

PACT: A Near-Real-Time Clinical Trial Workload Model Using OnCore and Power BI

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INTRODUCTION & OBJECTIVES

- Increasing clinical trial complexity has increased operational burden on research staff
- Existing workload tools often fail to capture real-time patient activity
- Developed the PACT model using OnCore and Power BI
- Evaluated alignment between operational workload measures and staff perceptions

METHODS

Data Source

- OnCore clinical trials management system
- Nightly data extraction into Power BI

Workload Classification

- Pending: CONSENTED, ELIGIBLE
- Active: ON STUDY, ON TREATMENT
- Follow-up: OFF TREATMENT, ON FOLLOW UP

Workload Formula

Per-Trial Workload = (ASCO Score × Pending & Active Cases) + Follow-up Cases

Workload Attribution

- Primary CRC
- Primary CRA
- Primary Data Manager

Staff Survey

Confidential pilot survey (Penn State IRB#29095)

- workload appropriateness
- workload fairness
- workload intensity
- confidence in workload assignment

Figure 1. Evolution of the ASCO Framework into the PACT Model

Feature	ASCO 2019 (Baseline)	PSCI PACT (Sophisticated Model)	Rationale
Primary Metric	Randomization steps	Eligibility Confirmation	Captures the primary labor bottleneck
Complexity Trigger	2+ ancillary departments	4+ ancillary departments	Refined high-intensity granularity
Agent Delivery	Oral vs. IV distinction	Toxicity & Data Focused	Focuses on monitoring burden
Staff Benchmarking	Aggregate volume	Tenure-Based Levels	Links capacity to professional growth
Data Update	Manual / Static	Near-Real-Time	Automated via Power BI & OnCore

Fig 1. Key operational enhancements incorporated into the PACT workload framework.

Figure 2. Daily Workload Distribution by Role and Experience Level

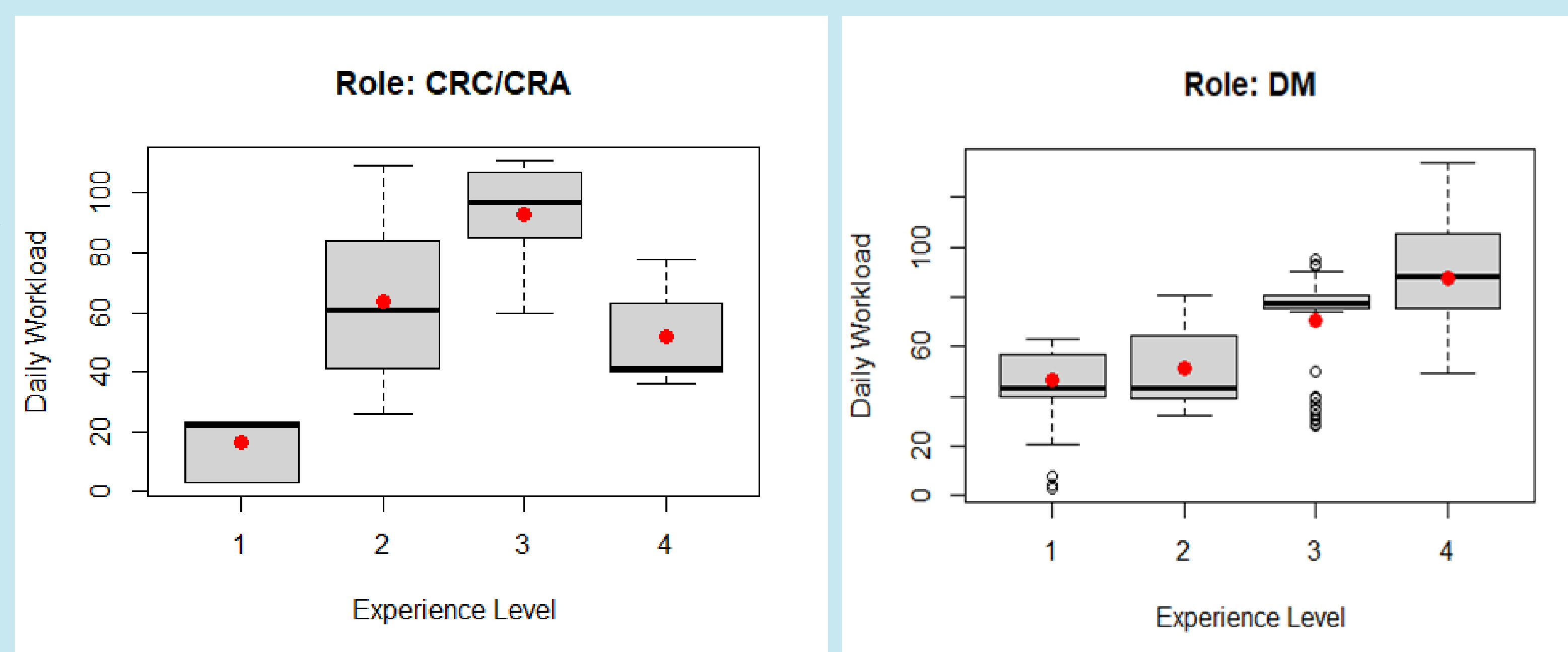


Fig 2. Workload distributions across staff roles and experience levels over eight months.

