



TMC COVID-19 MONITORING METRICS

Daily report

October 2, 2020



TMC KEY TAKEAWAYS FOR OCTOBER 1, 2020

1 Effective Reproduction Rate, R(t)

- R(t) for the Greater Houston Area (9-county MSA) is **0.77**¹
 - This was the **twenty-second day below 1.0**, which means the virus spread is decreasing. Compared to:
 - Last week, R(t) was **0.70** for Greater Houston Area

2 Testing

- The current 7-day average COVID-19 testing positivity rate is **3.3%** for TMC hospital systems. Compared to:
 - Last week³: **3.4%**
 - Last month: **5.7%**

3 New cases

- Yesterday, **388 new people**² were reported as testing positive for COVID-19 in the Greater Houston Area. DSHS also released **228** older cases recently reported as of yesterday. Compared to:
 - Last week: **373** new cases/day
 - Last month: **1,415** new cases/day

4 Hospitalizations

- Yesterday, TMC **admitted 81 new COVID-19 patients** in TMC hospital institutions⁴. Compared to:
 - Last week: **78** hospitalizations/day
 - Last month: **88** hospitalizations/day

5 ICU capacity

- As of October 3rd, TMC's ICU Phase 1 (non-pandemic configurations) is **88%** full, and TMC is not into Phase 2 plans for intensive care.

1. <https://sph.uth.edu/dept/bads/covid19-dashboard>

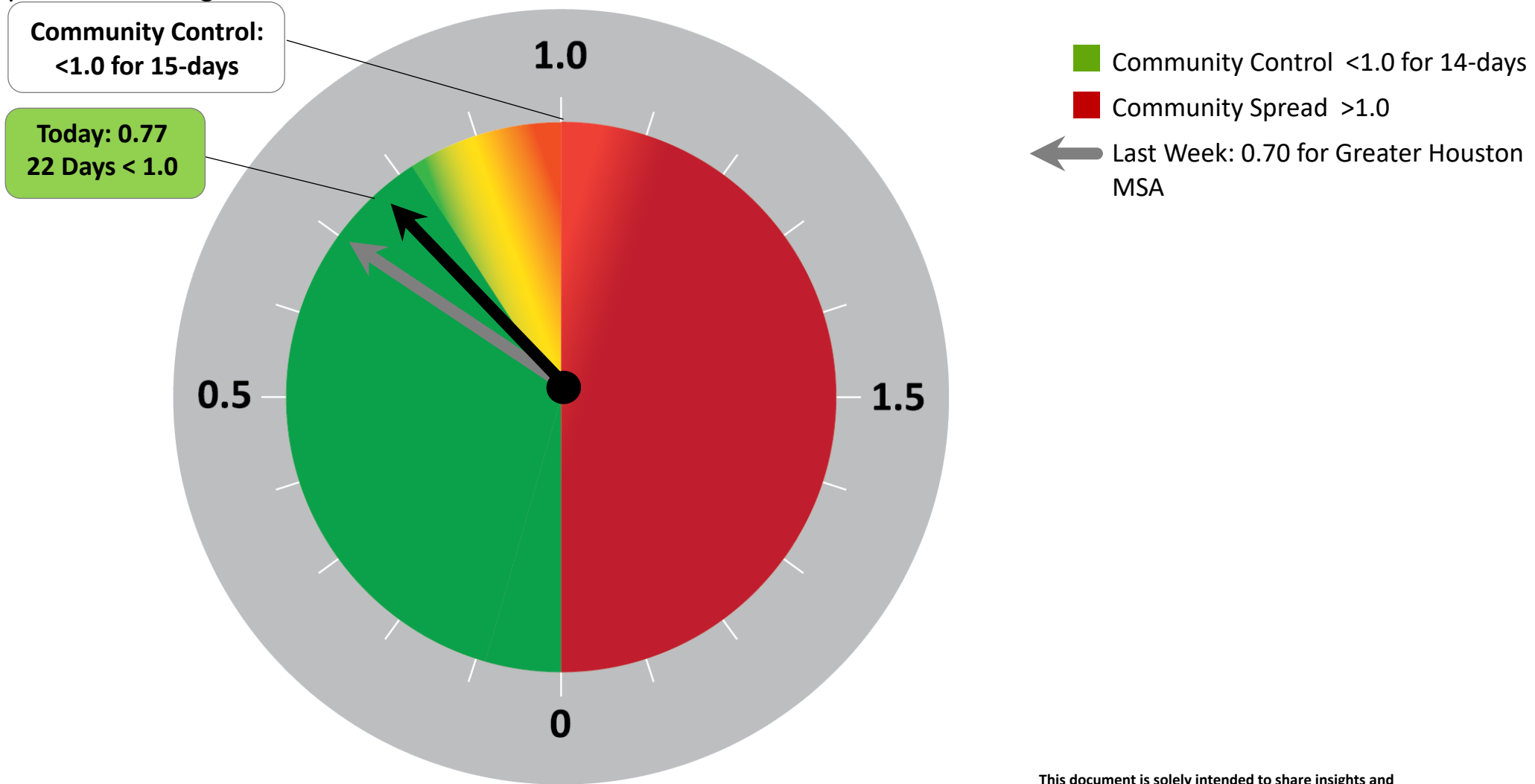
2. Source: TX Health and Human Services (<https://dshs.texas.gov/coronavirus/AdditionalData.aspx>)

3. Testing positivity charts from the TMC hospital systems have been added to the daily metrics, in addition to the charts presented from the Texas Department of State Health Services data for the Greater Houston Area. Values from the most recent week may be updated as new test data is compiled.

4. Source: Internal data collected from the systems CHI Texas Division, Harris Health System, Houston Methodist, MD Anderson Cancer Center, Memorial Hermann, Texas Children's Hospital, UTMB

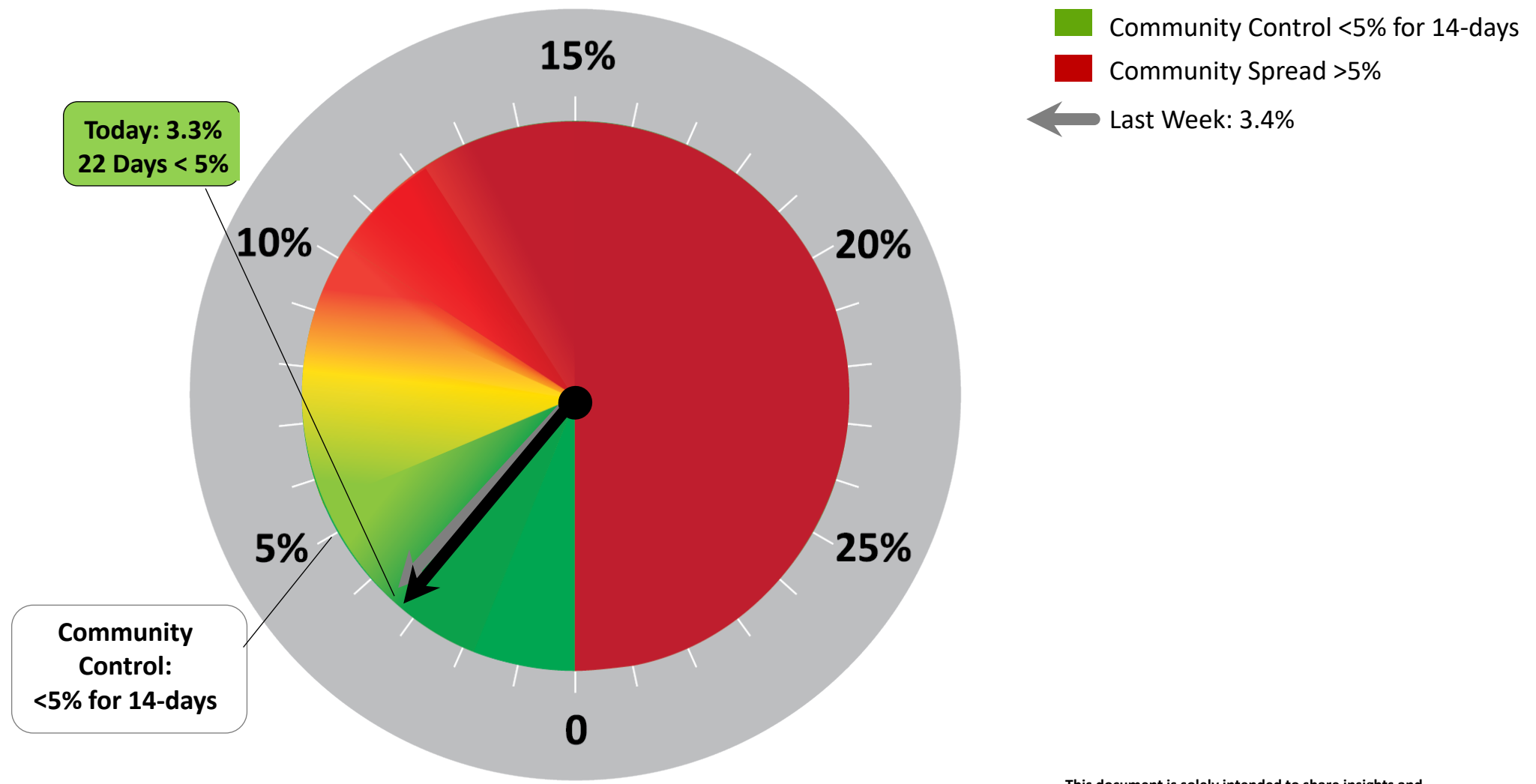
R(t): EFFECTIVE REPRODUCTION RATE FOR THE GREATER HOUSTON MSA¹

R(t) measures how effective our collective behaviors (e.g., mask wearing and social distancing) are in slowing the growth of the virus. It is the average number of people who become infected by one infectious person. If R(t) is above 1.0, the virus spread is increasing; if R(t) is below 1.0, the virus spread is slowing.

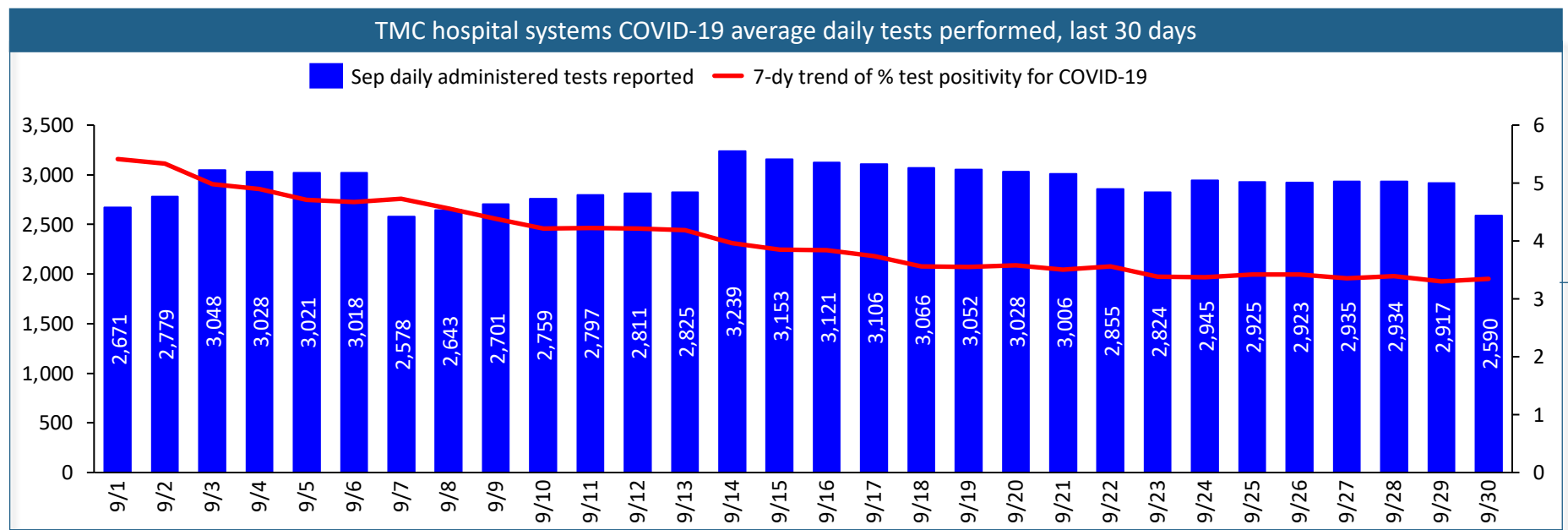


TEST POSITIVITY RATES FOR TMC HOSPITAL SYSTEMS¹

A low positivity rate may indicate declining spread of the virus.



