

## INTRODUCTION

- Previous studies indicate variability in the accurate application of NHSN surveillance criteria but data on possible contributing factors are limited.
- Our results indicate 2019 NHSN training and increased years of IP experience may be associated with correct identification of CAUTI and CLABSI criteria.
- Routinely performing more hours of surveillance may increase accuracy of CLABSI identification, but not CAUTI.

## BACKGROUND

- Healthcare workers responsible for surveillance and reporting of healthcare associated infection (HAI) data to NHSN are required to use the NHSN surveillance definition criteria to standardize reporting.
- Previous studies show inconsistent knowledge and application of criteria [1,2,3,4]. Despite NHSN's attempts at standardization, variation in interpretation of criteria persists [1,2,3,4].
- This study evaluated the application of 2019 NHSN surveillance definitions in Texas.

## METHODS

- A web-based survey, open from January 13 to March 27, 2020, was sent to members of professional IP organizations including nine Texas chapters of APIC, TSICP, and IP associations in Lubbock and the Panhandle. Participants had the opportunity to enter to win one of three \$25 gift cards. Eighty-eight individuals submitted the survey.
- The survey collected information about education, experience, 2019 NHSN training, work setting, hours spent on surveillance and primary organizational role.
- Participants were asked to identify surveillance elements for two case scenarios and make an infection determination for a CAUTI and CLABSI using surveillance criteria from the 2019 NHSN PSC Manual [5].

## CAUTI & CLABSI Case Scenarios

- 1/12 48-year-old to ED; Foley Catheter inserted
- 1/13 admitted to Med/Surg; Temp 100.5°F
- 1/14 Temp 100.7°F
- 1/15 Urine culture S. epi 50-100,000 CFU/ml
- 1/16 Temp 100.1°F; 1/17 Temp 100.6°F
- 1/18 Foley Catheter removed; Temp 100.4°F
- 1/19 Temp 100.9°F; 1/20 Temp 100.2°F
- 1/21 Urine culture S. epi >100,000 CFU/ml
- 1/22 Temp 99.9°F

Answers: CAUTI: Yes; Criterion: SUTI 1A; IWP: 1/18-1/24; DOE: 1/19; RIT: 1/19-2/1; SBAP: 1/18-2/1

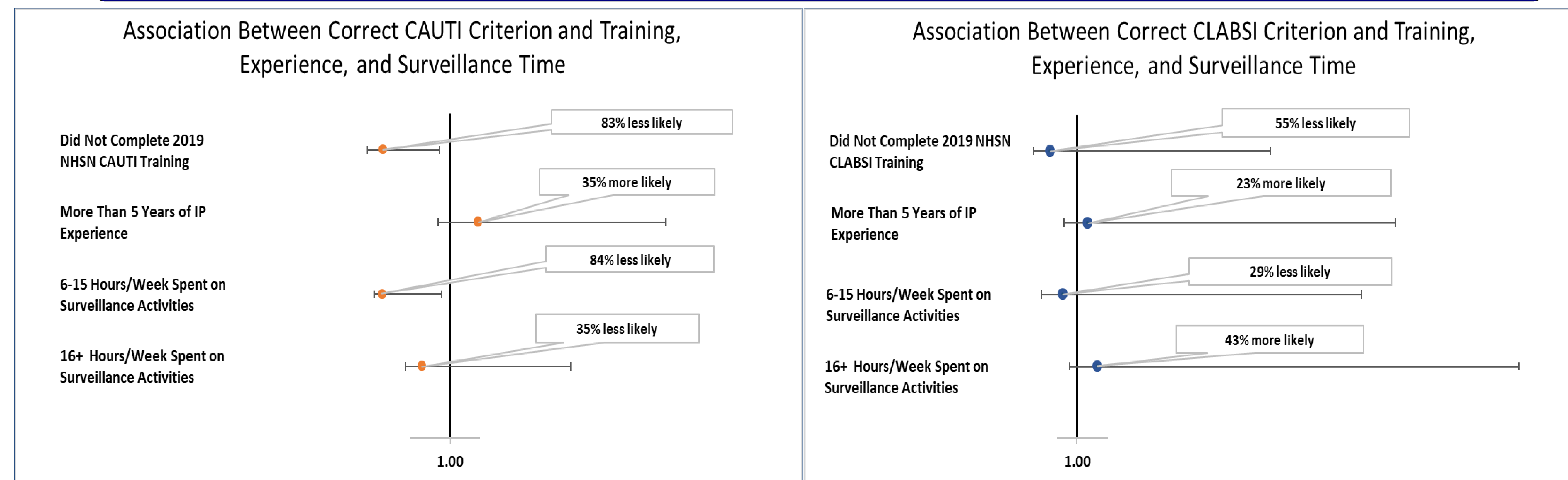
- 1/15 54-year-old admitted to ICU
- 1/16 Central line inserted
- 1/17 Patient has a new onset of cough
- 1/18 Chest x-ray: consolidation; WBC 450 cells/mm<sup>3</sup>
- 1/19 Chest x-ray: consolidation; Temp 100.5°F
- 1/20 BAL culture Enterococcus faecalis; WBC 498 cells/mm<sup>3</sup>
- 1/21 Blood culture Enterococcus faecalis; patient has crackles/rales

