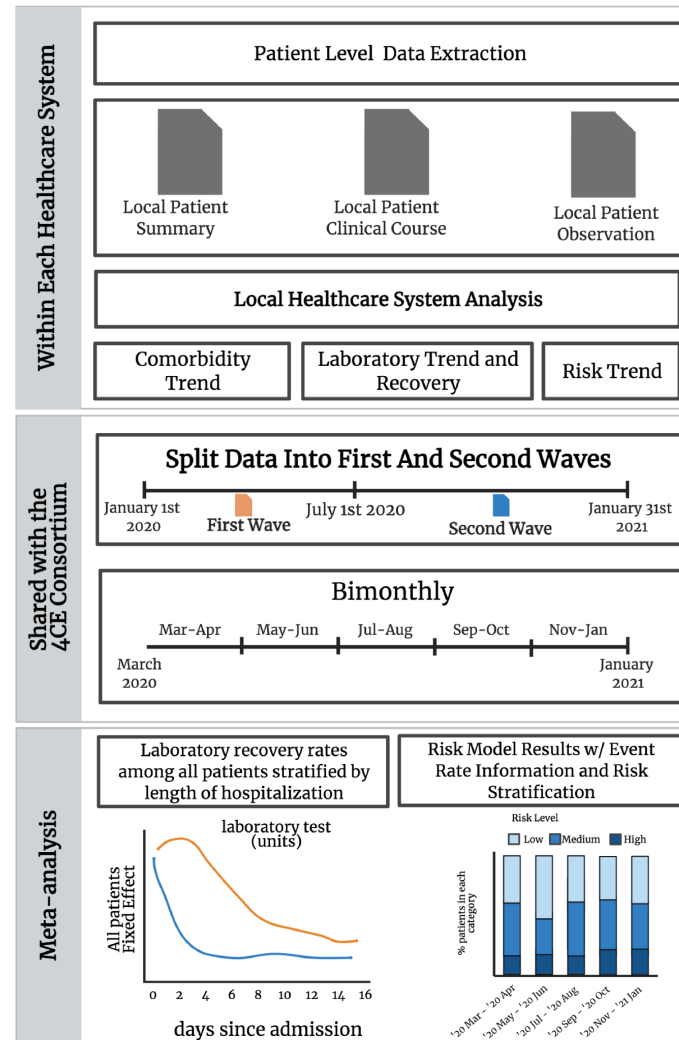

Remark: The hospitalization rate over time tends to differ across regions and across countries, in part due to heterogeneity in a wide range of regional factors including community morbidity and local social distancing policy. This results in different relative sample sizes across healthcare centers over time. To ensure that the temporal trends in clinical presentations summarized via meta-analysis combining all healthcare centers are not driven by the temporal change in the relative sample sizes, we used the same weight for each healthcare center across different calendar months.

