I2.02-Enhancing Operations for Meals on Wheels Central Texas

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MEALS ON WHEELS CENTRAL TEXAS

PROBLEM STATEMENT

Meals on Wheels receives an influx of phone calls during peak operational hours, "crunch time". Due to this bottleneck, volunteers and clients cannot have immediate communication. Leading to missed meals, volunteer support wait time, and client questions unanswered.

PROJECT PURPOSE

The purpose of this project is to conduct data analysis techniques and utilize corrective action principles to reduce call volume and improve the operational process.

OBJECTIVES

- Utilize IE methodologies to streamline project material.
- Analyze given data to draw call weight conclusions.
- Implement continuous improvement ideas to reduce total call volume.

DESIGN APPROACH

DMAIC
DEFINE MEASURE ANALYZE IMPROVE CONTROL

Define: MOW has a high influx of call that occur during "Crunch Time". Receiving approx. 215 calls within a 1.5-hour time window, with 3 workers.
Measure: We collected data of calls during MOW crunch time to identify the type of calls they're receiving & the duration of calls. This data helped us to identify any bottlenecks by:
   1: Identifying Metrics
   2: Visualizing Workflows
   3: Root Cause Analysis
Analyze: After we received the call log data from MOW, we decided on 3 common reasons for inbound calls to sort the data into:
1.   Volunteer Calling
2.   Volunteer Concern
3.   Client Concern
Improve: Produced 3 methods of improvement:
1.   Loop Queue