COVID-19 TESTING METRICS FOR TMC HOSPITAL SYSTEMS



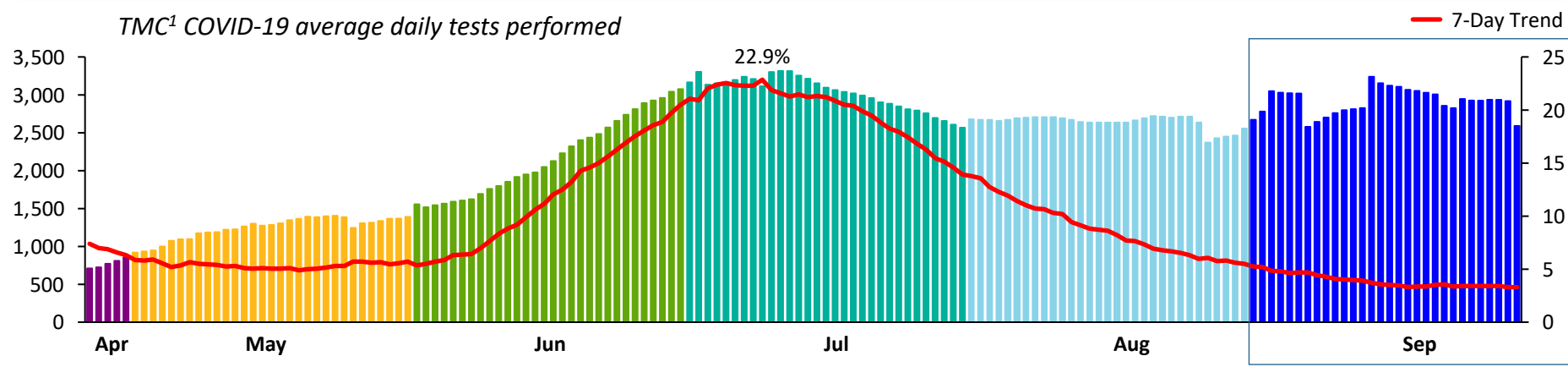
Positivity rates across TMC hospital systems increased from 5% on June 1st to a peak of 23% on July 9th

The current 7-day average testing positivity rate across TMC hospital systems¹ is 3.3%.

Notes:

Recent values will be updated each day as new test results are compiled

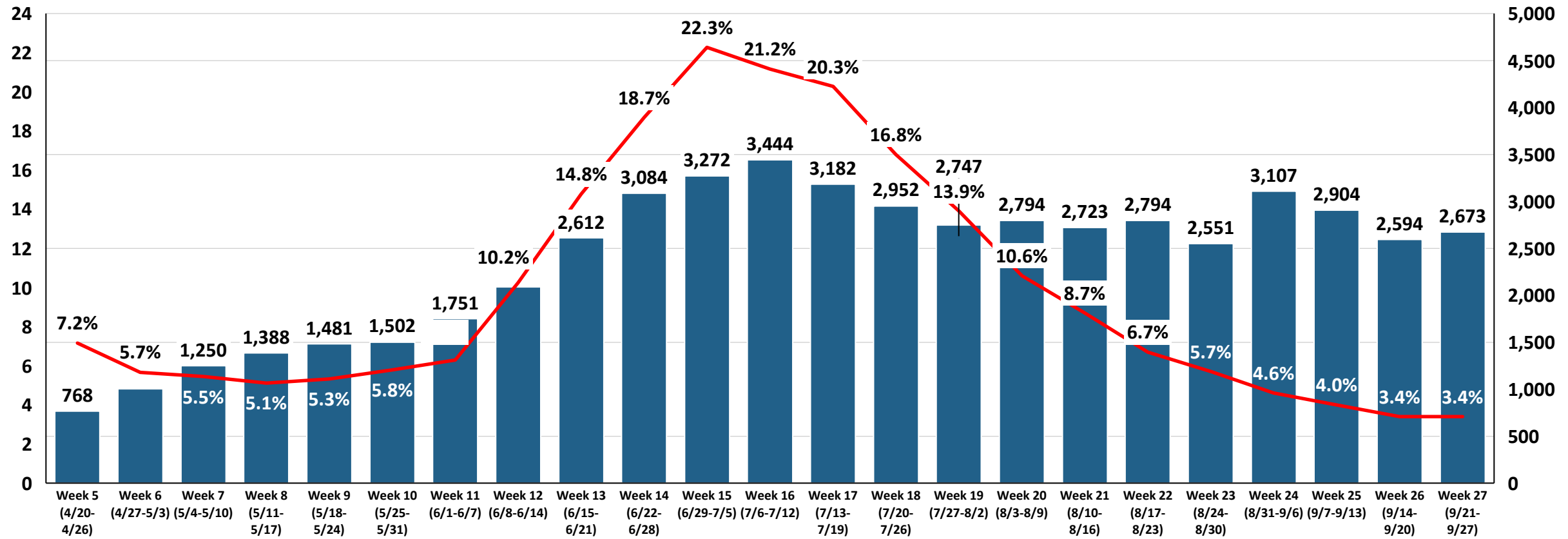
Test data provided daily from TMC¹ hospital systems



1. Testing data includes: CHI Texas Division, Harris Health System, Houston Methodist, MD Anderson Cancer Center, Memorial Hermann, and UT Health
 Note: May not include all hospitals within each system

WEEKLY AVERAGE OF COVID-19 TESTING METRICS ACROSS TMC HOSPITAL SYSTEMS

■ 7-day trend of daily # of tests performed
— 7-day trend of % test positivity for COVID-19



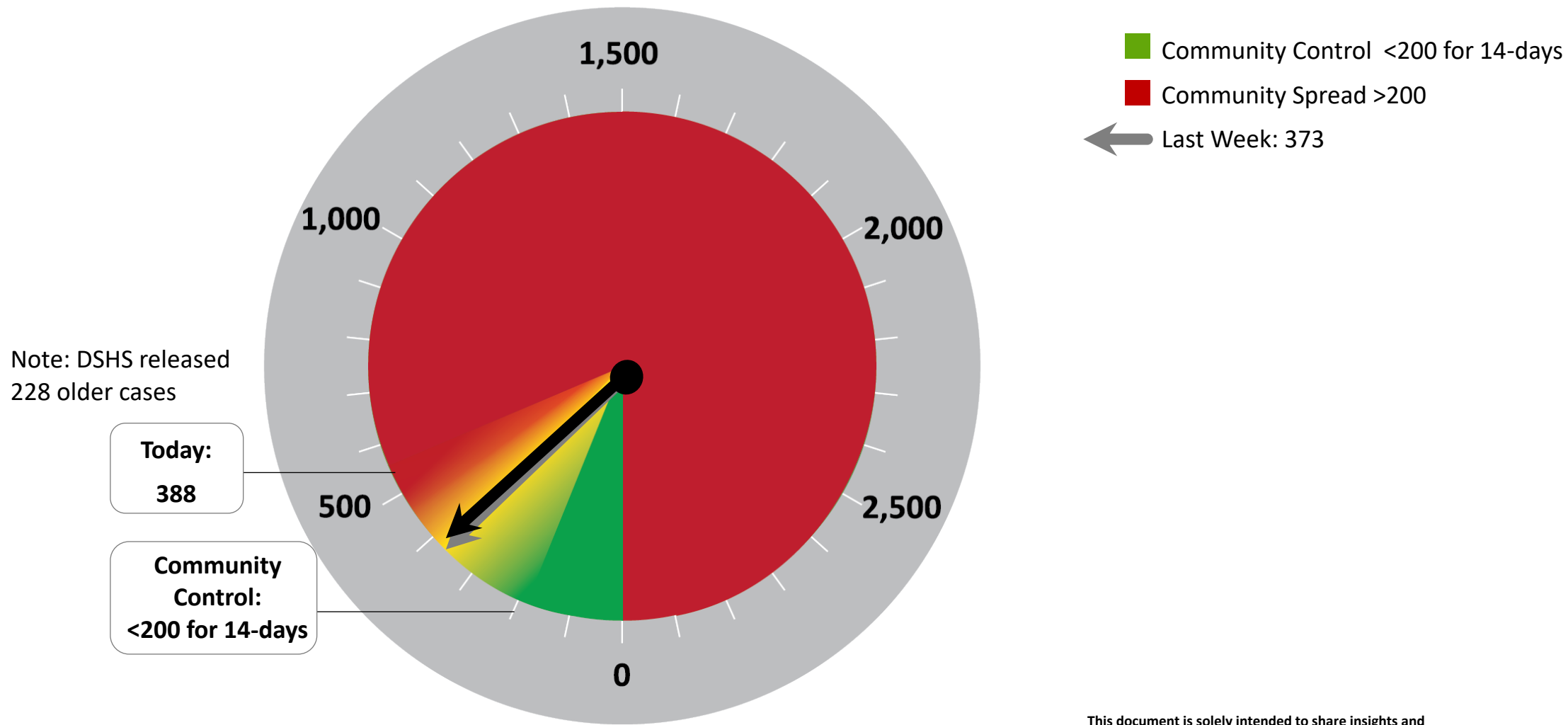
1. Testing data includes: CHI Texas Division, Harris Health System, Houston Methodist, MD Anderson Cancer Center, Memorial Hermann, and UT Health
 Note: May not include all hospitals within each system

Note: The most recent week may be updated as new test data is compiled.