## eFigure 2.Country-level demographic shifts.

eFigure 3. Country-level Distribution of laboratory values at admission. The Italy site had a relatively low percentage of patients with laboratory measurements which may have led to less precise estimates in these laboratory changes.
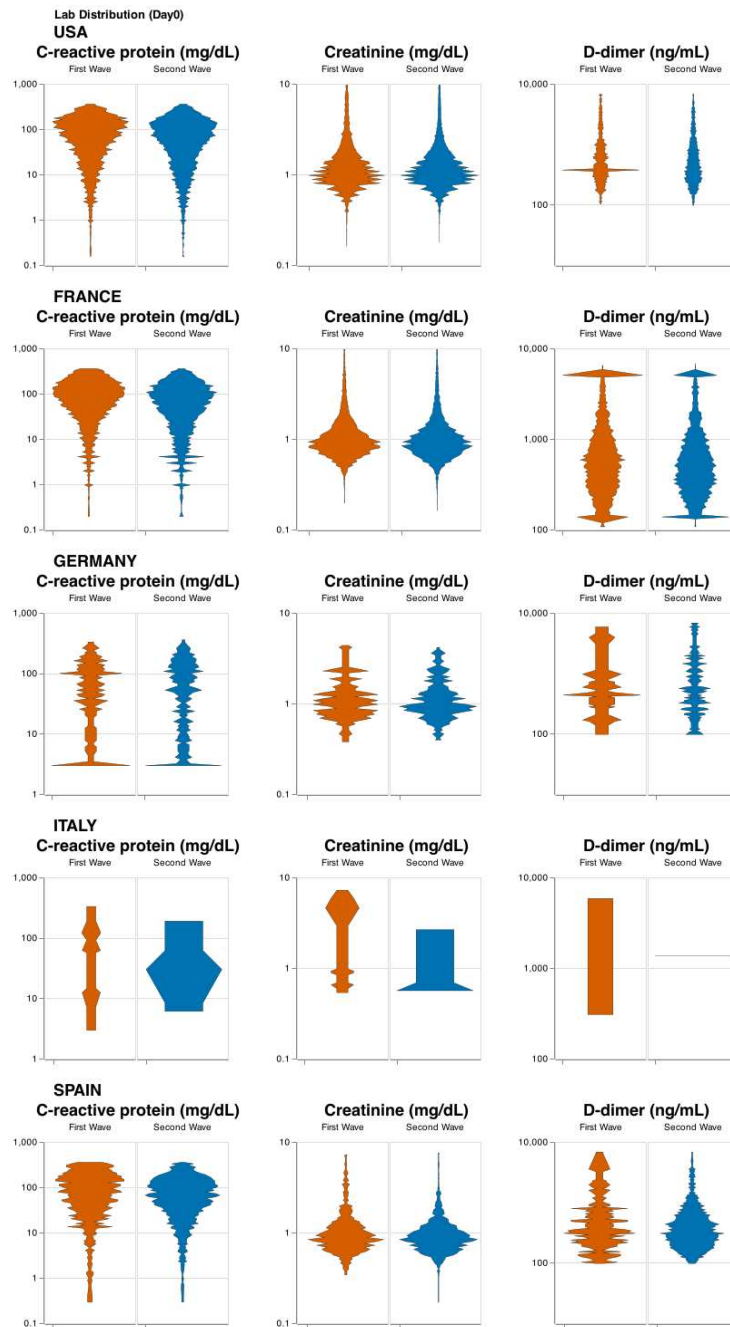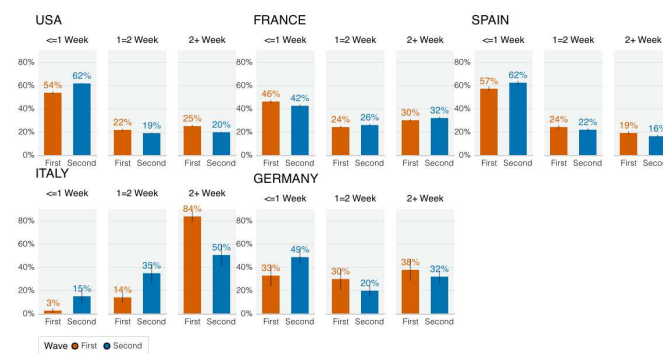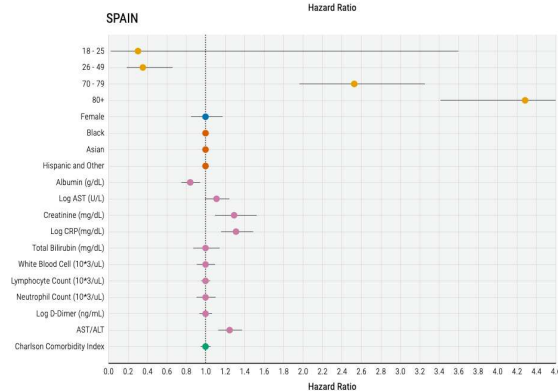
eFigure 4. Patient-level laboratory recovery rate. (a) country-level changes in the recovery rates of laboratory measures (excluding Germany and Italy due to the small number of patients with longitudinal laboratory measurements available); (b) distribution of length of hospital stay among patients admitted in the first wave and in the second wave
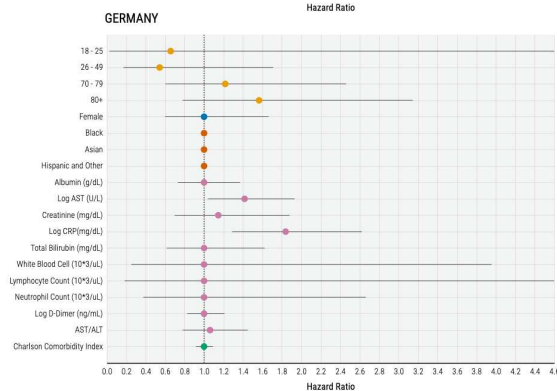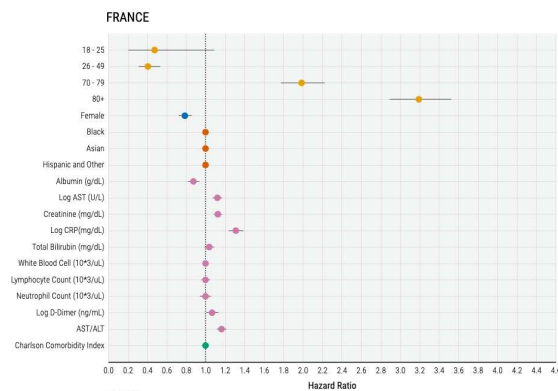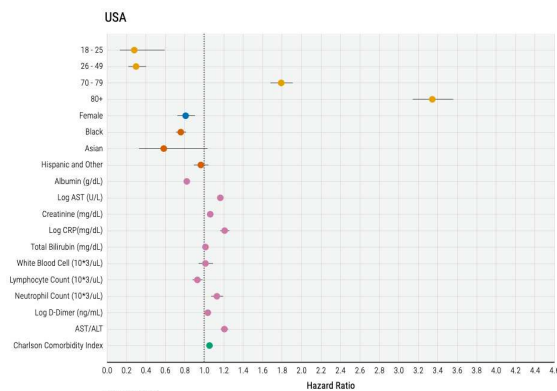
(a) country-level changes in the recovery rates of laboratory measures
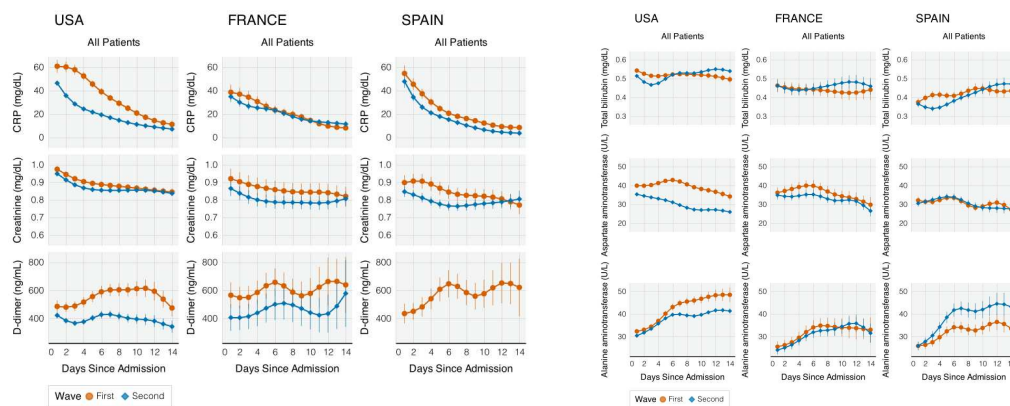
(b) Distribution of length of hospital stay among patients admitted in the first wave and in the second wave