Answers: CLABSI: Yes; Criterion: MBI-LCBI 1; IWP: 1/18-1/24; DOE: 1/21; RIT: 1/21-2/3; SBAP: No SBAP for BSI events

## DISCUSSION

- Misidentification of NHSN criteria could cause HAIs to be inaccurately reported, potentially affecting patient safety goals and efficient utilization of resources. Previous studies suggested that education and frequent review may reduce variation in application of NHSN definitions [1,2,3,4]. Our results support this, suggesting positive associations between correct CAUTI and CLABSI criteria determination and completing 2019 NHSN training as well as years of experience as an IP. However, our study found that increased time spent on NHSN surveillance and tasks may be negatively associated with correct determination of CAUTI but not CLABSI criteria.
- Study limitations include possible lack of generalizability and small sample size. Concurrent distribution of another large IP survey, COVID-19 pandemic response, and difficulty accessing the survey link due to email firewalls may have contributed to limited response. While the small sample size restricted our ability to conduct stratified analyses, this study is one of the first to investigate factors contributing to variability in application of NHSN surveillance definitions while adjusting for possible confounders. More studies are needed to confirm our results.

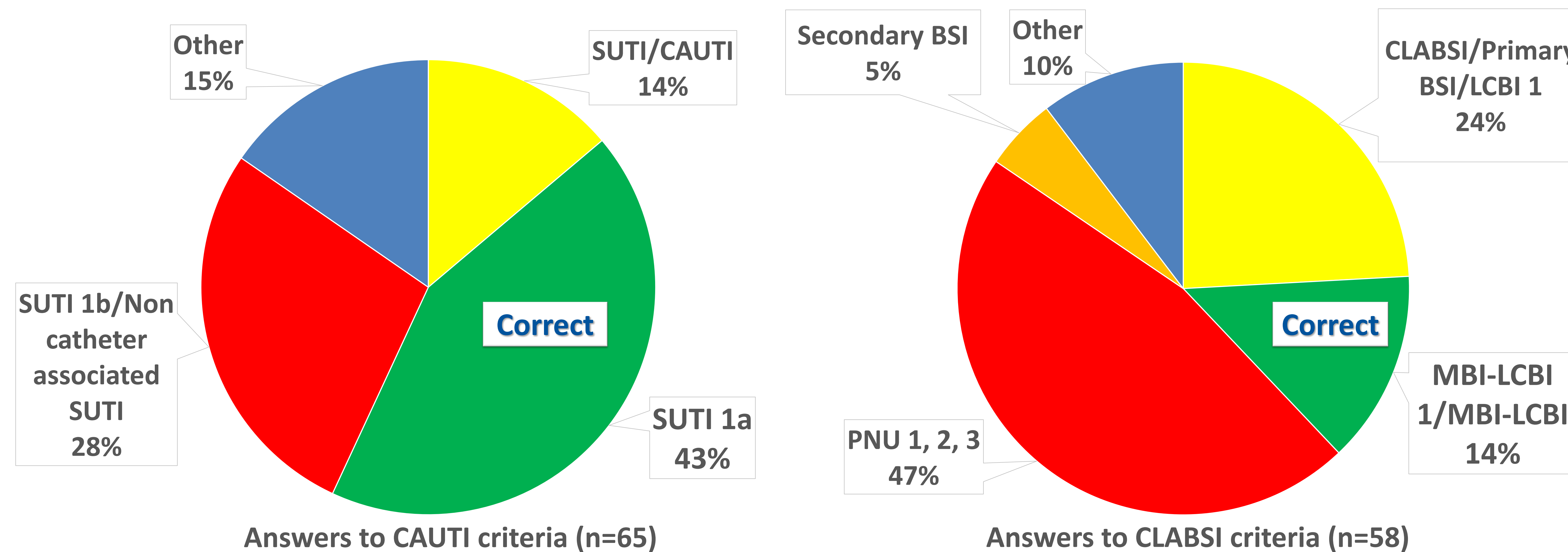
## RESULTS



Data limited to respondents who completed questions related to CAUTI identification: CAUTI (Y/N), Criteria Met, Date of Event, Infection Window Period, Repeat Infection Timeframe, and Secondary BSI Attribution Period (n=65); correct identification of SUTI 1a CAUTI (n=28).

