Development and Evaluation of a Nurse Leader Driven Telephone Appointment Reminder Protocol

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Introduction

No Show Appointments:

Challenge throughout healthcare system (Briatore et al., 2019)

Results in deteriorated health outcomes (Wolff et al., 2019)

Impacts patients, providers, & practices (Lance et al., 2021)

No Show = No advance notice of intention not to attend appointment

Cancellation = advance notice given of intention not to attend appointment (Marbouh et al., 2020)

National no show rates are highly variable: 5% - 55% (Penzias et al., 2019).

Problem Description

No Show Appointment Impact on Patients:
- Deteriorated Health Outcomes (Wolff et al., 2019)
  - Increased likelihood of hospitalization
  - Patients seeking acute care for non-acute needs
- Limits patient access to care (Lagman et al., 2021)
- Extends appointment unavailability (Shahab & Meili, 2019)
- Limits preventative protocols, resulting in uncontrolled chronic diseases (Lance et al., 2021)
- Higher Mortality (Brown et al., 2020)
- Low-income patients are at higher risk for:
  - No health insurance
  - No access to healthcare
  - Increased worse health outcomes (Boshers et al., 2021)

No Show Appointment Impact on Staff:
- Decreased quality of care provided (Marbouh et al., 2020)
- Decreased productivity, efficiency & lost time (Fiori et al., 2020; Kumthekar & Johnson, 2018)
- Squandering of physical and human resources (Lance et al., 2021)
- Impact on cost & revenue (Dantas et al., 2018)
 - Est. financial loss per primary care consultation in U.S. = $274 (Lagman et al., 2021)

Available Knowledge

- Live telephone appointment reminders have lower no show rate than text messages or no reminders (Lance et al., 2021)
- Timing of appointment reminder is important (Adams et al., 2019)
  - Calling 24 hours in advance is associated with lower no show rate (Lagman et al., 2021)
- Forgetfullness = most common reason for no shows (Penzias et al., 2019)
- Estimated annual gross revenue loss in U.S. = $84,000 - $380,000 (Lagman et al., 2021)
- Estimated annual gross revenue loss in U.S. $84,000 - $380,000 (Lagman et al., 2021)
- Gender not a strong predictor of patient no show behavior (Dantas et al., 2018)
- Racial minorities at higher risk for no show behavior (Penzias et al., 2019)

Theoretical Framework

Pender's Health Promotion Model (HPM)

1. Personal Characteristics & Behaviors
- Patients are unique and shaped by their individual environment (Aqtam & Darawwad, 2018)
- The practice must know how to effectively reach their patients.
2. Assessment of Health Promoting Behavior
- Interdisciplinary collaboration and communication should exist between nursing and operations
3. Behavioral Outcome:
- Did patients attend their scheduled appointments?
- Is there a correlation between no show rate and intervention?