eFigure 5. Hazard ratio of the Cox model for mortality risk prediction (excluding Italy).

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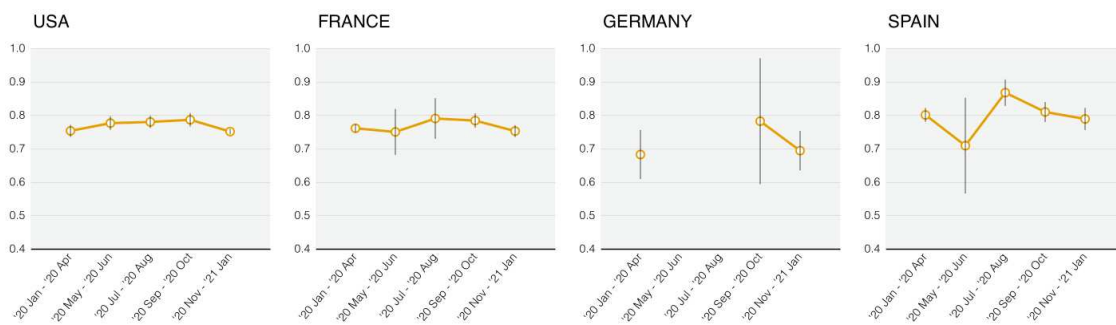
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eFigure 6. AUC of the Cox regression model for mortality risk prediction (excluding Italy).

(a) Meta-analysis over all countries.
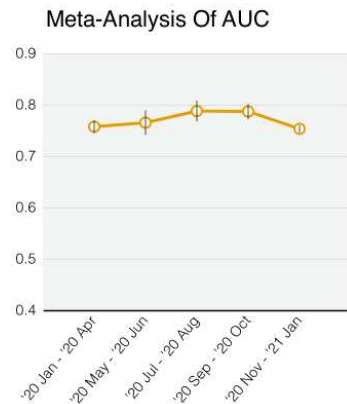
(b) Country-level AUC over time. AUC was not reported for May–June 2020, and July–August 2020 in Germany due to small counts of death occurring during these months.