RESULTS

Figure 3. Pilot Staff Survey Findings

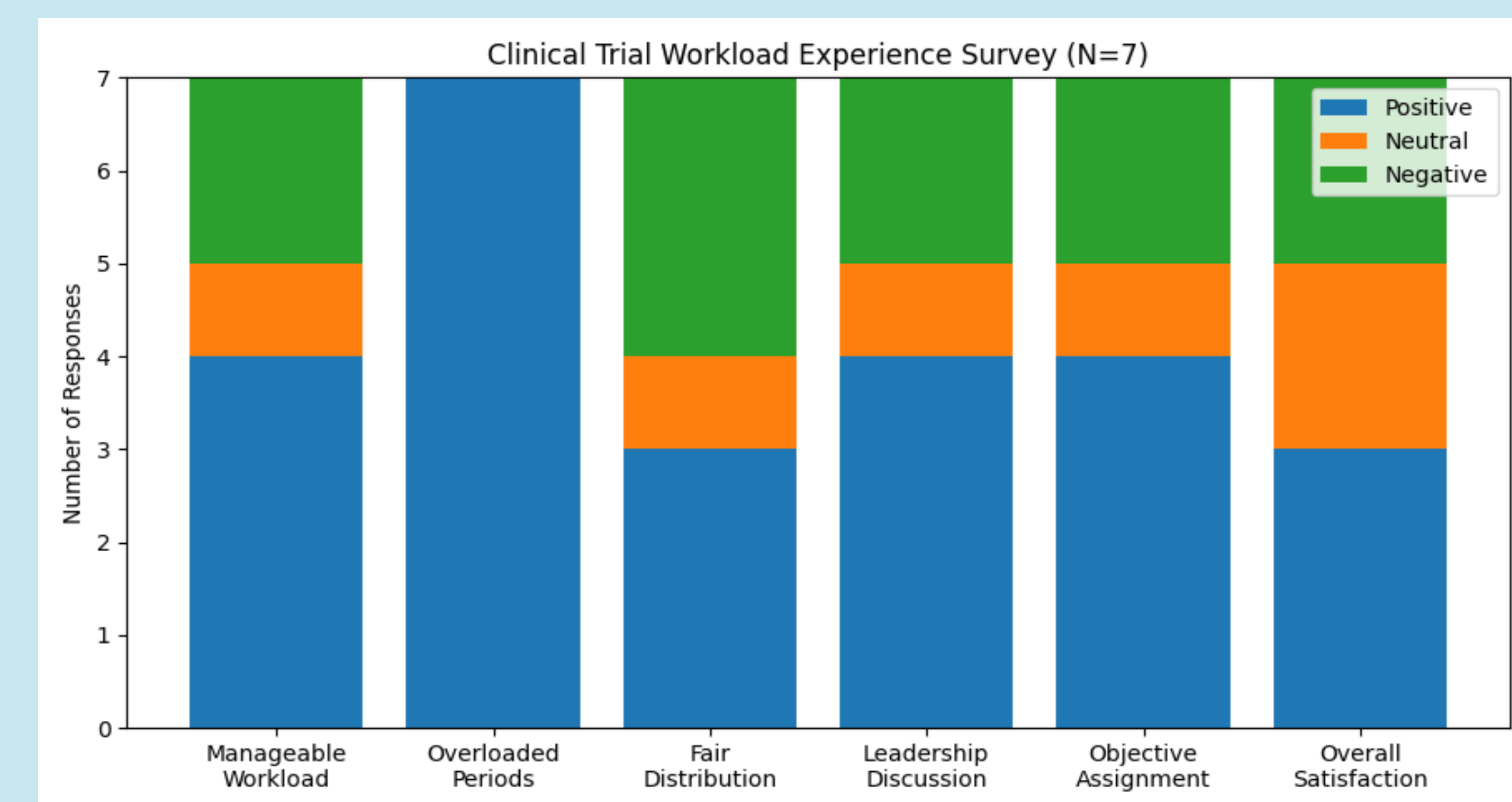


Fig 3. Staff perceptions of workload intensity, fairness, and workload management.

DISCUSSION & CONCLUSIONS

- PACT integrates protocol complexity with near-real-time operational data using OnCore and Power BI.
- Workload patterns differed by role and experience level.
- Staff perceptions generally aligned with workload intensity measures and supported the operational relevance of the PACT model.
- PACT may support workload balancing, staffing planning, and operational oversight in oncology clinical trials offices.

FUTURE DIRECTIONS

- Expand longitudinal workload tracking
- Refine predictive staffing analytics
- Automate onboarding/ramp-up benchmarking for new staff
- Evaluate implementation across additional clinical research programs