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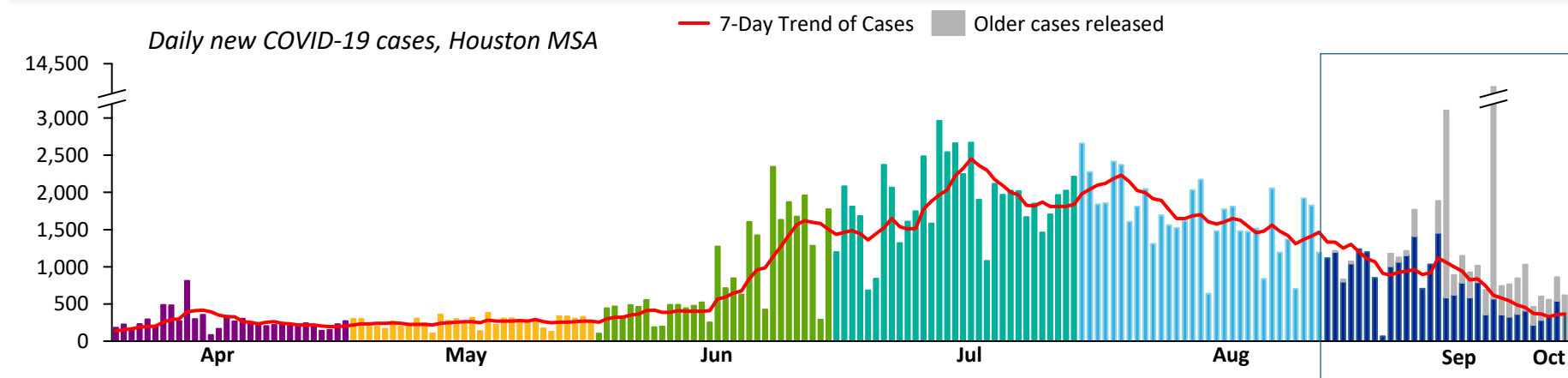
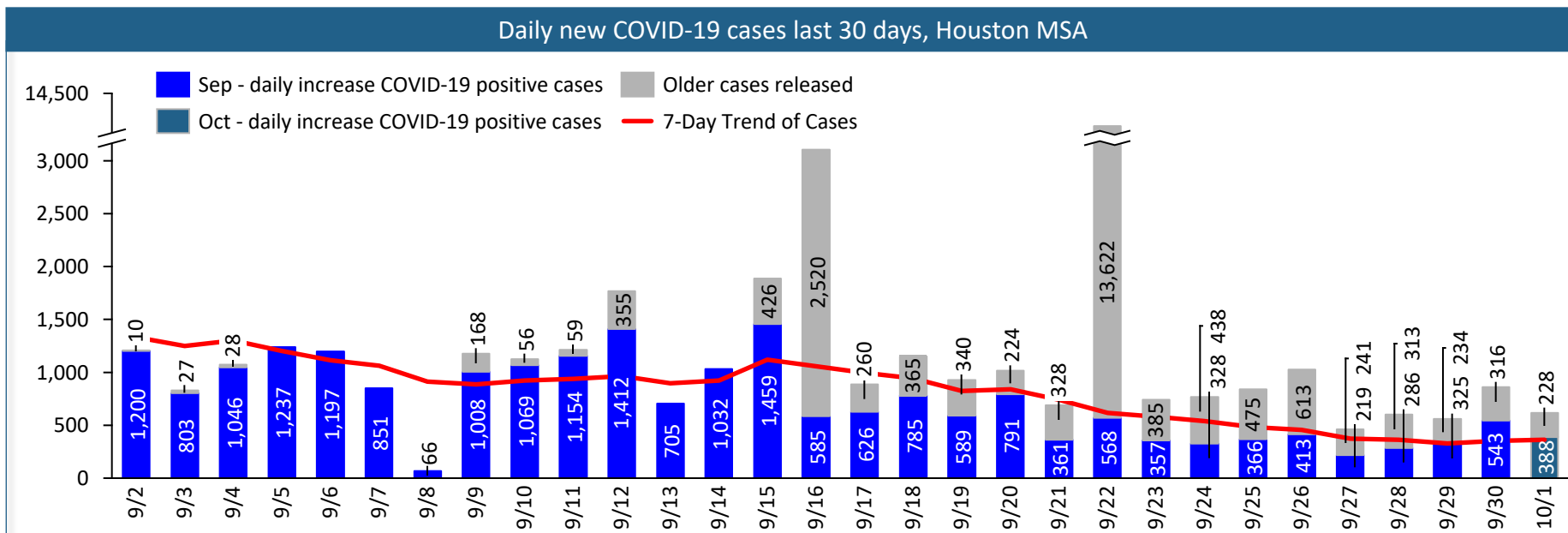
DAILY NEW COVID-19 POSITIVE CASES FOR THE GREATER HOUSTON AREA

Measures the public health strategy shift from mitigation to containment. When the number of new daily cases is over 200, it is difficult for public health teams to effectively trace to help isolate further spread of the virus.



DAILY NEW COVID-19 POSITIVE CASES

Greater Houston Area¹



Monitoring threshold:

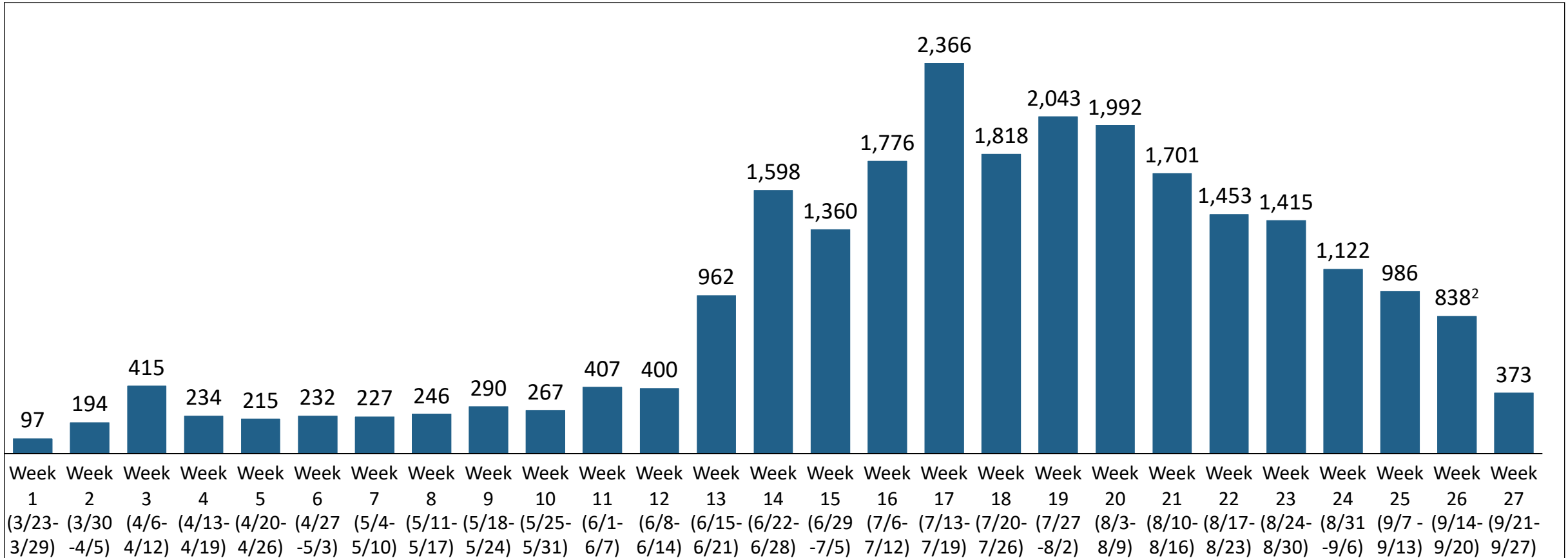
Threshold is exceeded by the occurrence of a positive daily growth rate (averaged over 7 days) in the new daily case trend

Current status:

0 days of positive daily growth rate (averaged over 7 days) in the new daily case trend

WEEKLY AVERAGE OF DAILY NEW COVID-19 POSITIVE CASES

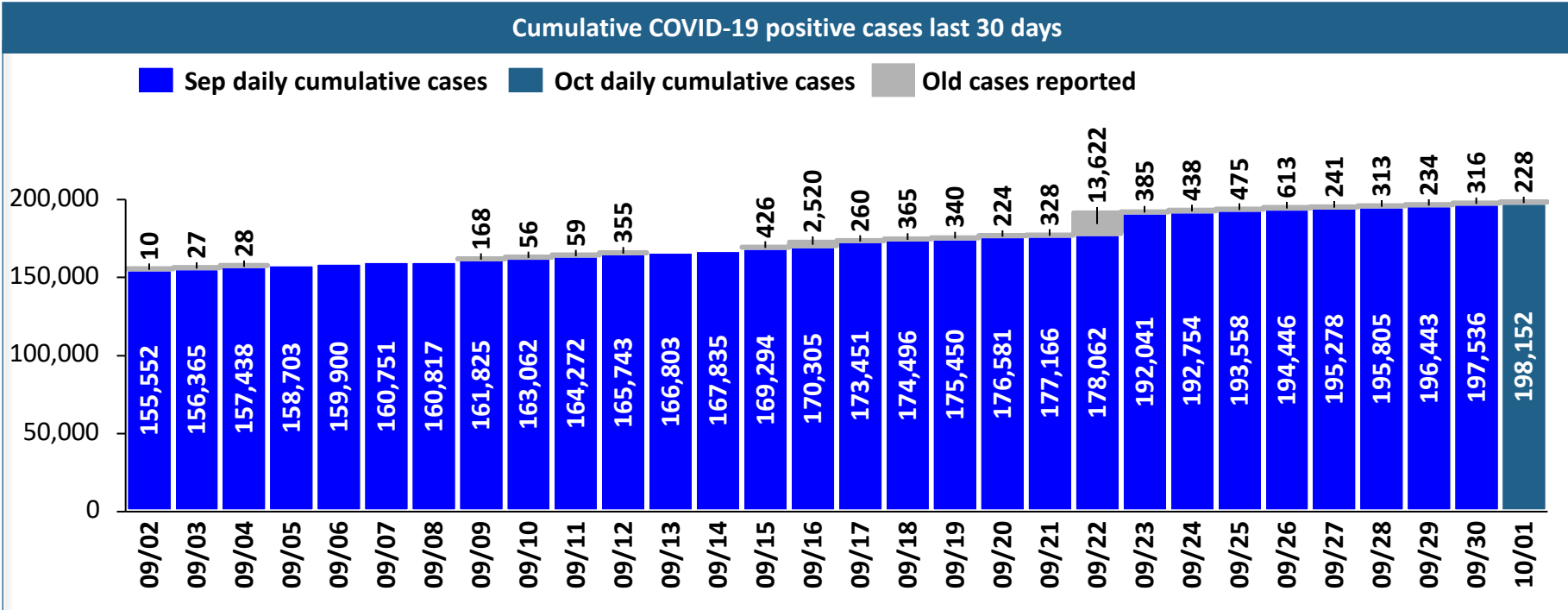
Daily average new cases in Greater Houston Area¹ (Monday-Sunday)



1. Austin, Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery and Waller
 2. Includes only net new cases. Excludes 4,135 cases reported by the state as "old" cases during week of 9/14