Data limited to respondents who completed questions related to CLABSI identification: CLABSI (Y/N), Criteria Met, Date of Event, Infection Window Period, Repeat Infection Timeframe, and Secondary BSI Attribution Period (n=58); correct identification of MBI-LCBI 1 CLABSI (n=7).

## Misidentification of CAUTI or CLABSI may be related to several factors including experience, training, and workload



## CONCLUSION

- Our findings suggest NHSN training and more years of IP experience may be associated with increased accuracy of CAUTI and CLABSI identification but spending increased time on surveillance activities may have differing effects on the determination of CAUTI and CLABSI criteria. The results may be used to inform education initiatives and possible evaluation of the effect of workload on accurate application of surveillance definitions.

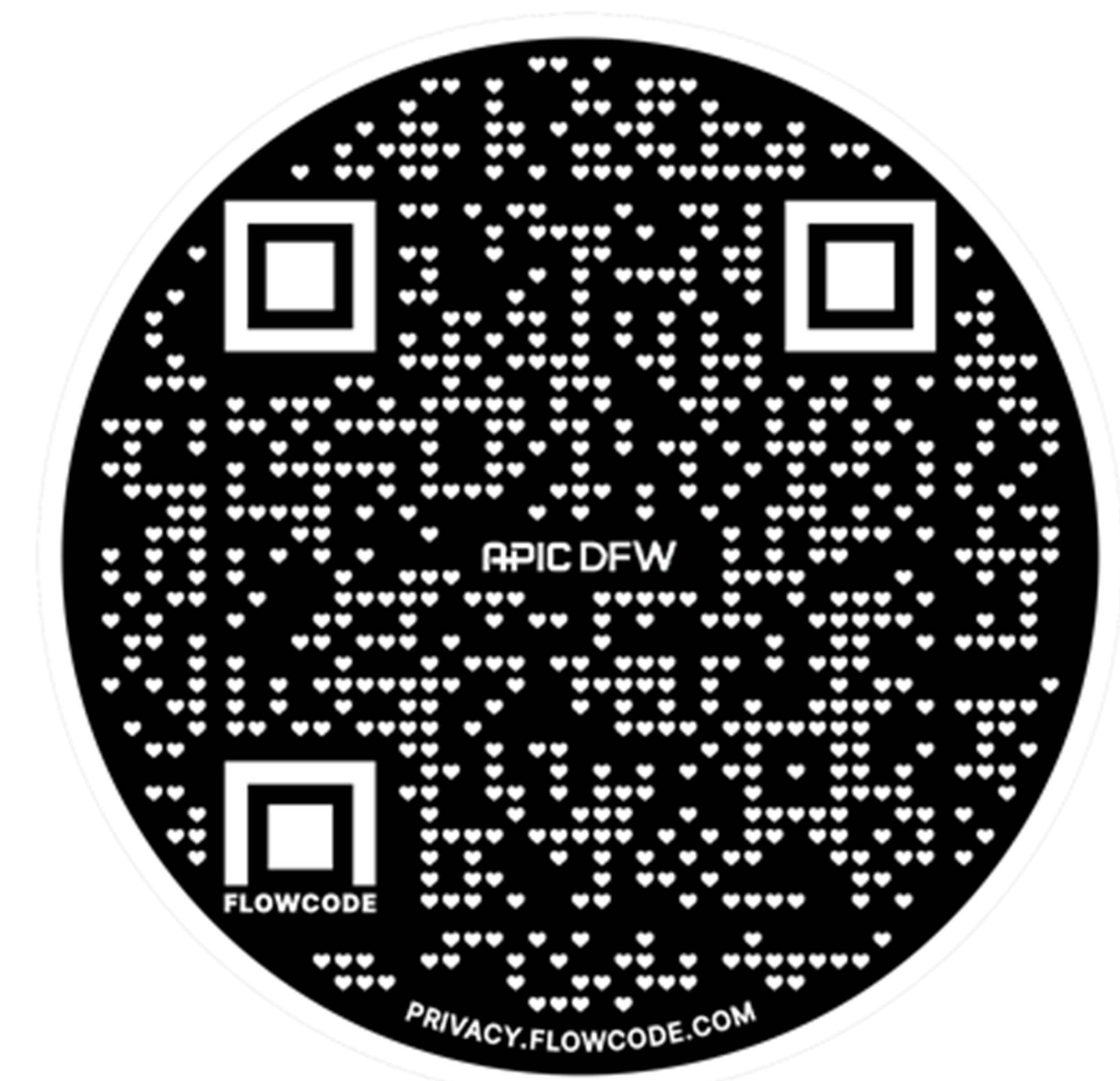
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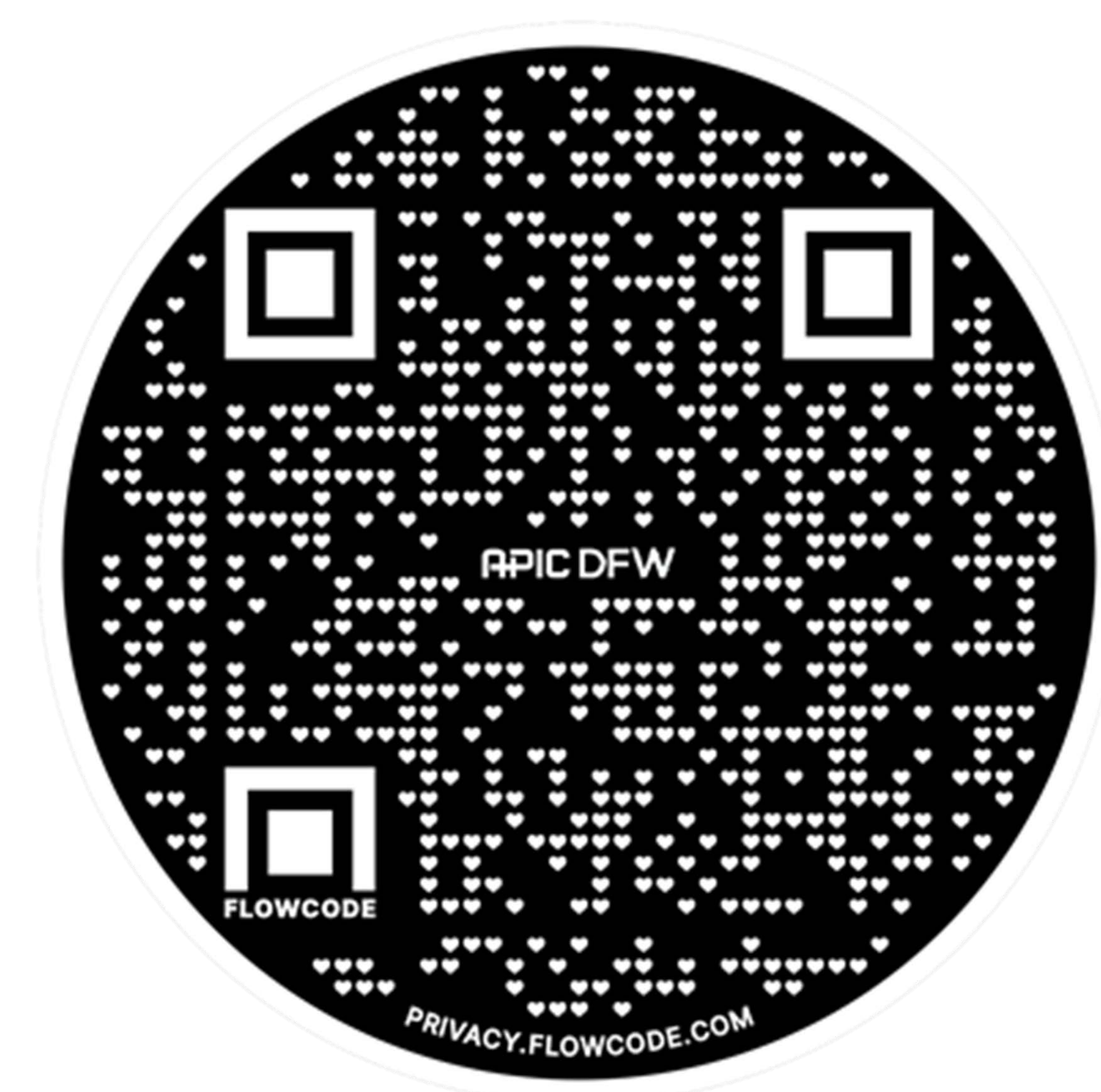
