

# DIGITAL ADAPTATION OF THE ZERO SUICIDE MODEL IN A PAKISTANI MEDICAL COLLEGE: EARLY IMPLEMENTATION EVIDENCE FROM THE DAREECHA DIGITAL PORTAL

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## KEY EMERGING FINDING

80%

16 of 20 screening-indicated referrals were triggered by substantial depressive symptoms (PHQ-9  $\geq 15$ ) while C-SSRS risk remained Low.

The pilot revealed an earlier entry function of the pathway: students could be connected to psychological care before Moderate/High suicide-risk classification.

Earlier entry to care does not imply that these students would otherwise have progressed to suicidal behaviour.

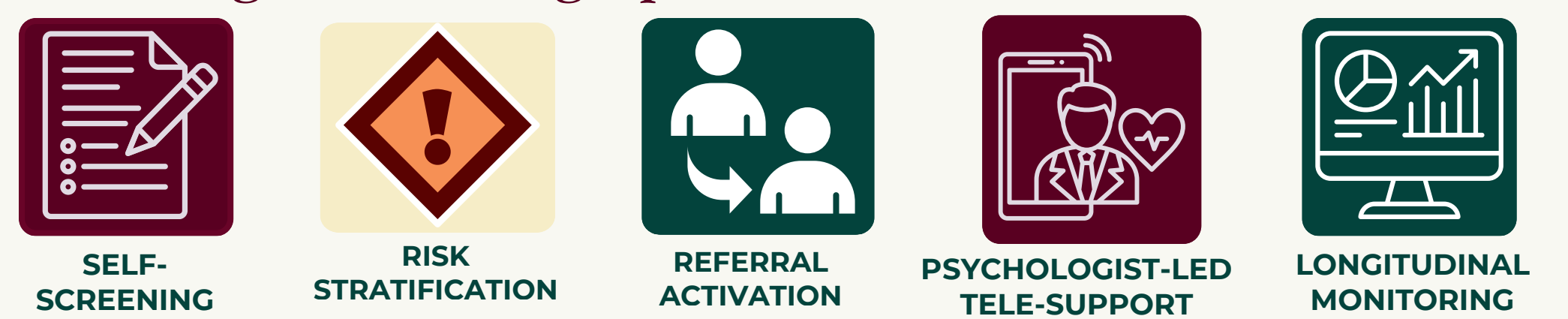
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students who screened Moderate/High on C-SSRS were referred.

The same pathway retained suicide-specific escalation when elevated risk was identified. Among the three High-risk students who accepted referral and initiated therapy, all received documented Safety Planning Intervention (SPI) and Counseling on Access to Lethal Means (CALM)

## DIGITIZING A ZERO SUICIDE-INFORMED CARE PATHWAY

Dareecha had previously operationalized Zero Suicide model through a school-based pathway linking screening, referral, tele-therapy including clinical assessment, safety planning and follow-ups. The pilot tested a digitally enabled extension of the pathway, integrating self-screening, risk stratification, referral activation, psychologist-led tele-therapy and longitudinal clinical monitoring within a single portal.



### OBJECTIVE

To examine the feasibility, reach and functioning of the Dareecha Digital Portal across screening, referral, care engagement and longitudinal follow-up.

### PILOT DESIGN

#### DESIGN

Mixed-methods feasibility and implementation pilot

#### POPULATION

213 eligible first- and second-year MBBS students invited using a census approach

#### SCREENING

Digital PHQ-9 + C-SSRS with pre-specified risk stratification and referral criteria