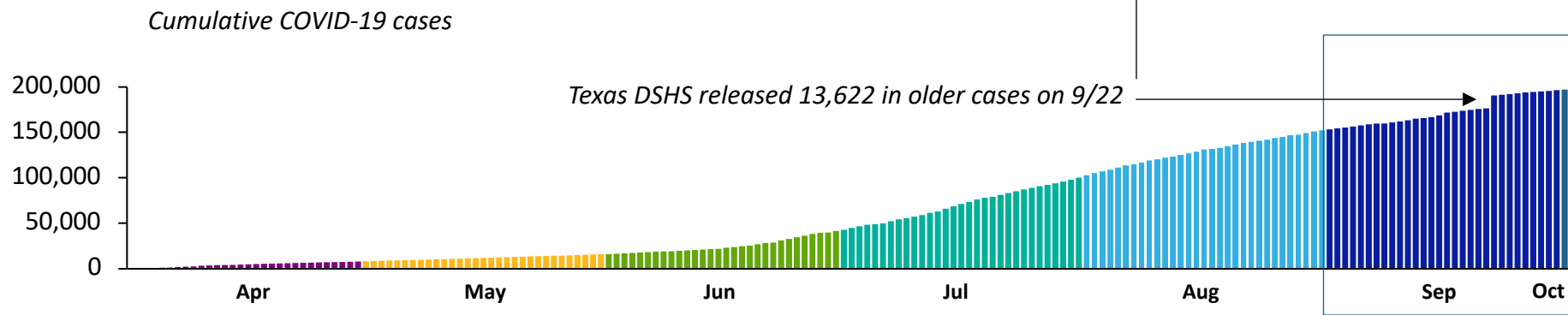
COVID-19 POSITIVE CUMULATIVE CASES

Greater Houston Area¹

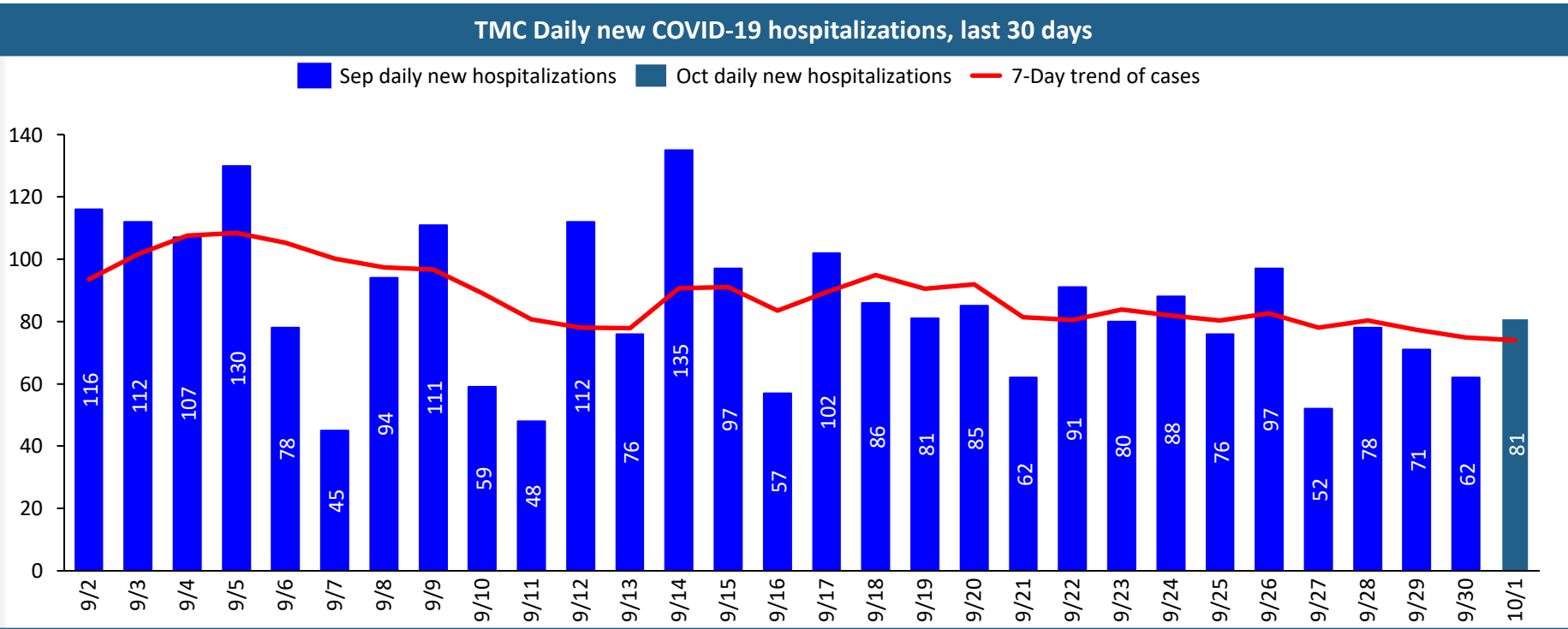


- There have been **198,152** total positive COVID-19 cases to date

- Cumulative case load is ~**1.0X** what it was **7** days ago



TMC DAILY NEW COVID-19 HOSPITALIZATIONS



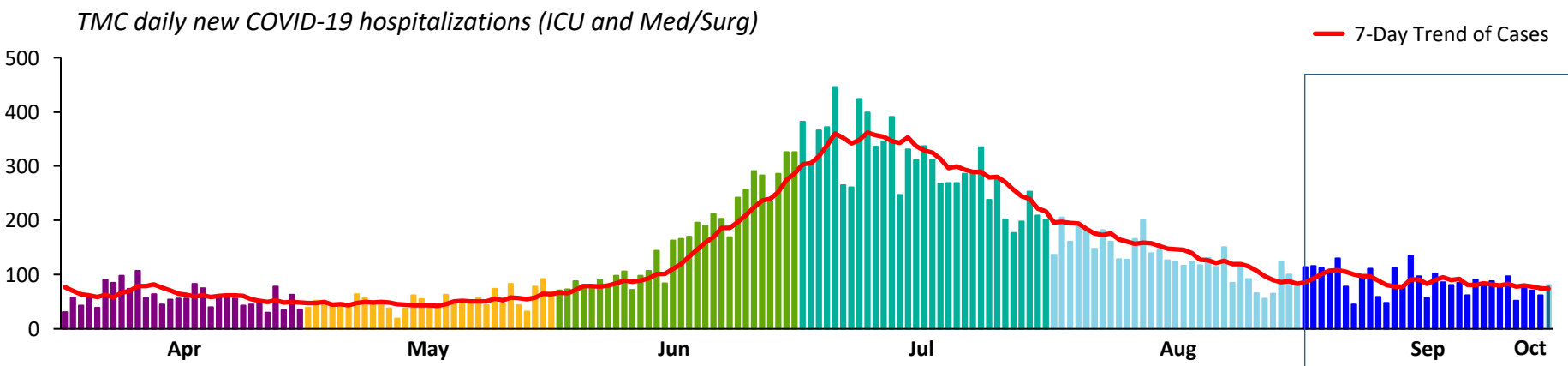
Monitoring threshold:

Threshold is exceeded by the occurrence of a positive daily growth rate, averaged over 7 days

Current status: -1.7% daily growth rate (averaged over 7 days) in the COVID-19 daily hospital admissions trend

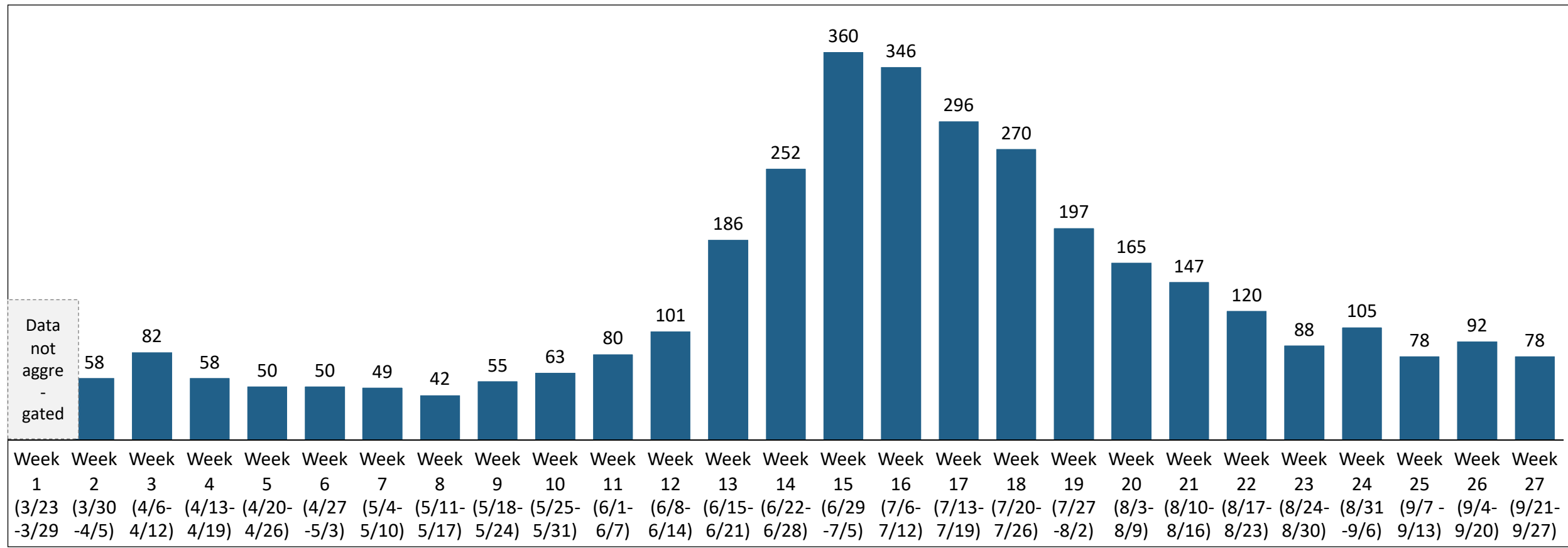
Notes:

While new daily cases may fluctuate for a variety of reasons (e.g., testing), the daily hospitalization trend shows an objective view of how COVID-19 impacts hospital systems



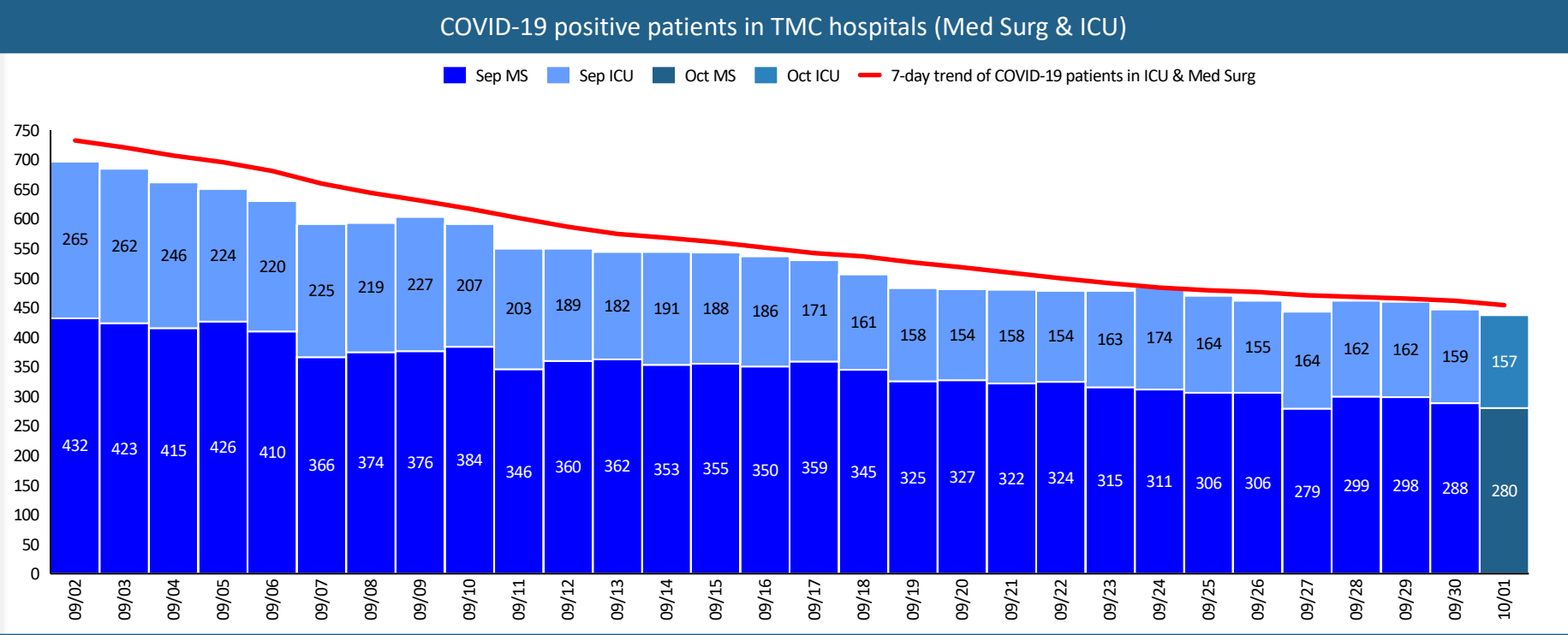
WEEKLY AVERAGE OF TMC DAILY NEW COVID-19 HOSPITALIZATIONS

average daily hospitalizations in TMC system (Monday-Sunday)



1. Austin, Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery and Waller

TOTAL TMC COVID-19 POSITIVE PATIENTS IN HOSPITAL

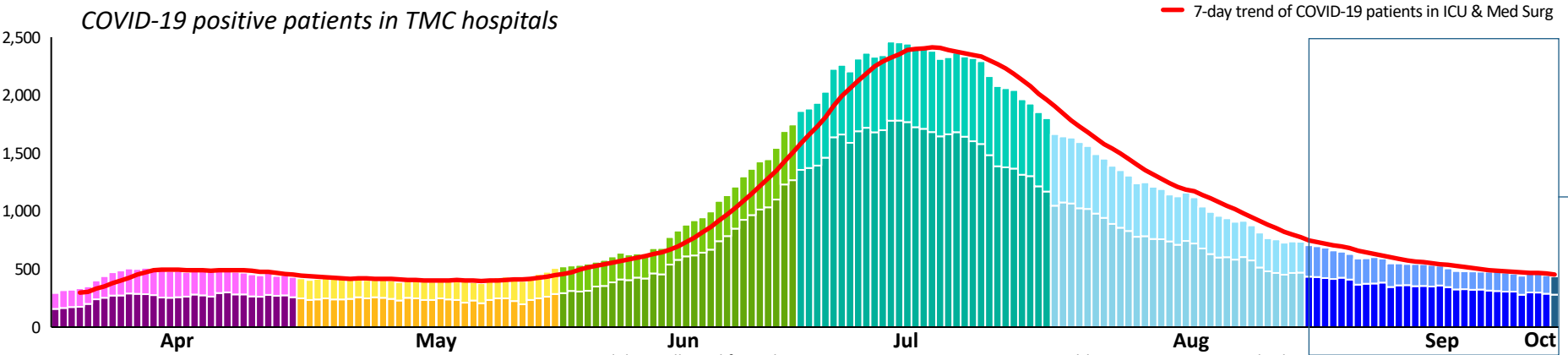


Current status:

- 1.2% total daily growth rate (averaged over 7 days) in COVID-19 patients TMC hospitals
- 0.9% ICU daily growth rate
- 1.4% Med Surg daily growth rate

Notes:

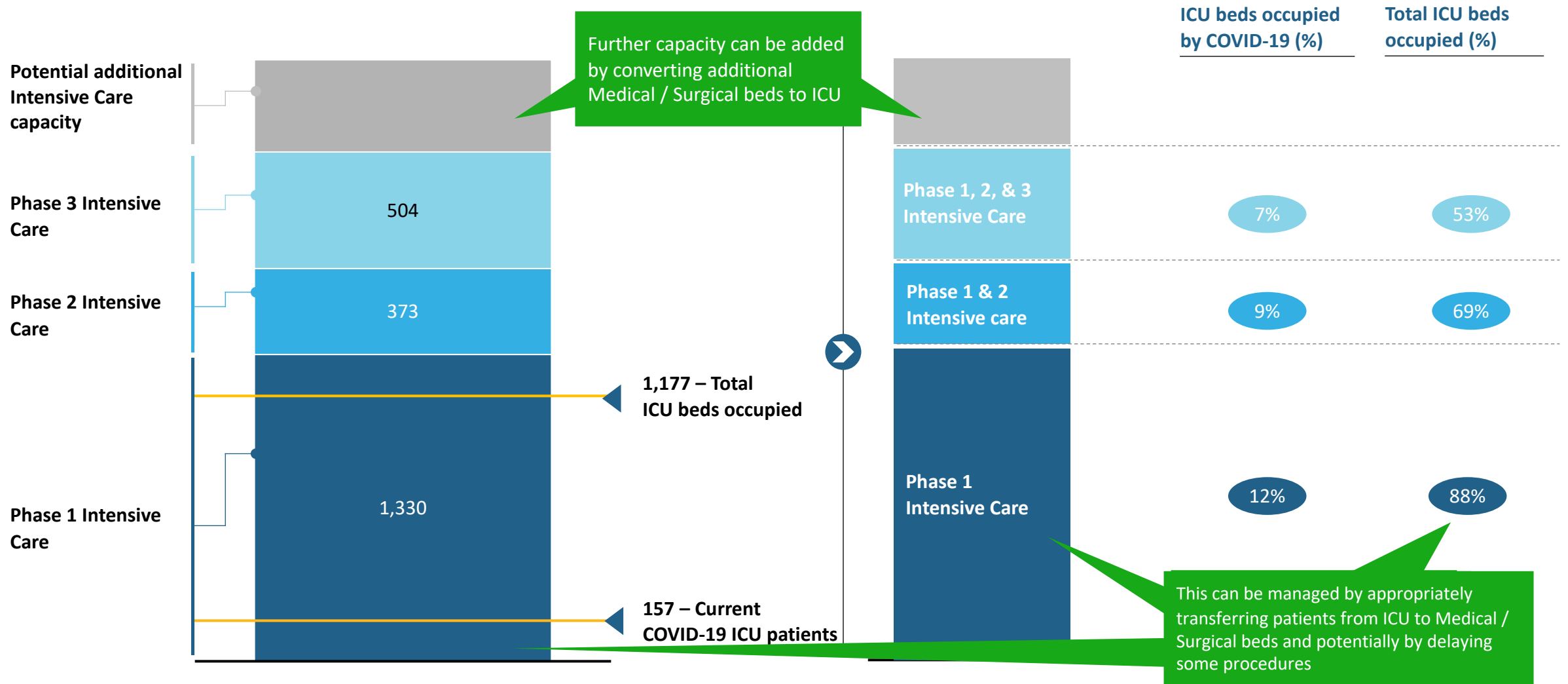
While new daily cases may fluctuate for a variety of reasons (e.g., testing), the number of COVID-19 positive patients being treated in med surg and ICU shows an objective view of how COVID-19 impacts hospital systems



OVERVIEW OF TMC ICU BED CAPACITY AND OCCUPANCY

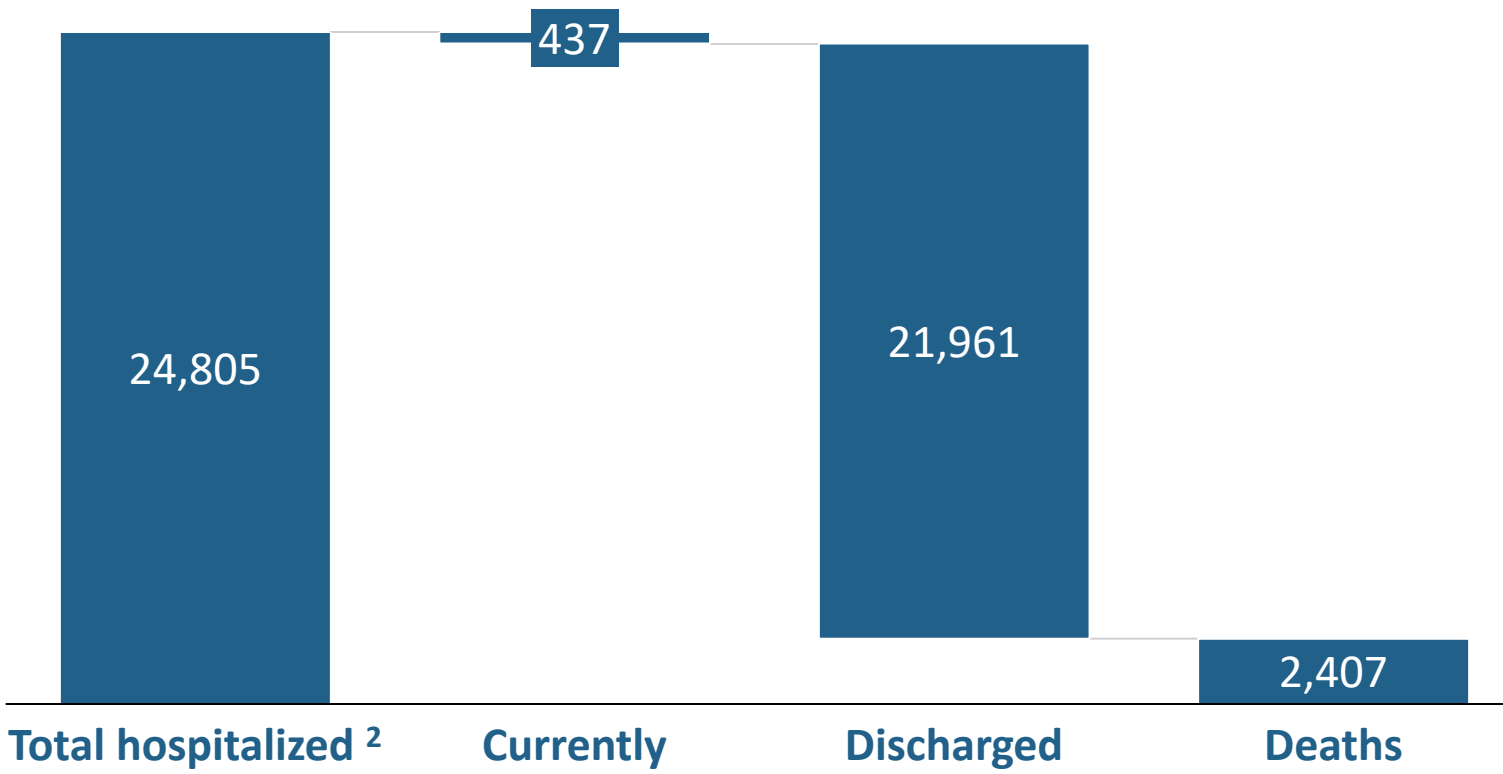
This capacity is actively managed by each of the hospitals and changes on a minute-by-minute basis

- Phase 1 Intensive Care capacity
- Phase 2 Intensive Care capacity
- Phase 3 Intensive Care capacity



TMC COVID-19 PATIENT SUMMARY

COVID-19 positive patients (excludes PUIs¹) through TMC system²



<i>Day/day:</i>	0%	-2%	0%	0%
<i>Week/week:</i>	2%	-10%	2%	2%

- TMC has served **24,805** positive in-patients to date
- Of those served, **21,961** patients have been successfully discharged

1. Persons under investigation for COVID-19 but not yet confirmed

2. Houston MSA includes 9 counties: Austin, Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery and Waller

Source: Internal data collected from the systems CHI Texas Division, Harris Health System, Houston Methodist, MD Anderson Cancer Center, Memorial Hermann, Texas Children’s Hospital, UTMB



APPENDIX

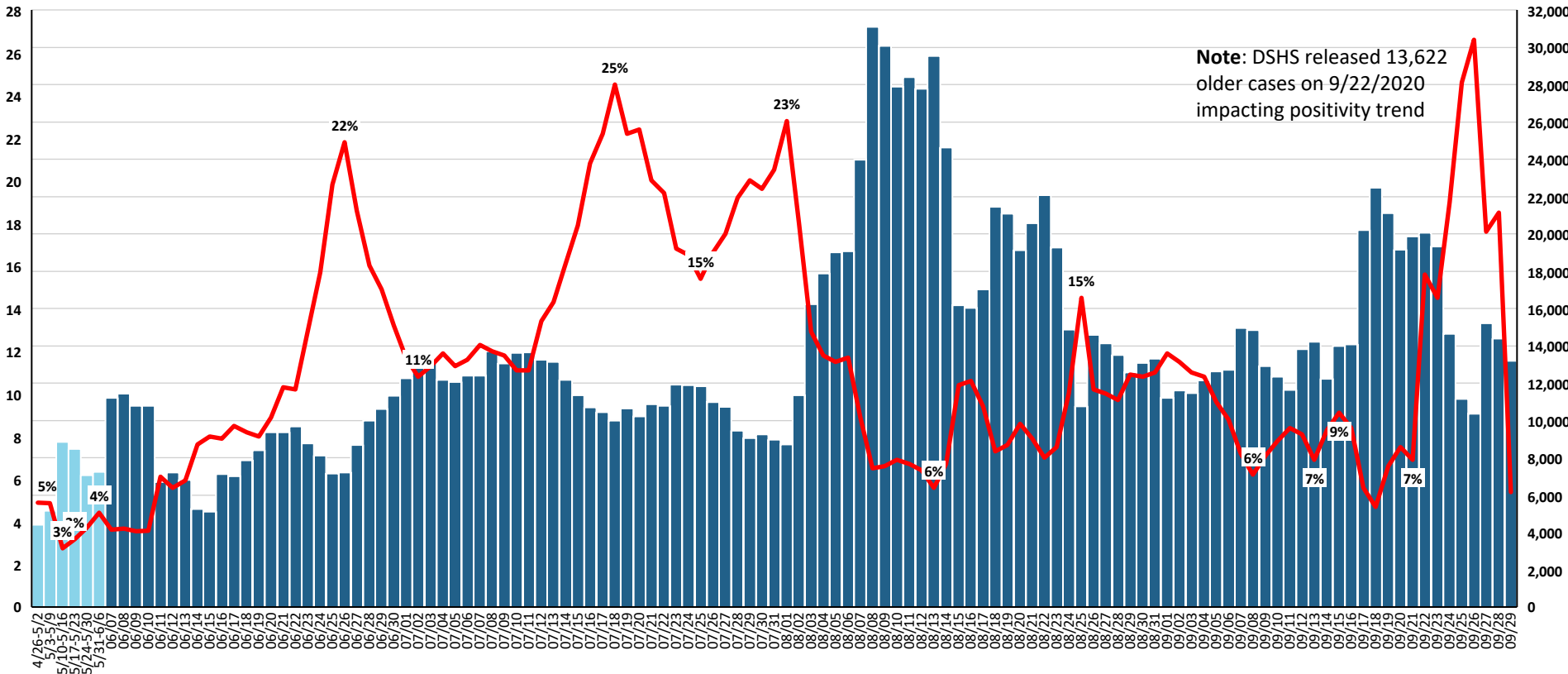
AS OF SEPTEMBER 30, 2020

COVID-19 TESTING TRENDS FOR GREATER HOUSTON AREA¹

Data from Texas Department of State Health Services

— 7-dy trend of % test positivity for COVID-19

■ 7-day trend of daily # of tests performed



(weekly averages)