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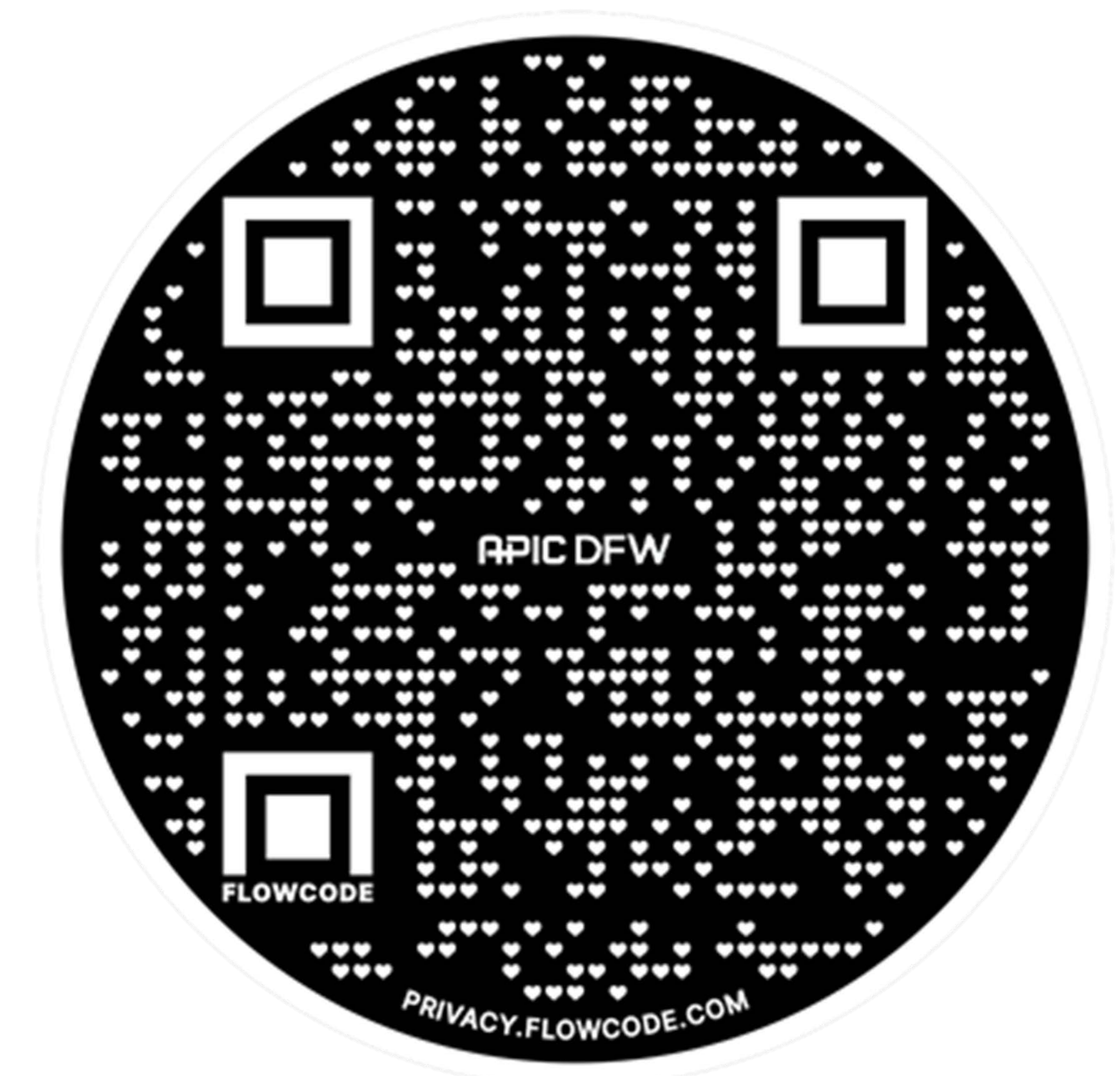
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# Disclosures

- *Terri Goodman & Associates is approved as a provider of nursing continuing professional development by the California Board of Nursing.  
Provider Number: CEP 16550*
- *The presenter (s) have no conflicts of interest to declare*



# Deadline

The evaluation must be completed by

August 31, 2021

