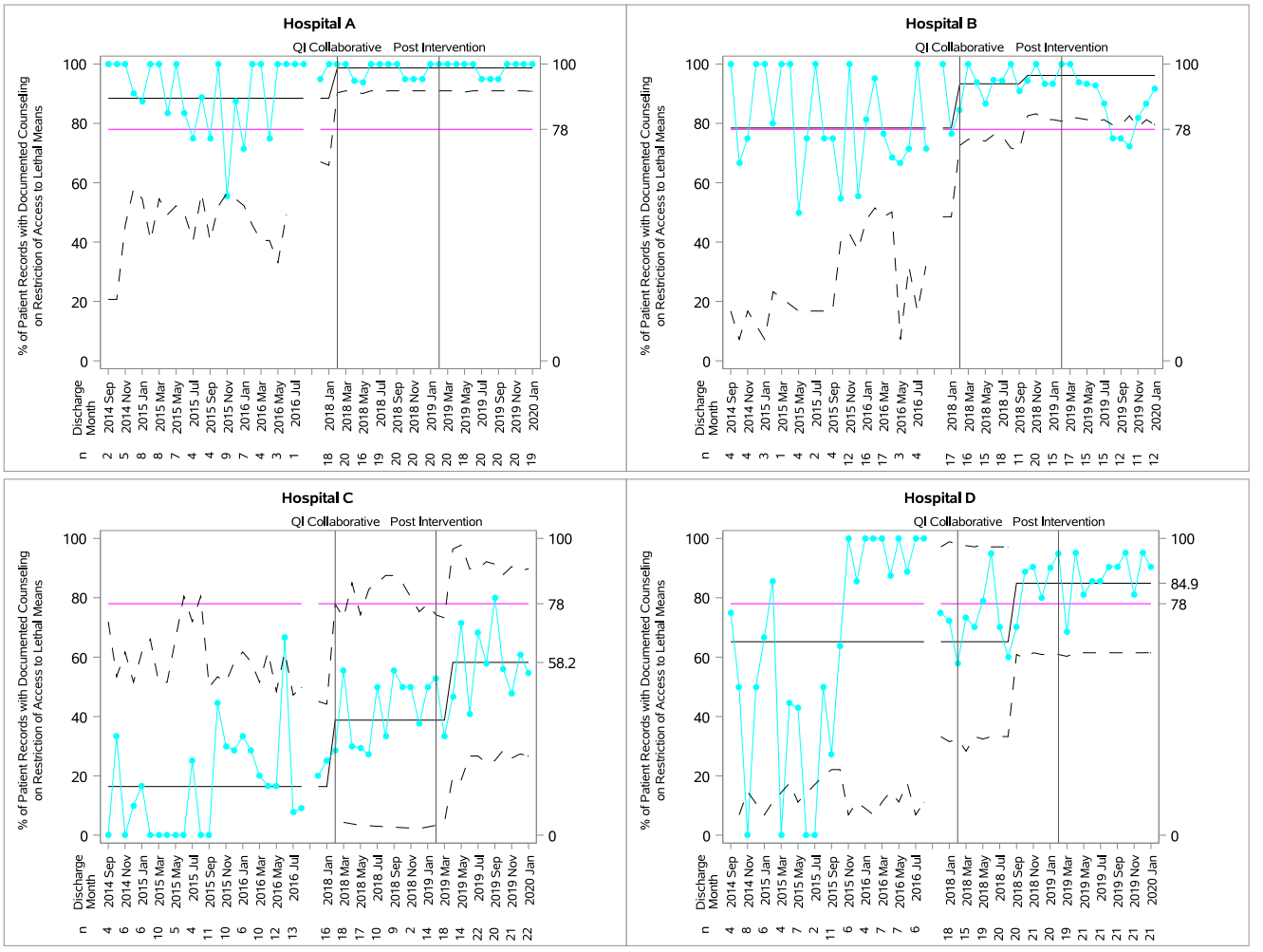
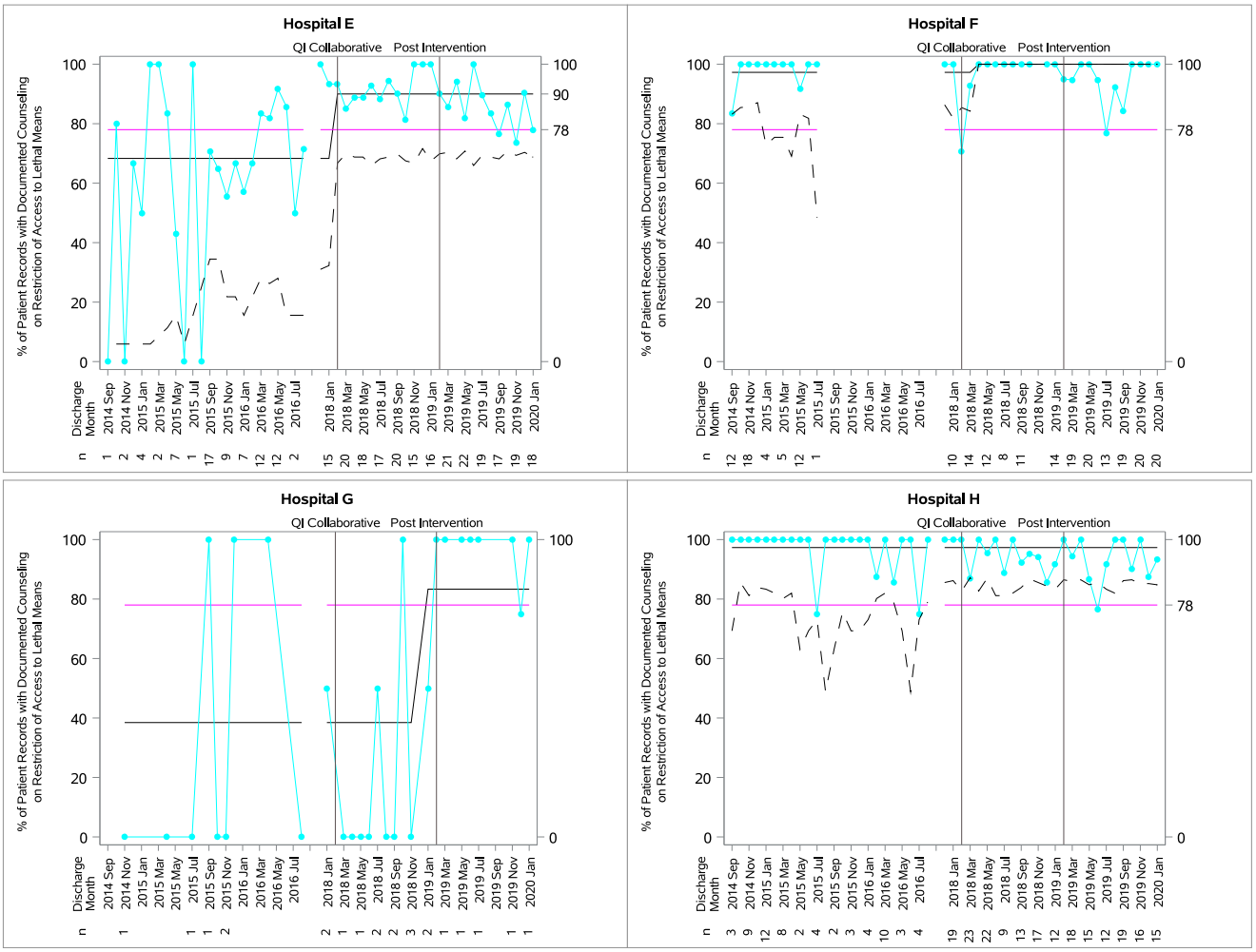
Supplemental Information