Source: TX Health and Human Services (<https://dshs.texas.gov/coronavirus/AdditionalData.aspx>)

Note: Excludes days with no tests reported

1. Austin, Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery and Waller
2. Test data on chart will have a 1-day lag

TMC TEXAS MEDICAL CENTER

"TMC" refers to the group of systems that make up Texas Medical Center

Reflects retroactive changes in testing data made by Texas Department of Health and Human Services on 6/9/2020

Monitoring threshold:

Threshold is exceeded by the occurrence of a positive 7-day average growth in % test positivity

Current status²:

0 days of positive average growth in the % test positivity trend

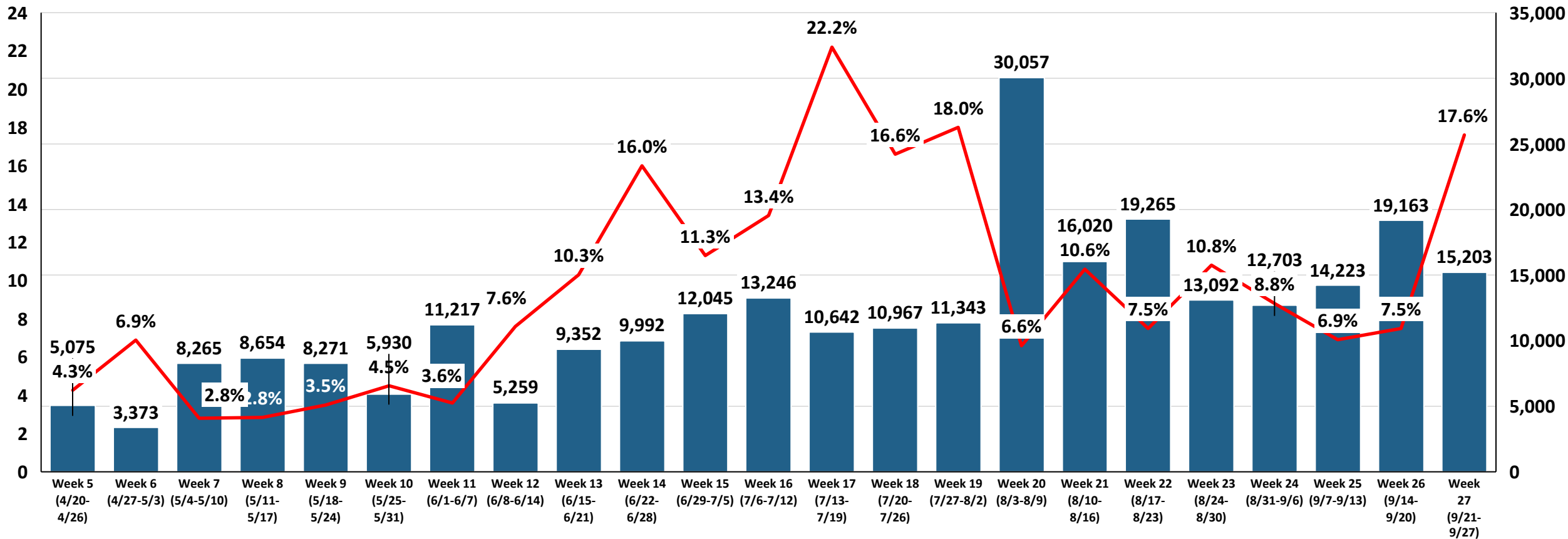
Note: Public testing data for this chart may lag several weeks

AVERAGE DAILY COVID-19 TESTING METRICS BY WEEK ACROSS GREATER HOUSTON AREA

Data from Texas Department of State Health Services

Note: Public testing data for this chart may lag several weeks

— 7-day trend of % test positivity for COVID-19 ■ 7-day trend of daily # of tests performed



Source: TX Health and Human Services (<https://dshs.texas.gov/coronavirus/AdditionalData.aspx>)

Note: Excludes days with no tests reported

1. Austin, Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery and Waller

TMC TEXAS MEDICAL CENTER

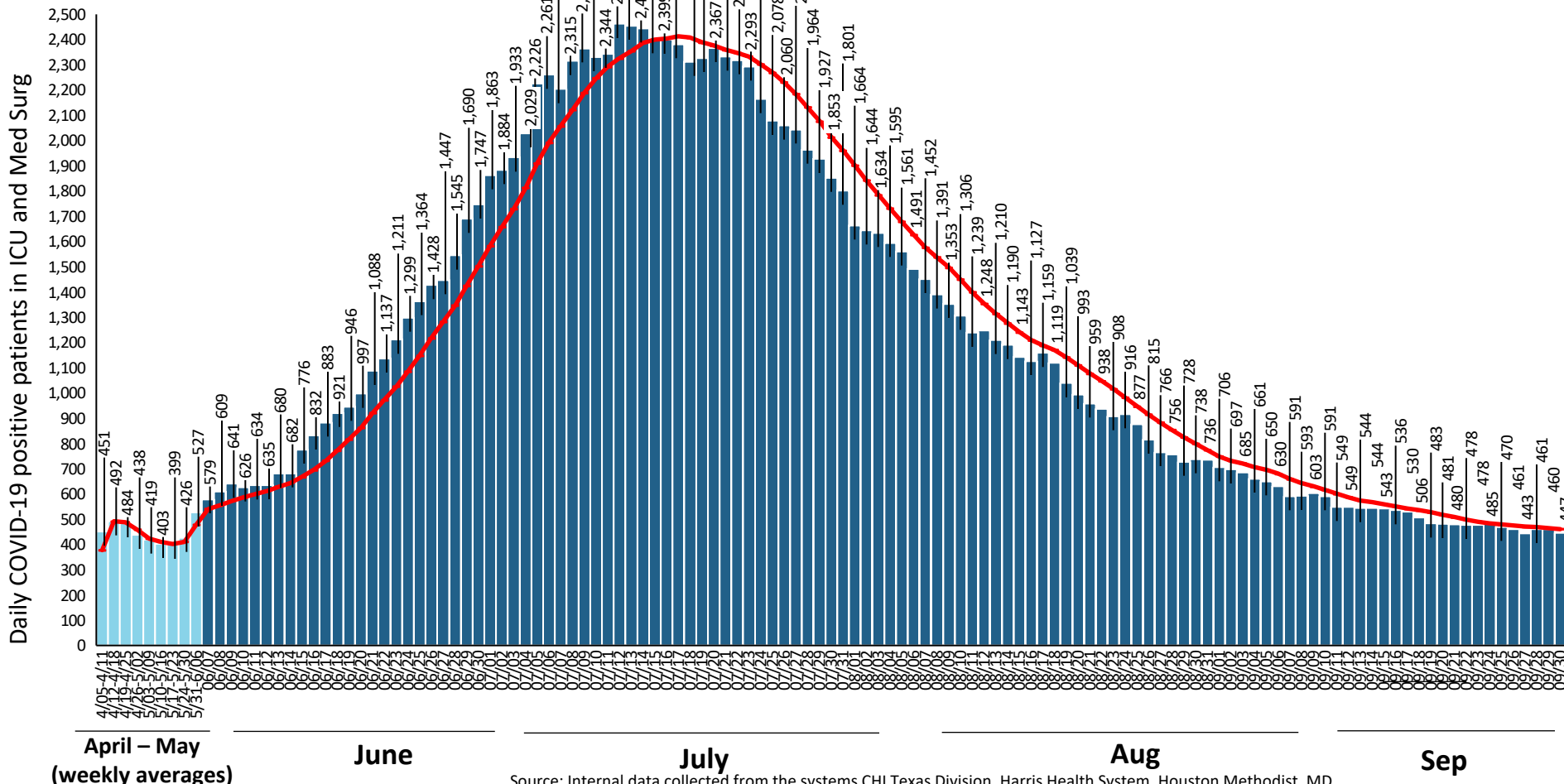
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TOTAL TMC COVID-19 POSITIVE PATIENTS (ICU & MED SURG) IN HOSPITAL

■ Daily COVID-19 patients in ICU & Med Surg
 — 7-day trend of COVID-19 patients in ICU & Med Surg



Current status:

-0.7% daily growth rate
 (averaged over 7 days) in
 COVID-19 patients in med
 surg and ICU combined

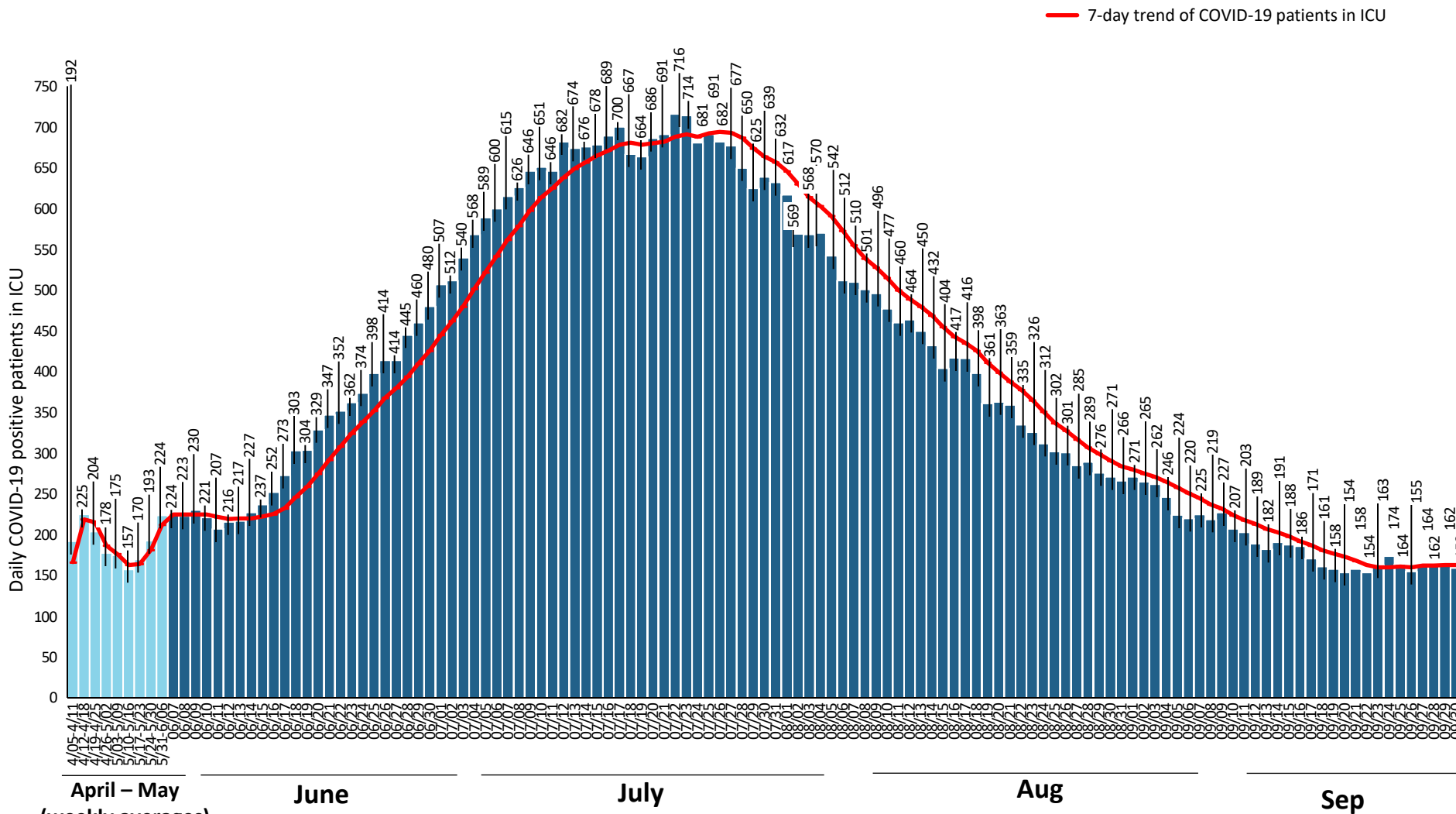
Notes:

While new daily cases may fluctuate for a variety of reasons (e.g., testing), the number of COVID-19 positive patients being treated in med surg and ICU shows an objective view of how COVID-19 impacts hospital systems

Source: Internal data collected from the systems CHI Texas Division, Harris Health System, Houston Methodist, MD Anderson Cancer Center, Memorial Hermann, Texas Children's Hospital, UTMB
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 All guidelines should be in accordance with CDC guidelines

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TOTAL TMC COVID-19 POSITIVE PATIENTS IN ICU BEDS



Current status:

0.2% daily growth rate (averaged over 7 days) in COVID-19 patients in ICU

Notes:

While new daily cases may fluctuate for a variety of reasons (e.g., testing), the number of COVID-19 positive patients being treated in ICU shows an objective view of how COVID-19 impacts hospital systems

April – May (weekly averages)

June

July

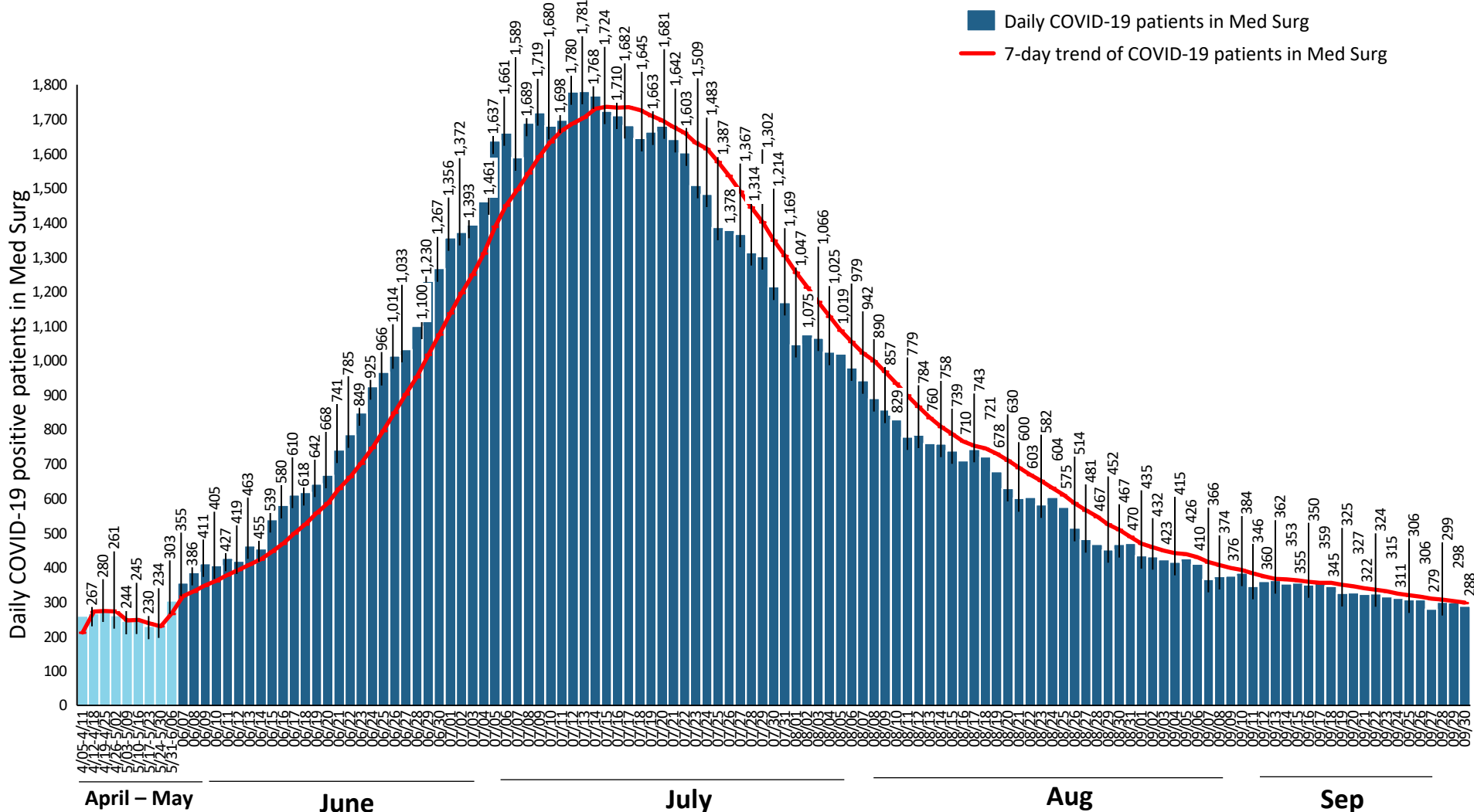
Aug

Sep

Source: Internal data collected from the systems CHI Texas Division, Harris Health System, Houston Methodist, MD Anderson Cancer Center, Memorial Hermann, Texas Children’s Hospital, UTMB “TMC” refers to the group of systems that make up Texas Medical Center All guidelines should be in accordance with CDC guidelines

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TOTAL TMC COVID-19 POSITIVE PATIENTS IN MED SURG BEDS



Current status:
-1.2% daily growth rate
 (averaged over 7 days) in
 COVID-19 patients in med surg

Notes:
 While new daily cases may fluctuate for a variety of reasons (e.g., testing), the number of COVID-19 positive patients being treated in Med surg shows an objective view of how COVID-19 impacts hospital systems

April – May

June

July

Aug

Sep

(weekly averages)

TMC CAPACITY PLANNING PROTOCOL

Definitions

Phase 1 Intensive Care Beds

- ICU bed configuration and staffing under non-pandemic situations

Phase 2 Intensive Care Beds

- Builds on ICU capacity using our existing plans - through increasing staffing levels and ratios, mobilizing additional Intensive Care equipment & utilizing additional beds

Phase 3 Intensive Care Beds

- Further planned utilization of Phase 2 levers of surge capacity to provide additional temporary Intensive Care capacity

Capacity planning



Our hospitals are **very experienced at operating at near 100% capacity** and are able to flex up and down when needed (e.g., with additional staffing)

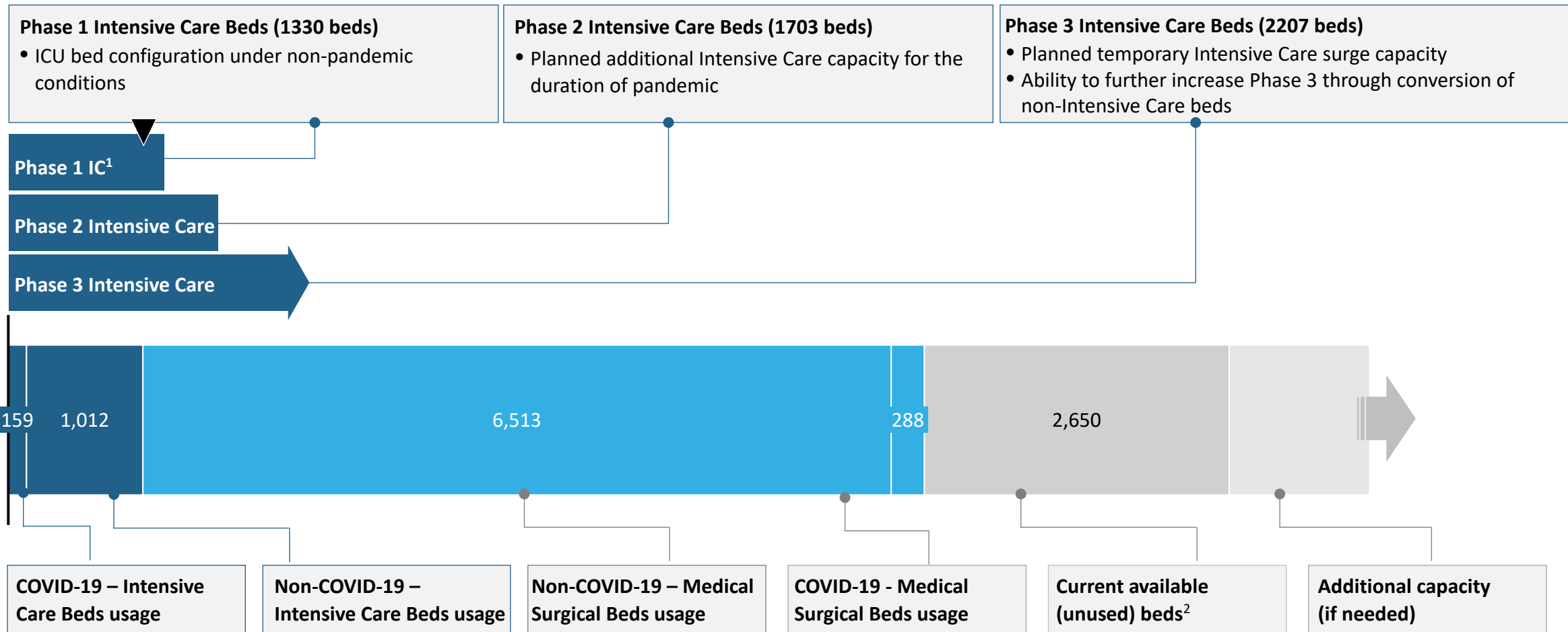
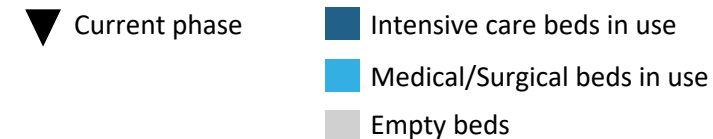


We have proactively developed our surge plans and are **able to add extensive capacity when needed** (e.g., by adding additional staff, additional equipment, additional beds, and increasing densification)



Additionally, we **can moderate intake of non-COVID 19 patients**, based on the clinical needs of the elective portion of these patients. **Non-COVID 19 patients today represents the vast majority of our patients.**