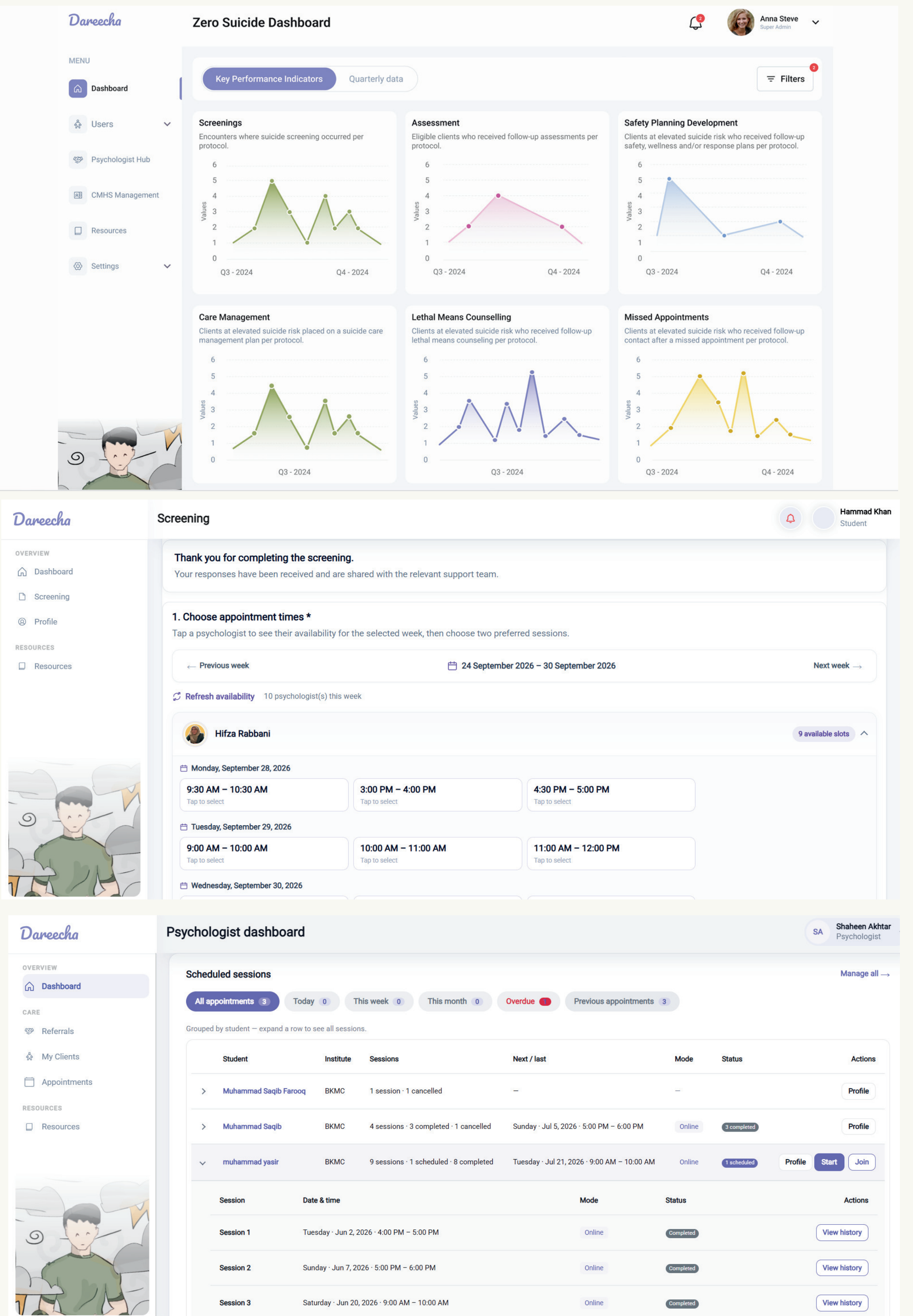
#### CARE

Psychologist-led tele-support; repeated assessment; SPI and CALM where clinically indicated

#### IMPLEMENTATION EVIDENCE

Programme data, screening records, clinical assessments, and early qualitative interviews

## PORTAL AT A GLANCE

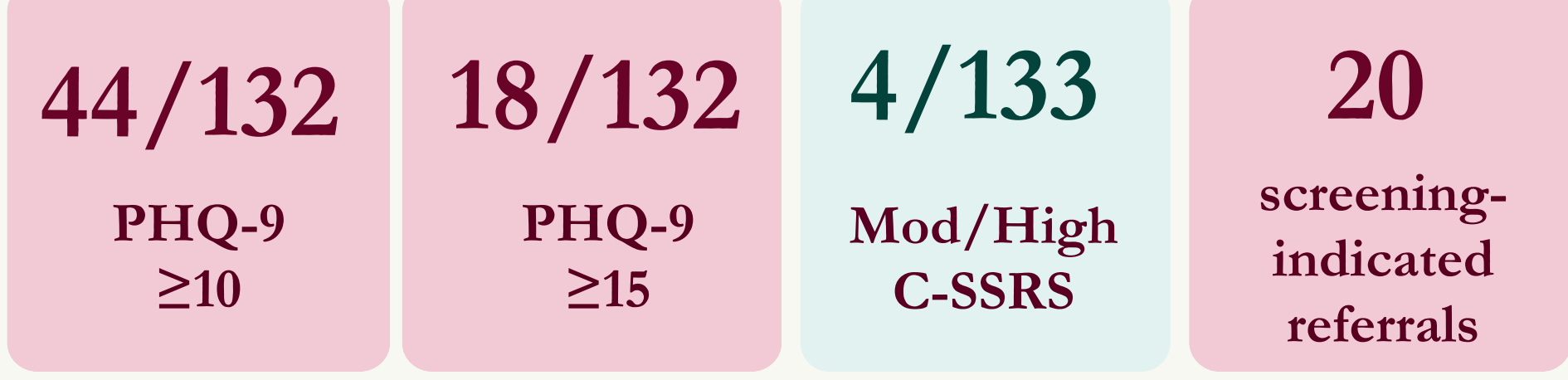


## REACH & SCREENING



PHQ-9 total available for 132 students; C-SSRS available for 133.