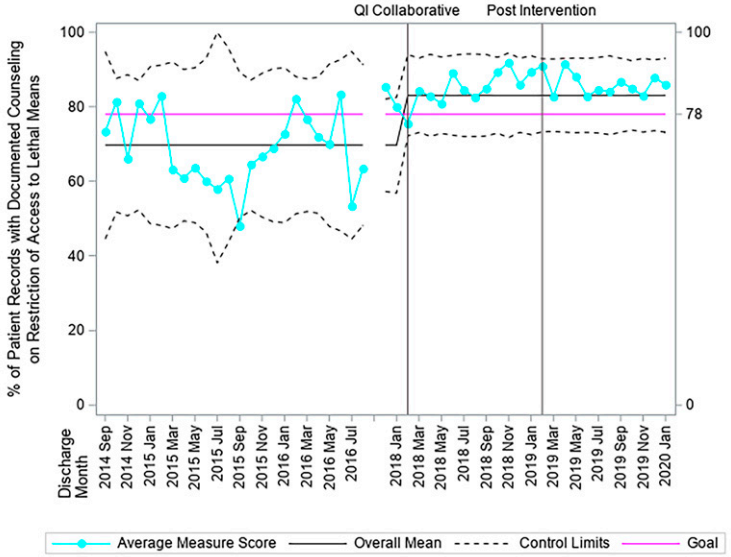


SUPPLEMENTAL FIGURE 4

Statistical process control *p*-charts for each of the 8 hospitals participating in the collaborative. X-axis shows number of discharges for the shown month; missing values indicate 0 discharges for that month; center-line shifts considered following the start of the active QI collaborative period.