Aqtam & Darawwad, 2018)
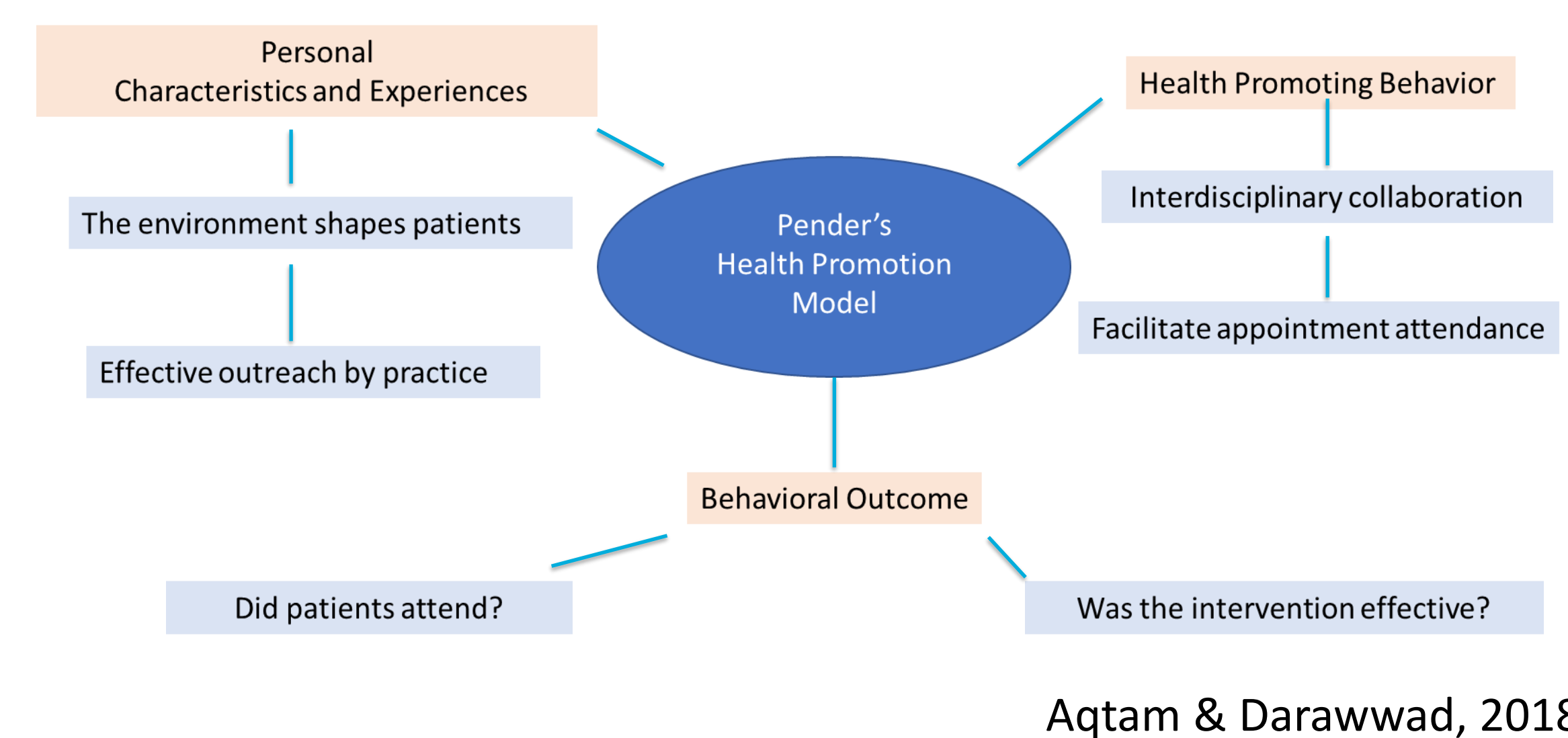
PICOT Question

In a primary care practice, how do live telephone appointment reminders compared to current practice affect no show rates over a six-week time period?

Population: Primary care practice
Intervention: Live telephone appointment reminders
Comparison: Current practice
Outcomes: No show rates
Time: a six-week time period

Specific Aims

Evaluate no show rates at primary care practice

Perform an evidence-based intervention

Evaluate impac/
t of intervention on the no show rate

Ethical Considerations

- 7/10/2022: Collaborative Institutional Training Initiative (CITI) in Human Subjects Research completed
- 10/14/2022: Primary Care Practice leadership permission received
- 11/4/2022: Organization's Institutional Review Board (IRB) permission received
- 11/21/2022: Human Subjects Review Committee approval from Wilmington University received

Process

Location: urban primary care practice in a tertiary healthcare system in the Northeast

Inclusion Criteria were patients who:
1. Were at least 18 years old
2. Had a 10-digit telephone number listed in chart

Exclusion Criteria included patients who:
1. Under the age of 18 years
2. Were adults under guardianship
3. Were incarcerated
4. Had a preferred language other than English
5. Were unwilling to speak with the caller

Process:
1. Access chosen nurse practitioner's schedule daily
2. Call patients scheduled for any appointment type 24 hours in advance of scheduled appointment
3. Phone calls were made between the hours of 3pm-7pm
4. Caller used the secured phone application, Avaya One-X Communicator
5. Caller read from a pre-written script, approximately 10 seconds in length
6. Enter information into data log:
   1. If patient confirmed, canceled, or rescheduled appointment

Analysis/Results

- 259 pts. called, 10 pts. excluded, total pts. = 249
- 58.8% (n = 134) answered phone when called
- 60.8% (n = 115) who answered phone also attended appointment
- Statistical significant correlation (p = .000) between pts. who answered the phone and attended appointment
- Of pts. who answered phone: 49.9% confirmed, 3.2% rescheduled, 1.6% cancelled their appointment
- 72.7% = female gender; 34.5% = age 59+ yrs.; 70.1% = Black/AA
- No relationship between appointment attendance and age/gender
- Higher show rates among White pts. than Black or African American