OVERVIEW OF TMC BED STATUS



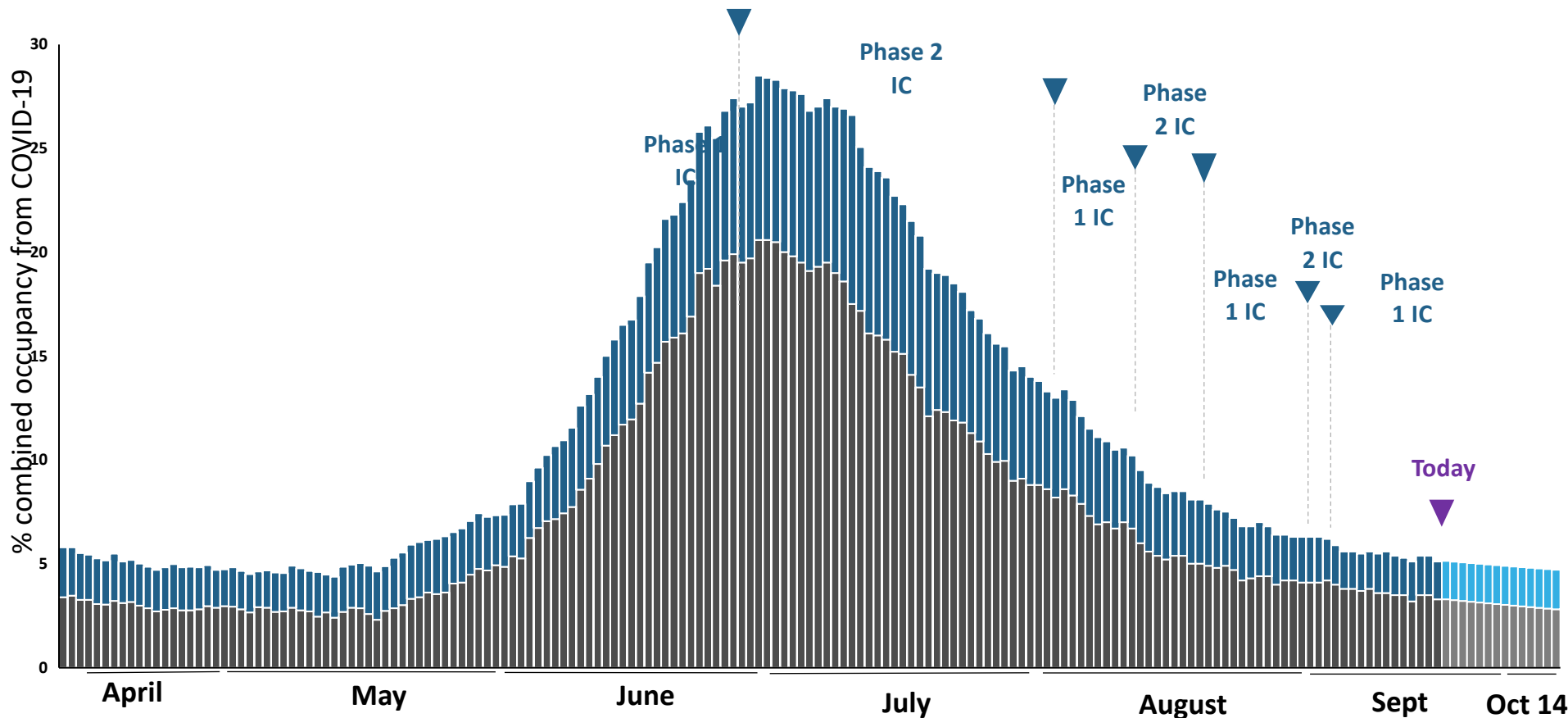
TMC leaders are actively managing, and can adjust, elective procedures to ensure sufficient capacity for COVID-19 needs

1. Intensive Care
 2. Total bed availability may fluctuate over time, given ongoing planning and operational considerations. On June 28th and 29th, the total unoccupied beds should have been 3,506 and 3,565, respectively. These data updates did not change ICU or med-surg occupancy and did not change ICU capacity percentages reported on any date.

TMC 2-WEEK PROJECTION USING BED OCCUPANCY GROWTH

% total bed occupancy¹

■ ICU actuals ■ ICU forecast
 ■ Med/Surg actuals ■ Med/Surg forecast



- For the past 7 days, the average daily growth in occupancy for COVID-19 patients has been:
 - 0.2% for ICU
 - -1.2% for Med Surg
- TMC is in **Phase 1 Intensive Care Capacity**
- If this growth continues, TMC:
 - Will likely not move into Phase 3 Intensive Care within 2 weeks
- This calculation assumes a similar occupancy for non-COVID-19 procedures as today

The health and wellbeing of our community requires that **each of us do our part to slow the spread of COVID-19**, including:

- Maintaining social distance
- Wearing a mask while in public
- Washing hands regularly
- Test and self-isolate, if sick

1. Daily occupancy is smoothed over a two-day period

Note: For projections, non-COVID-19 occupancy is assumed to stay constant at modeling rate on day of forecast

TMC EXPECTED PPE NEEDS

- No concern
- Moderate concern
- Warning

	<u>Average daily burn rate¹</u>	<u>Estimated days available</u>	<u>Status</u>
N95 respirator masks	7,572	274	●
Surgical face masks	133,336	144	●
Eye protection	4,259	634	●
Gowns	55,792	121	●
Gloves	1,037,641	45	●

Monitoring threshold:

30-day supply of critical PPE items

Current status:

All critical PPE items within range

Note:

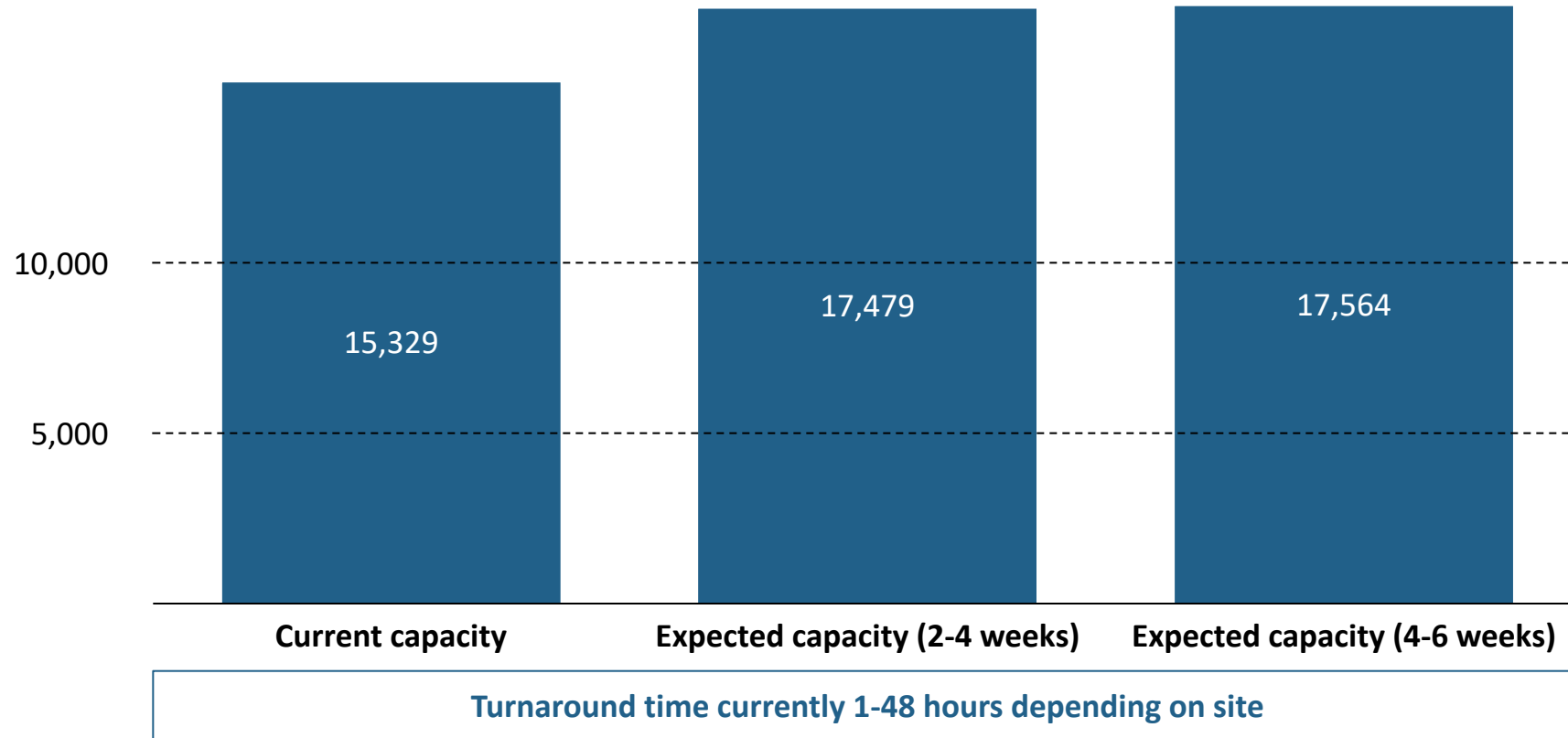
Data shown represents all TMC institutions and might vary from institution to institution

1. Calculated using trailing 2-week average burn rate

Source: Internal data collected from the systems CHI Texas Division, Harris Health System, Houston Methodist, MD Anderson Cancer Center, Memorial Hermann, Texas Children's Hospital, UTMB

TMC TESTING CAPACITY

PCR tests, (#/day)



1. Austin, Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery and Waller

Source: Internal data collected from the systems Baylor College of Medicine, CHI Texas Division, Harris Health System, Houston Methodist, MD Anderson Cancer Center, Memorial Hermann, Texas Children's Hospital, UT Health, UTMB

TMC | TEXAS MEDICAL CENTER

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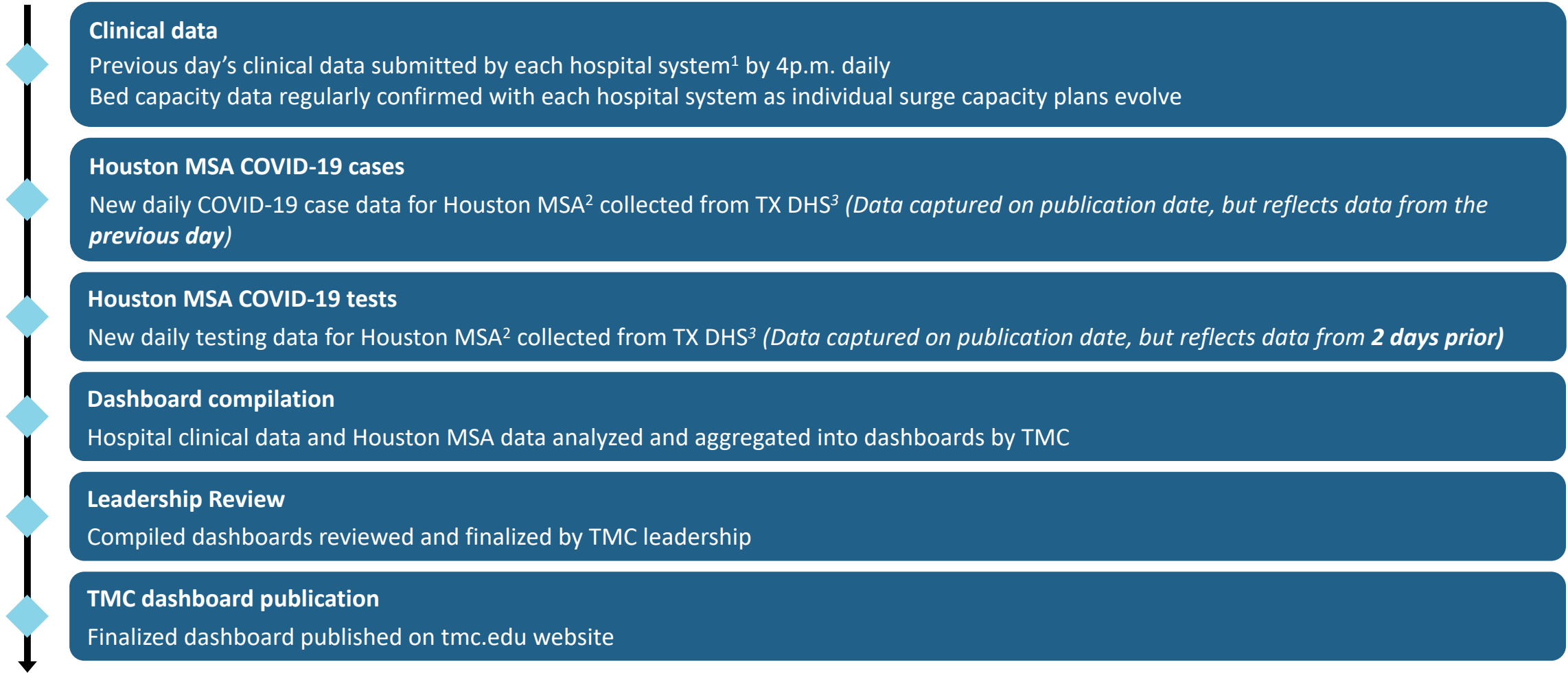
Monitoring threshold:

5,000-10,000 PCR tests per day available for hospital patients and healthcare worker surveillance (with <24 hour turnaround time)

Notes:

Capacity is dependent on critical supplies (reagents)

TMC DATA COLLECTION PROCESS



1. System-wide clinical data collected from CHI Texas Division, Harris Health System, Houston Methodist, MD Anderson Cancer Center, Memorial Hermann, Texas Children's Hospital, UTMB. TMC institutions represent ~70-80% of licensed beds in the 9 Houston MSA counties
2. Houston MSA includes 9 counties: Austin, Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery and Waller
3. Source: txdhs.gov