SUPPLEMENTAL FIGURE 4
Continued.



SUPPLEMENTAL FIGURE 5
Percent of patient records with documented counseling on restriction of access to lethal means.

SUPPLEMENTAL TABLE 4 ICD-9 and ICD-10 Codes for Suicidality and Self-harm Applied to Identify Study Participants

ICD-9 Codes	ICD-10 Codes
E950.*	R45.851
E951.*	T36.**2A
E952.*	T37.**2A
E953.*	T38.**2A
E954.*	T39.**2A
E955.*	T4*.**2A
E956.*	T5*.**2A
E957.*	T60.**2A
E958.*	T61.**2A
E959.*	T62.**2A
V62.84	T63.**2A
	T64.**2A
	T65.**2A
	X71.***A
	X72.***A
	X73.***A
	X74.***A
	X75.***A
	X76.***A
	X77.***A
	X78.***A
	X79.***A
	X80.***A
	X81.***A
	X82.***A
	X83.***A

An asterisk (*) indicates that all subcodes in the series should be selected. For example, E950.* includes E950.1, E950.2, E950.3, E950.4, E950.5, E950.6, E950.7, E950.8, and E950.9. **For ICD-10 codes, the T code series must end in 2A to indicate intentional self-harm and an initial encounter. ***ICD-10 codes, the X code series must end in A to denote an initial encounter. Codes ending in D or S denote follow-up encounters that are not eligible for inclusion in the P-HIP measure set abstraction sample.

SUPPLEMENTAL TABLE 5 Participating Hospitals' 90-d Aim Statements

Hospital ID	Quarterly (90-d) Aim Statements
A	Q1 (February–April 2018): develop a standardized process for communication and documentation of lethal means counseling by social workers on 3 inpatient units within the Psychiatry division by June 30, 2018. Q2 (May–July 2018): develop and implement standardized documentation of lethal means counseling by social workers on 6 inpatient units within the Psychiatry division by September 30, 2018. Q3 (August–October 2018): develop and implement standardized documentation of lethal means counseling by 12 social workers on 5 inpatient units within the Psychiatry division by November 30, 2018.
B	Q1: to implement a standard documentation template for crisis prevention plans and safety classes to easily identify the completion of these across all inpatient units. Q2: to expand current psychiatry and behavioral medicine unit (PBMU) safety curriculum and get participation from 70% of the patients on other inpatient floors who receive psychiatry consultation. Q3: to expand current PBMU safety curriculum and get participation from 70% of the patients on other inpatient floors who receive psychiatry consultation.
C	Q1: we will work to standardize and expand the discharge education included in the patient's after visit summary for suicide including restriction to lethal means counseling. Q2: by August 2019, we will continue to educate front line staff of the newly updated suicide prevention discharge instructions (available March 27, 2018) which includes counseling on restriction of access to lethal means to increase our score on this metric from ∼50% to 65%. Q3: currently we are focusing on implementation of caregiver educational session that discusses suicide, mental illness, resources, well care, bullying, mindfulness, and safety planning and counseling.
D	Q1: starting with the inpatient psych unit, we aim to create a form of documentation that can be uploaded into EPIC and sent to the PCP that not only documents that lethal means counseling occurs, but provides any related information that is important for the inpatient, outpatient, and PCP to know. Our team will also contact outlier teams to determine whether this counseling takes place, whether they need standardized documentation, etc, so that we can work with these teams in the future to further improve our hospital's performance on this measure. Q2: because of barriers that developed in the last 90 d, we were not able to accomplish all our Q1 goals as a team. Because of massive staffing changes and time constraint issues, our ability to make changes during Q2 may be limited. Therefore, our goal is to improve overall performance on this aim from 66% to 68% by focusing on staff education and any progress our physician can make with creating a "lethal means document." Q3: we aim to improve our overall performance by 10% by reaching out to the new psych inpatient leadership to educate them out our initiative, meeting with therapists to discuss the initiative, and working with both parties to find the best solution for improved lethal means counseling documentation. Additionally, we will explore options for addressing lethal means counseling via staff for patients initially admitted to medical units.
E	Q1: by May 1, we will increase documentation of restriction of lethal means from 65% to 75% for children discharged from our hospital with suicidality or serious self-harm. Q2: by September 1, we will have 50% of faculty complete educational module on restriction of lethal means. Q3: by December 1, we will increase our baseline documentation of CALM for children discharged from the children's hospital by 50% (independent of documentation of CALM that occurs at our affiliated psychiatric hospital).
F	Q1: we aim to clarify the roles of the 3 key groups involved in this initiative (resident physician, licensed clinical social worker, attending physician). We aim to standardize the language in the new electronic medical record system to reflect counseling of access restriction. Q2: with roles now clear to LCSW and MD disciplines for this initiative, we aim to focus on educating the incoming junior attending and new set of child psychiatry fellows and residents on roles and the training of the new providers for the coming 2018–2019 academic year. Q3: following a dip in overall performance on documentation of counseling on removal of access to means of harm after a transition from an EMR, we have recovered to full adherence. We will continue these gains with established unit chief and LCSWs and now with new junior attending as it relates to supervision of new rotators under the supervision of new junior attending. Unit chief has also floated to an alternate unit and adherence to performance while supervising junior attending from afar will also be evaluated and observed.
G	Q1: within the next 60–90 d, we will develop a process map of MH admissions for the medical providers and the mental health team. The process map will clarify the roles of the medical providers and the roles of the mental health team and delineate the steps that need to be accomplished surrounding admission and discharge, including counseling on restricting access to lethal means. Q2: within the next 60–90 d, we will refine a process map of MH admissions for the medical providers and the mental health team. The process map will clarify the roles of the medical providers and the roles of the mental health team and delineate the steps that need to be accomplished surrounding admission and discharge, including counseling on restricting access to lethal means. Q3: within the next 60–90 d, we will implement the process changes outlined by the process map we defined in our last aim cycle. This will specifically include ensuring all relevant providers know where to document lethal means counseling and that all relevant providers are aware of the communication processes for successful counseling (the counseling will be part of the initial psych assessment). We will improve from 0% to 20% of all patients (not just those discharged to home) with documentation of lethal means restriction counseling.