Patient Telephone Answer & Appointment Attendance
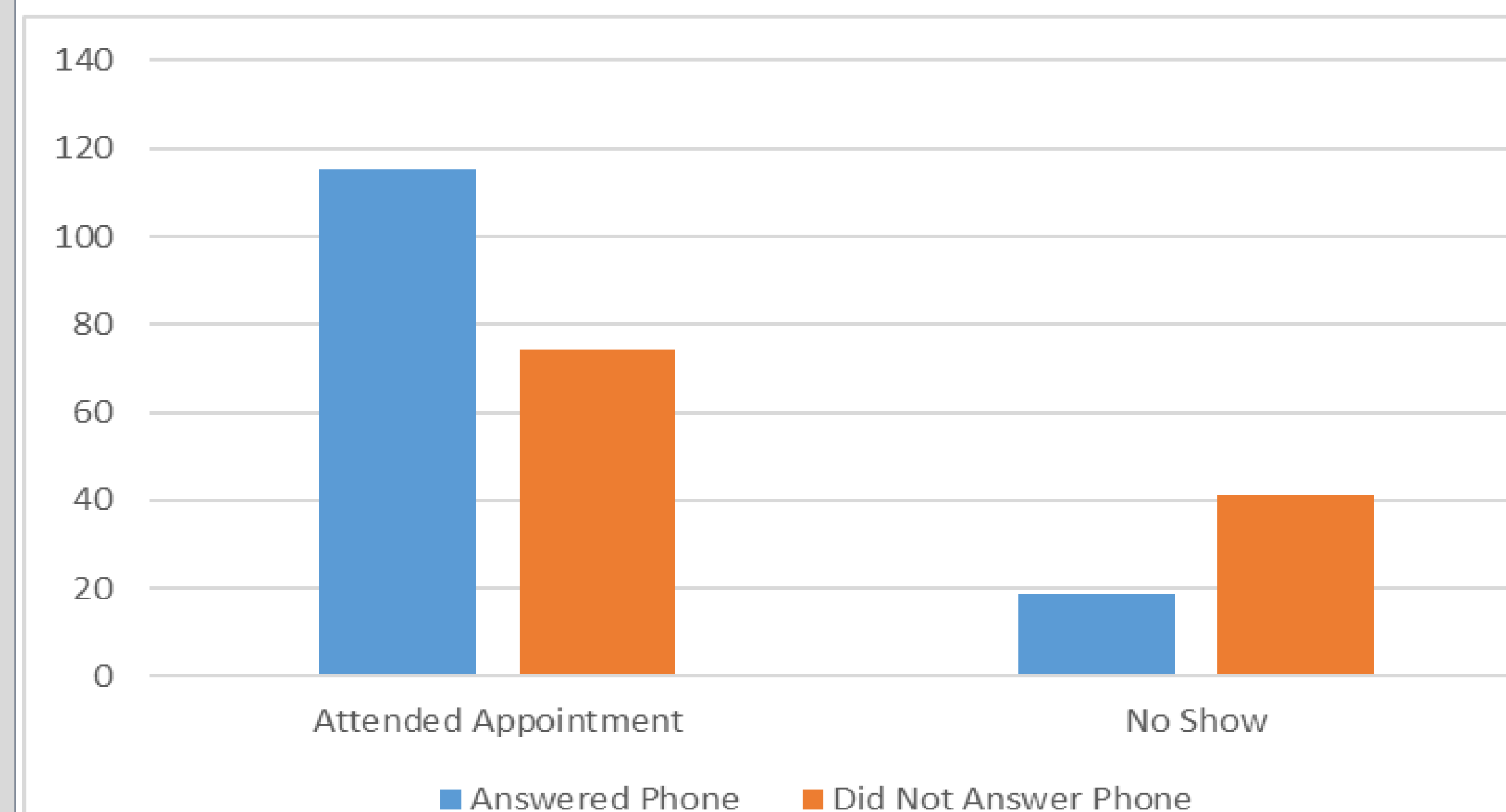
Interpretation

- Patients who answered the live telephone appointment reminder and confirmed their appointment were more likely to attend their appointment
- No show rate for the overall practice and nurse practitioner decreased during the one full month of the intervention

Limitations

- Small sample size
- Limited demographic details
- Staffing
- Budget constraints

Dissemination Plan

- Begin at practice level
  - Define workflow
  - Develop training module
  - Provide script
- Expand calling responsibility beyond nurse
- Clinical and operational leadership meet monthly

Implications for Nursing Practice

- Potential to create and increase patient access to appointments
- Preventative protocols cannot be initiated in patients who do not attend appointments (Lance et al., 2021)
- Partnerships and therapeutic relationships are formed between patient and provider with appointment attendance (AACN, 2006)

Conclusion

There is a strong correlation between patients who answer the live telephone appointment reminder calls and patients who attend their appointments.