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eFigure 7. Country-level risk model results w/ event rate information and risk stratification (excluding Italy).
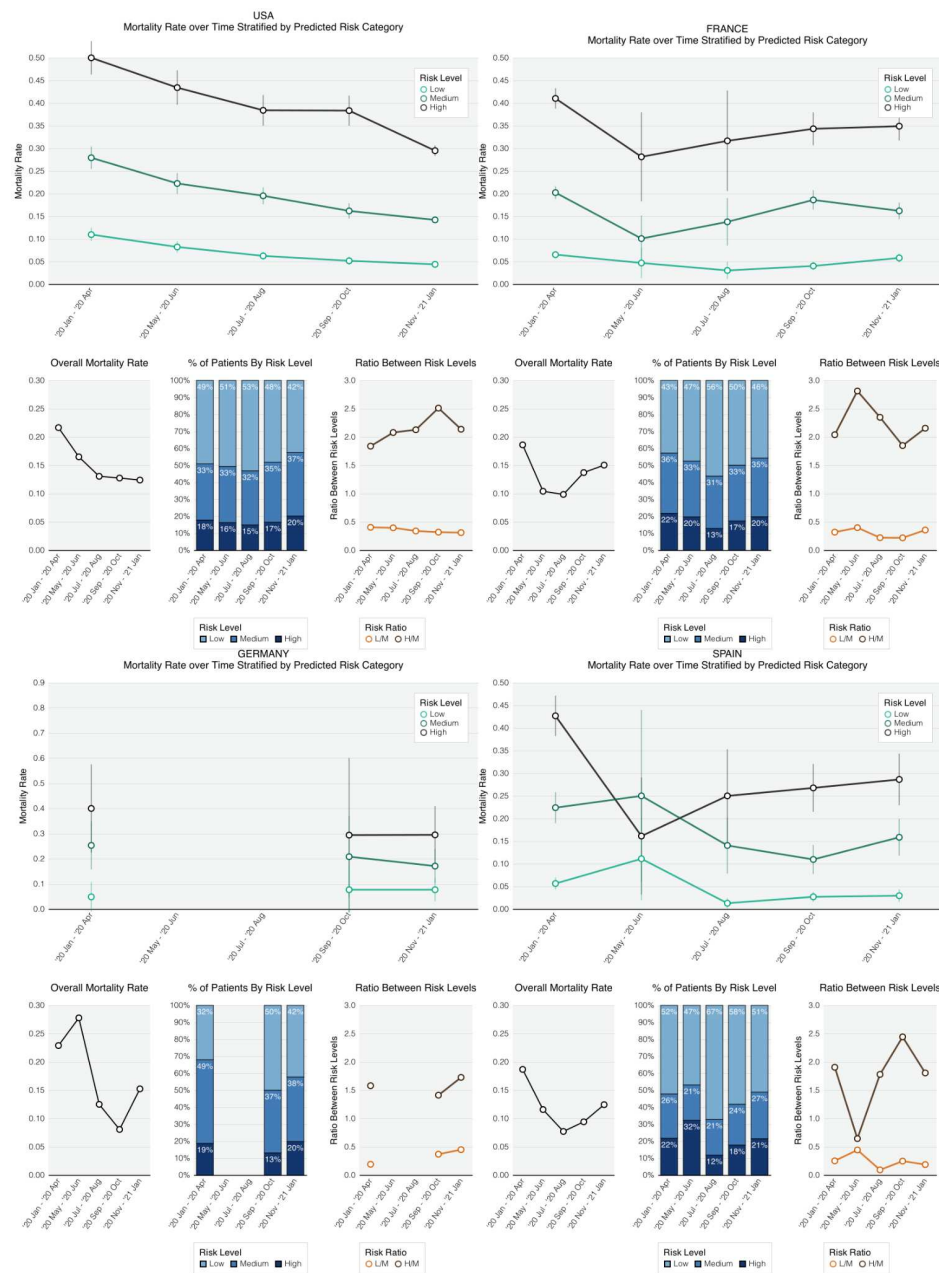
1. Jones AL, Pettey WBP, Carter ME, Brignone E, Redd A, Suo Y, et al. Regional Variations in Documentation of Sexual Trauma Concepts in Electronic Medical Records in the United States Veterans Health Administration. AMIA Annu Symp Proc. 2019;2019: 514–522.