SUPPLEMENTAL TABLE 5 Continued

Hospital ID	Quarterly (90-d) Aim Statements
H	Q1: review MH cases from December 2017 and January 2018 to determine location of discharge, role of individual completing restriction of lethal means documentation, and compliance with documentation of restriction of lethal means counseling by March 30, 2018. Q2: educate providers and staff in all areas that discharge youth with suicidal ideation or attempts in the importance of conducting family conversations about the importance of restriction of access to lethal means and teach them how to properly document those conversations. Q3: educate providers and staff in all areas that discharge youth with suicidal ideation or attempts in the importance of conducting family conversations about the importance of restriction of access to lethal means and teach them how to properly document those conversations.

LCSW, licensed clinical social worker; MD = medical doctor; MH, mental health; PCP, primary care provider.

SUPPLEMENTAL TABLE 6 Interrupted Time Series Model of Caregiver Lethal Means Counseling Over Time

Parameter or Variable[a]	β (95% CI)
Intercept	61.03 (56.38 to 65.68)***
Intercept change at the start of the postcollaborative phase	−0.94 (−3.80 to 1.93)
Slope (Time or monthly discharge date)	0.34 (0.27 to 0.41)***
Season	
Spring	−2.01 (−4.77 to 0.74)
Summer	−2.61 (−5.49 to 0.28)
Fall	−2.22 (−4.96 to 0.52)
Winter (reference)	0
Age, y	
5–12 (ref)	0
13–15	2.28 (−0.42 to 4.98)
16–17	1.73 (−1.08 to 4.55)
Sex	
Male (reference)	0
Female	2.46 (0.27 to 4.66)*
Race and ethnicity[b]	
Hispanic	5.51 (2.12 to 8.91)**
Non-Hispanic white (reference)	0
Non-Hispanic Black	−2.25 (−5.30 to 0.80)
Non-Hispanic Asian or Pacific Islander	−5.70 (−12.66 to 1.25)
Non-Hispanic other	1.91 (−1.84 to 5.66)
Hospital	
A	18.86 (15.19 to 22.54)***
B	10.34 (6.57 to 14.11)***
C	−38.37 (−42.10 to −34.64)***
D (reference)	0
E	6.92 (3.24 to 10.61)***
F	17.99 (14.01 to 21.96)***
G	−31.51 (−41.69 to −21.33)***
H	18.91 (15.07 to 22.74)***

β, regression coefficient; CI, confidence interval.

[a] Missing values for patient characteristics were imputed with the mean within hospital.

[b] Each hospital provided an indicator of Hispanic ethnicity and a separate race variable. We created mutually exclusive race and ethnicity categories such that Hispanic patients of any race were classified as Hispanic and non-Hispanic patients were classified as non-Hispanic white, Black, Asian or Pacific Islander, or other.

*$P < .05$, **$P < .01$, ***$P < .001$