The practice and nurse practitioner experienced an overall decrease in no show attendance during the one full month of the intervention.

References/Contacts
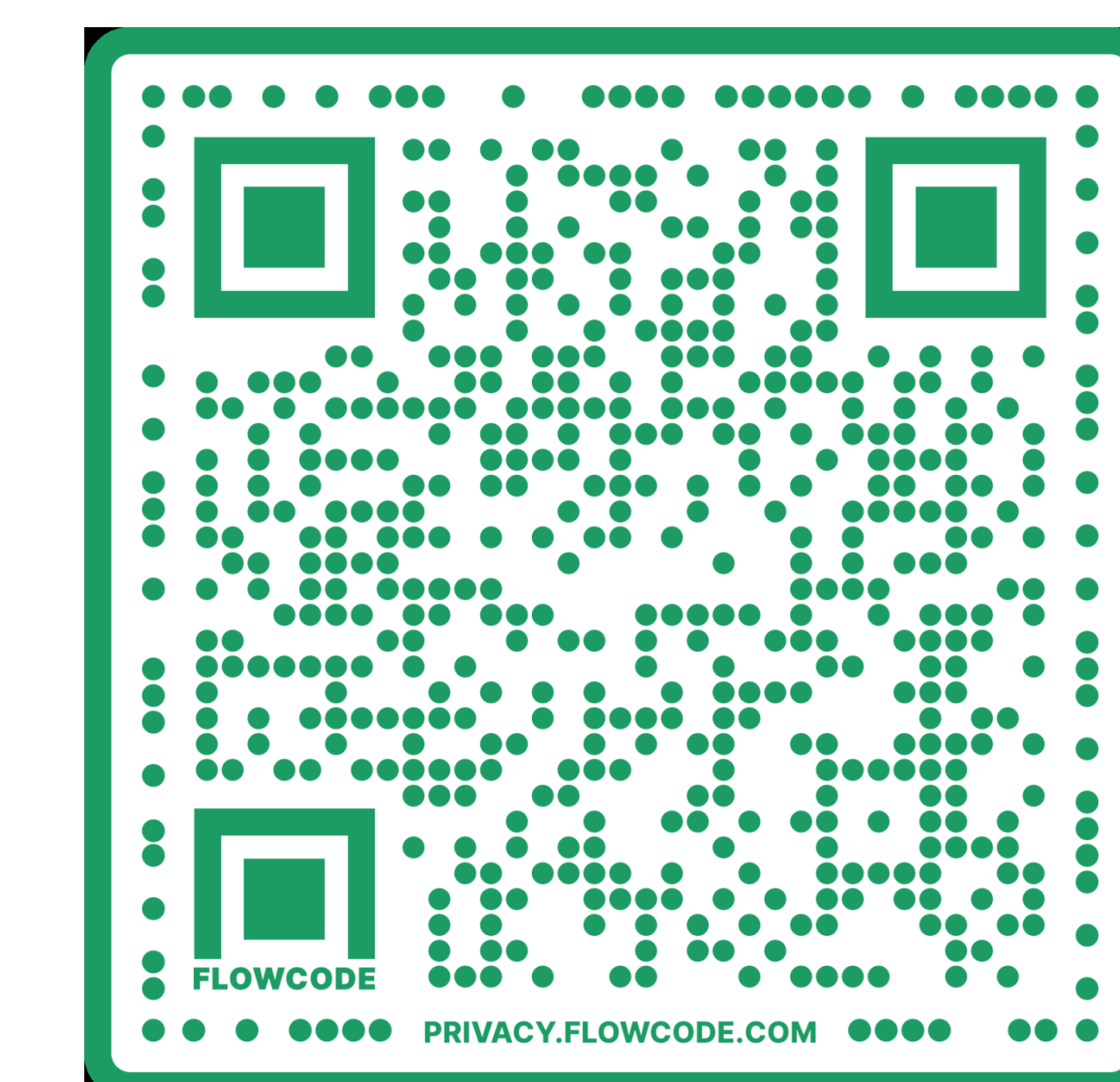
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