## EARLIER NEED ACROSS THE CONTINUUM



### REFERRAL COMPOSITION

|    |                                        |
|----|----------------------------------------|
| 16 | PHQ-9 $\geq 15$ + Low C-SSRS           |
| 2  | PHQ-9 $\geq 15$ + Moderate/High C-SSRS |
| 2  | Moderate/High C-SSRS + PHQ-9 $< 15$    |

+1 participant independently requested support → 21 referred/offered follow-up

## WHY DUAL SCREENING MATTERED

| PROFILE A                                                         | PROFILE B                                                       |
|-------------------------------------------------------------------|-----------------------------------------------------------------|
| PHQ-9 16<br>C-SSRS Low                                            | PHQ-9 9<br>C-SSRS High                                          |
| → distress-responsive referral<br>→ structured psychological care | → suicide-specific escalation<br>→ SPI + CALM + structured care |

PHQ-9 and C-SSRS captured different dimensions of clinical need.

## CARE CASCADE



- 14/17 (82.4%) of pathway entrants engaged in psychologist-delivered support.
- Of 13 structured-therapy starters, 8×8 sessions; 2×7; 1×2; 1×1; 1×3.
- Attrition occurred at different stages; “dropout” was not a single implementation outcome.

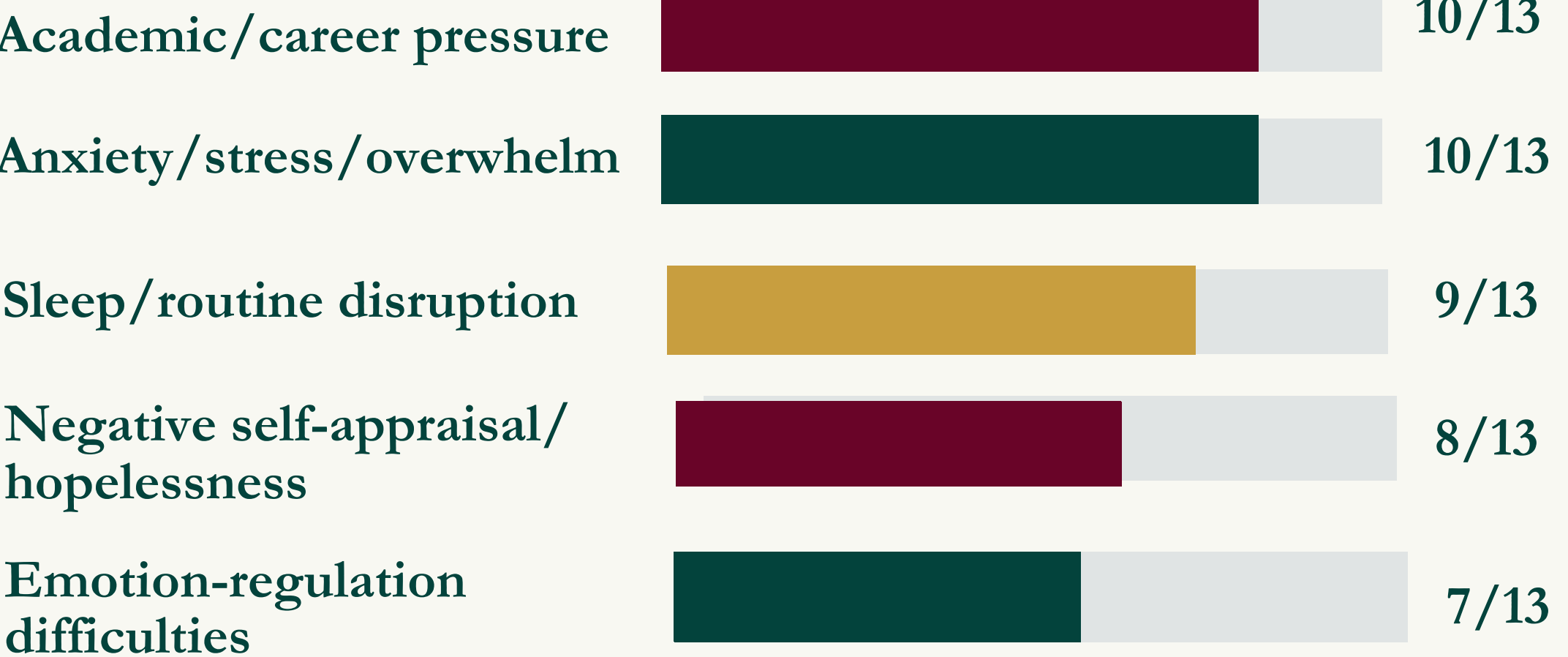
## HUMAN LAYER

- Confidentiality: initial concerns about privacy shaped early disclosure.
- Trust: disclosure and engagement increased as confidence in the therapist developed
- Therapeutic relationship: students valued being listened to and receiving practical strategies they could use between sessions.
- Flexible access: remote care was workable, although privacy and connectivity sometimes required adaptation.
- Cultural responsiveness: the psychologist described adapting language and therapeutic explanations to students’ context.

The pilot suggests that a Zero Suicide–informed model can support earlier entry to mental-health care for young people while retaining suicide-specific escalation when risk emerges. Digitally enabled care may widen access, facilitate repeated screening and reassessment, support recognition of distress, and provide more flexible and discreet routes into help-seeking and care.

**Limitations:**  
Single-institution feasibility pilot; small, non-random clinical follow-up sample; no control group; reassessment timing was not standardised; some longitudinal measures were missing due to drop-outs ; no suicide-attempt or mortality outcomes were evaluated. Findings are descriptive and cannot establish treatment efficacy or prevention of suicide-risk escalation.

## WHAT STUDENTS BROUGHT INTO CARE\*



- Relationship/communication difficulties and perceived disconnection were each documented in 6/13; trauma/grief in 5/13.
- Categories overlap; \*documentation among structured-therapy starters only.

## SUICIDE-SPECIFIC ESCALATION

4/4 Moderate/High students referred

↓

3 Initiated structured psychotherapy

↓

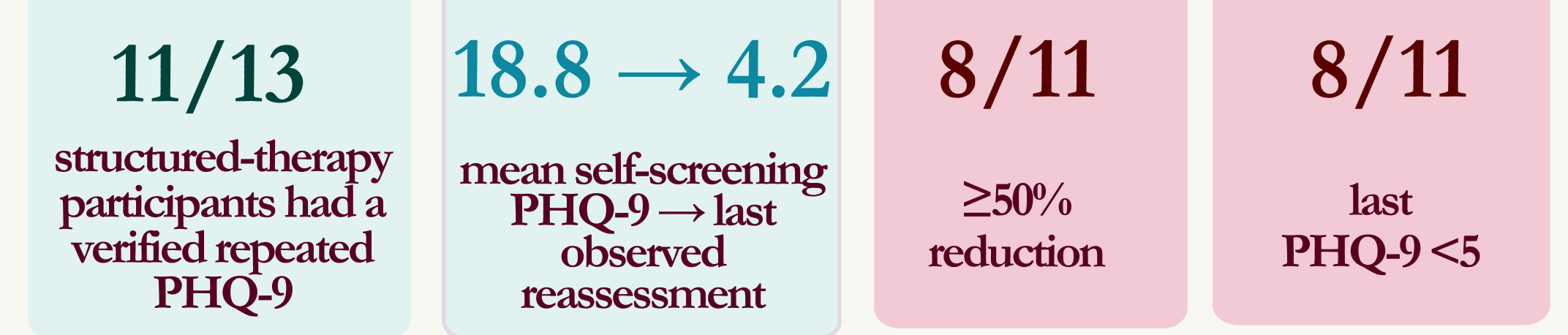
3/3 Received documented SPI + CALM

↓

Last available reassessment: 2/3 were Low/current-negative; 1/3 retained active SI without method, intent, plan or recent behaviour.

*Risk stratification was treated as longitudinal rather than a one-time label.*

## WHAT CHANGED DURING CARE?



- Clinical trajectories varied. Repeated assessment captured progressive improvement, fluctuation, residual passive suicidal ideation, improvement before therapy intake, and continuing therapeutic need despite favourable symptom scores.

- Clinical records also documented changes in sleep/routine, communication, confidence, motivation, self-care, coping and everyday functioning.

Exploratory descriptive outcomes from an uncontrolled feasibility pilot; no treatment effect can be inferred.

## WHAT IMPLEMENTATION TAUGHT US

| ENTRY STRATEGY                            | LINKAGE                                                                   | ADAPTATION                                                              | MEASUREMENT                                                   | DIGITAL Access                                                         |
|-------------------------------------------|---------------------------------------------------------------------------|-------------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------------|
| Facilitated onboarding and timing matter. | Active follow-up was needed to convert referral into therapeutic contact. | Provider reassignment and flexible support can recover/respond to need. | Repeated assessment prevents over-interpreting a single score | Remote care enabled flexible & discreet access without a clinic visit. |

## IMPLICATIONS FOR ZERO SUICIDE

|                                                                                                                                     |                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| IDENTIFY<br>Earlier, differentiated entry.                                                                                          | ENGAGE<br>Detection needs a human bridge.        |
| TREAT<br>Match intervention to clinical profile.                                                                                    | TRANSITION<br>Track and repair failed hand-offs. |
| IMPROVE<br>Use longitudinal data, regularly rescreen, engage with care partners; address stigma and hesitation at institution level |                                                  |

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