2.   Voice Support with Deliveries
3.   Personalized Route Sheets
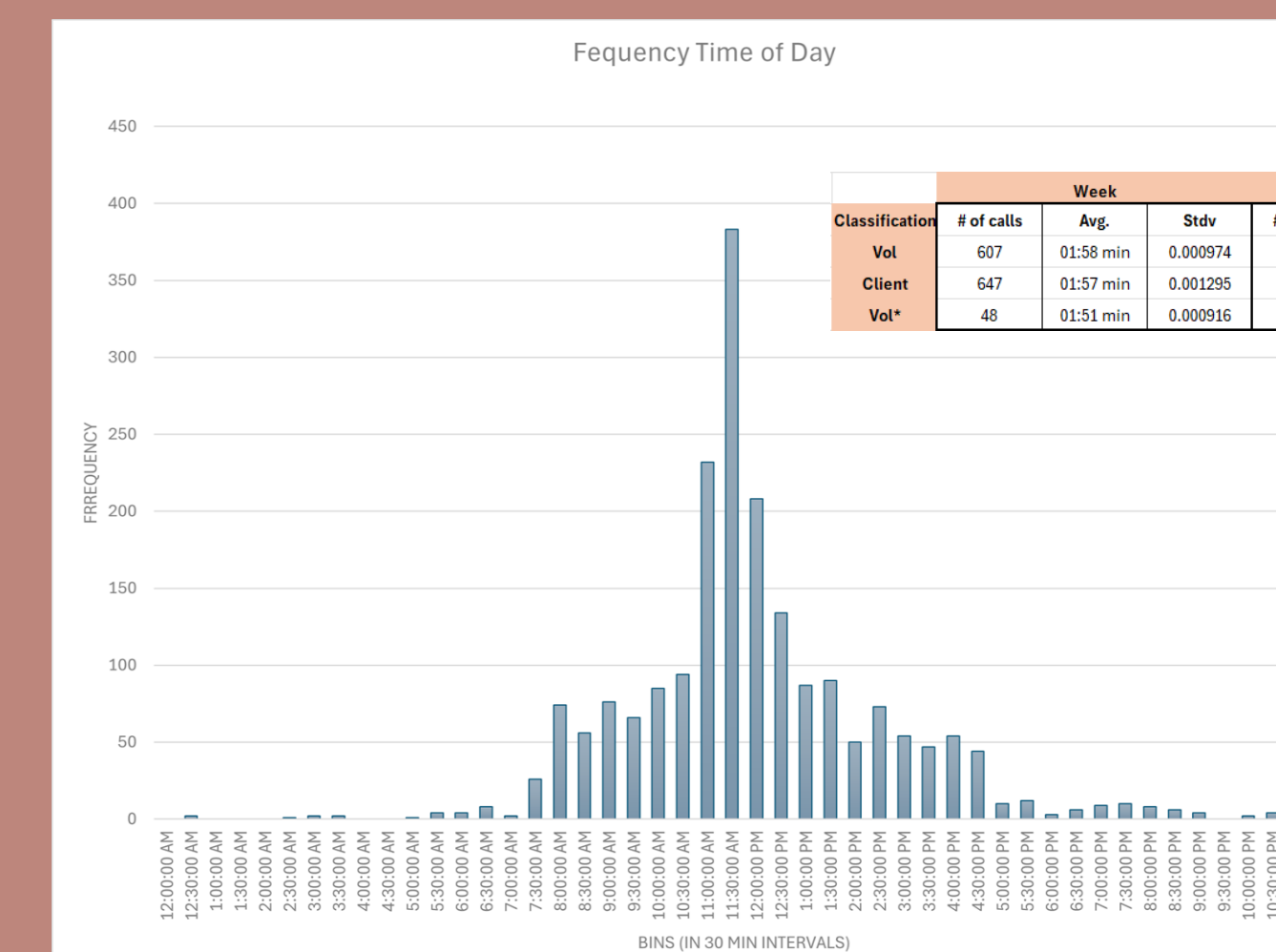**Control:** When these ideas are live and tangible within MOW:
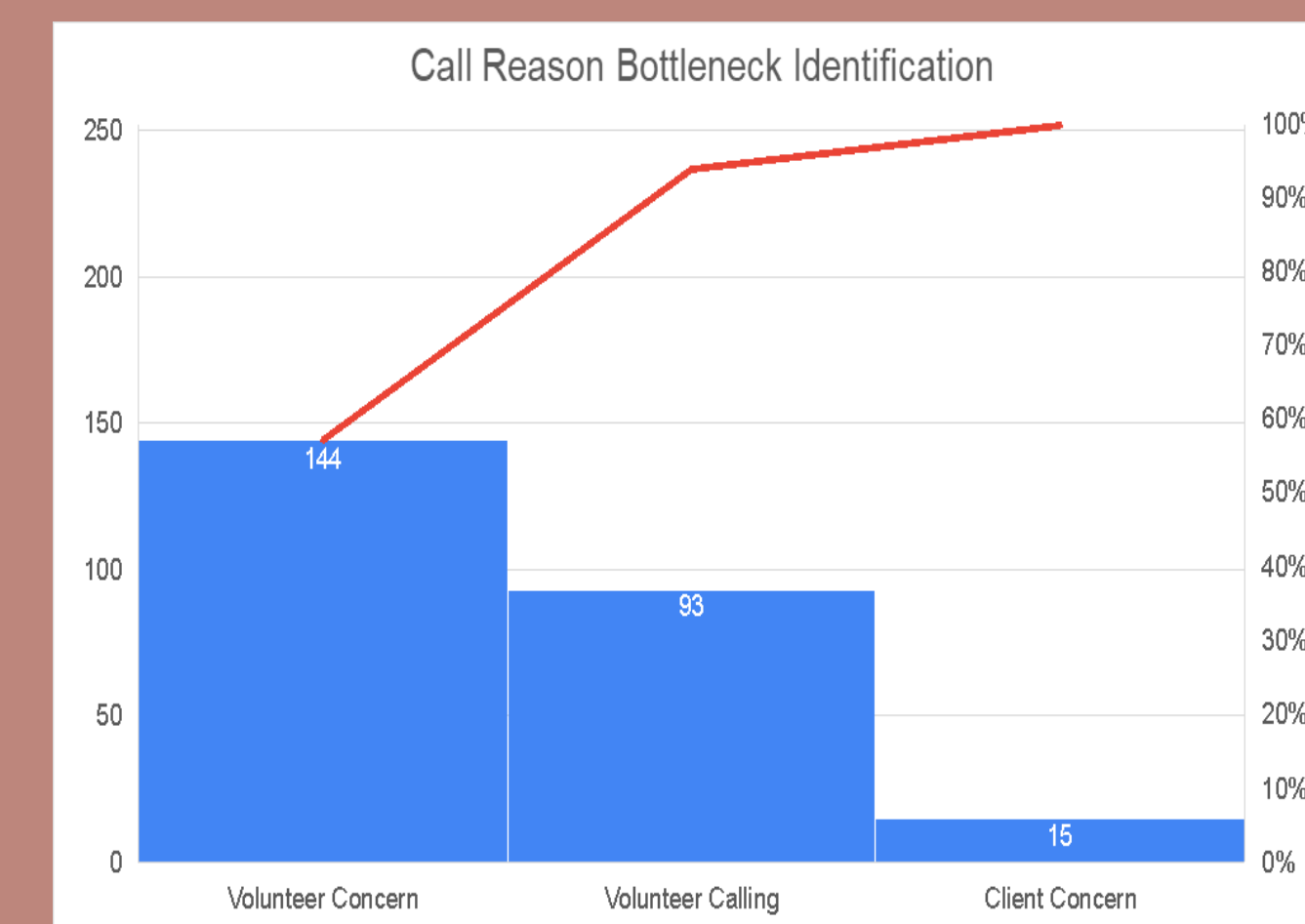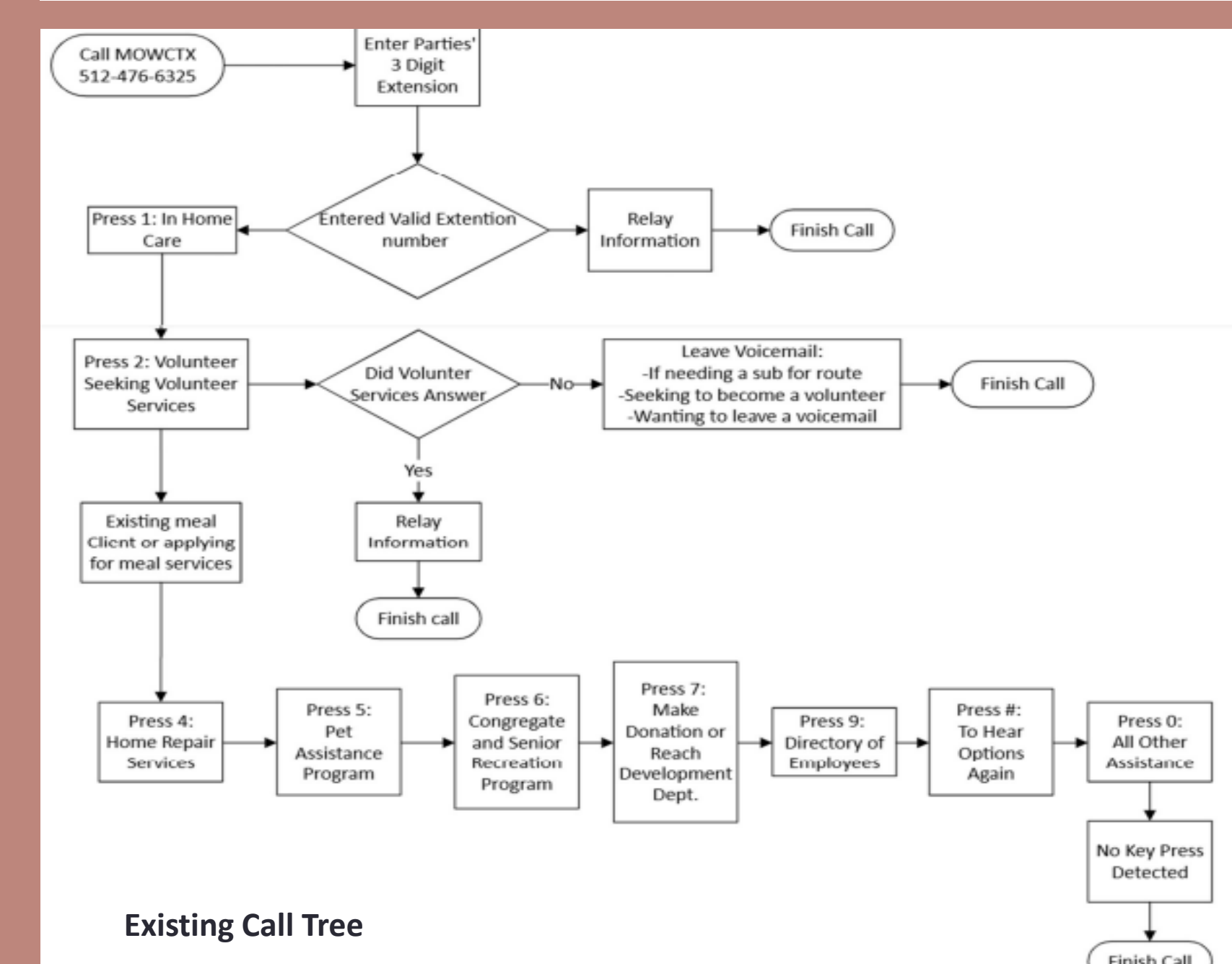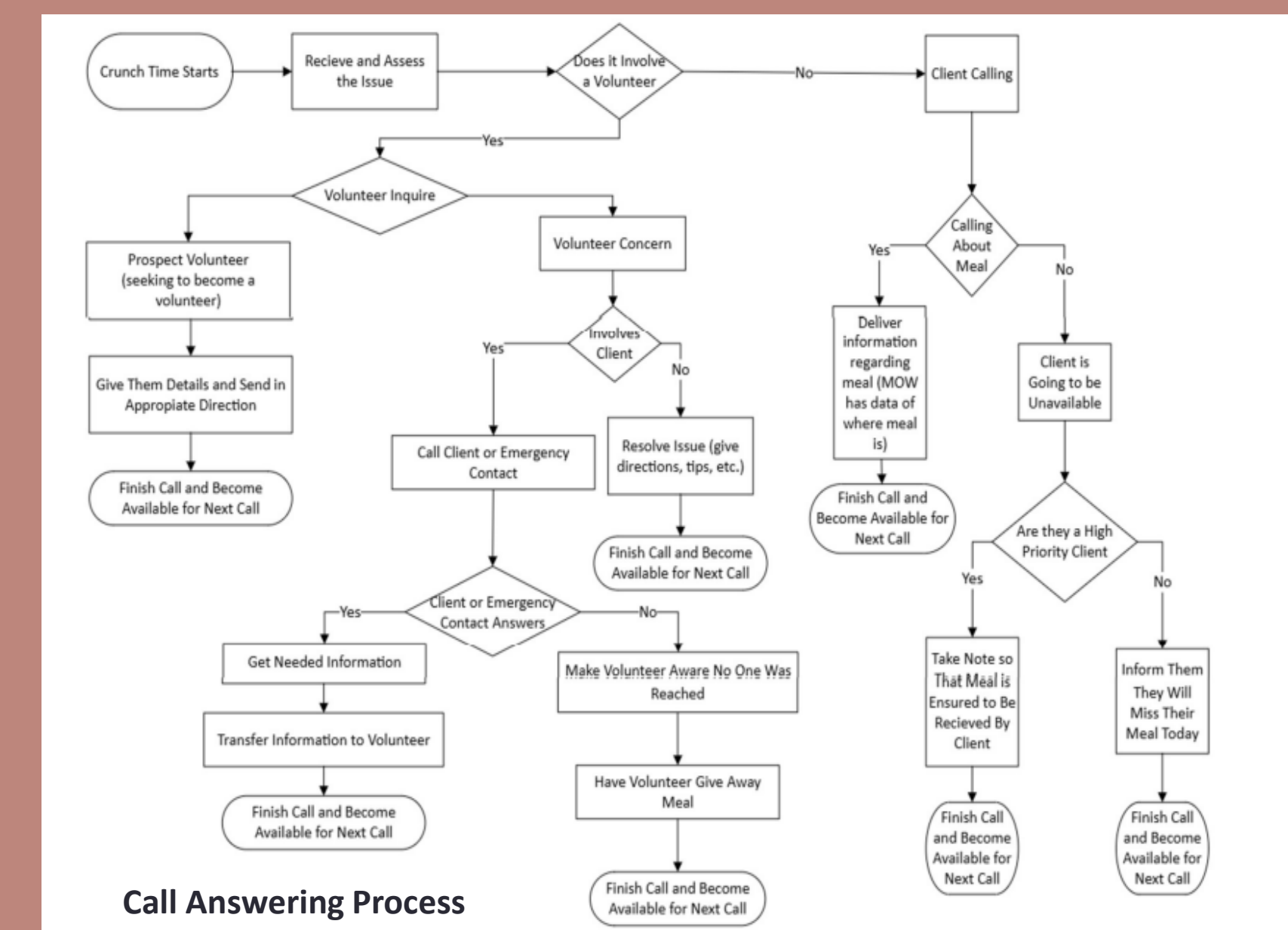1.   Prioritize accruing data points
2.   Ensure overall decrease in number of calls
3.   Utilize Continuous Improvement Strategies

MEASURE

| Call Number	Start Time	Elapsed	Type
1	10:57	2:10	Client Concern
2	9:52	0:34	Client Concern
3	8:46	1:34	Client Concern
4	15:47	1:14	Client Concern
5	8:03	5:44	Client Concern
6	9:39	0:23	Volunteer Calling
7	10:12	0:22	Volunteer Calling
8	10:13	0:45	Volunteer Calling
9	10:13	0:54	Volunteer Calling

- We collected data from one worker over a two-month period, combined with a comprehensive dataset covering all three workers over the span of one week.
- This information was consolidated into three distinct bins, forming the foundation for our analysis.

ANALYZE

Call Answering Process

Call Reason Bottleneck Identification

Existing Call Tree

Frequency Time of Day

- Through data driven analysis, we developed several graphs along with extensive calculations to fully understand/verify the data is consistent with the problem defined.
- With thorough observations at the facility, we created detailed flow process charts to accurately depict the workflows within the call center. These charts provide a clear and precise representation of the operational flow.

IMPROVE

Improved Call Tree With Queue
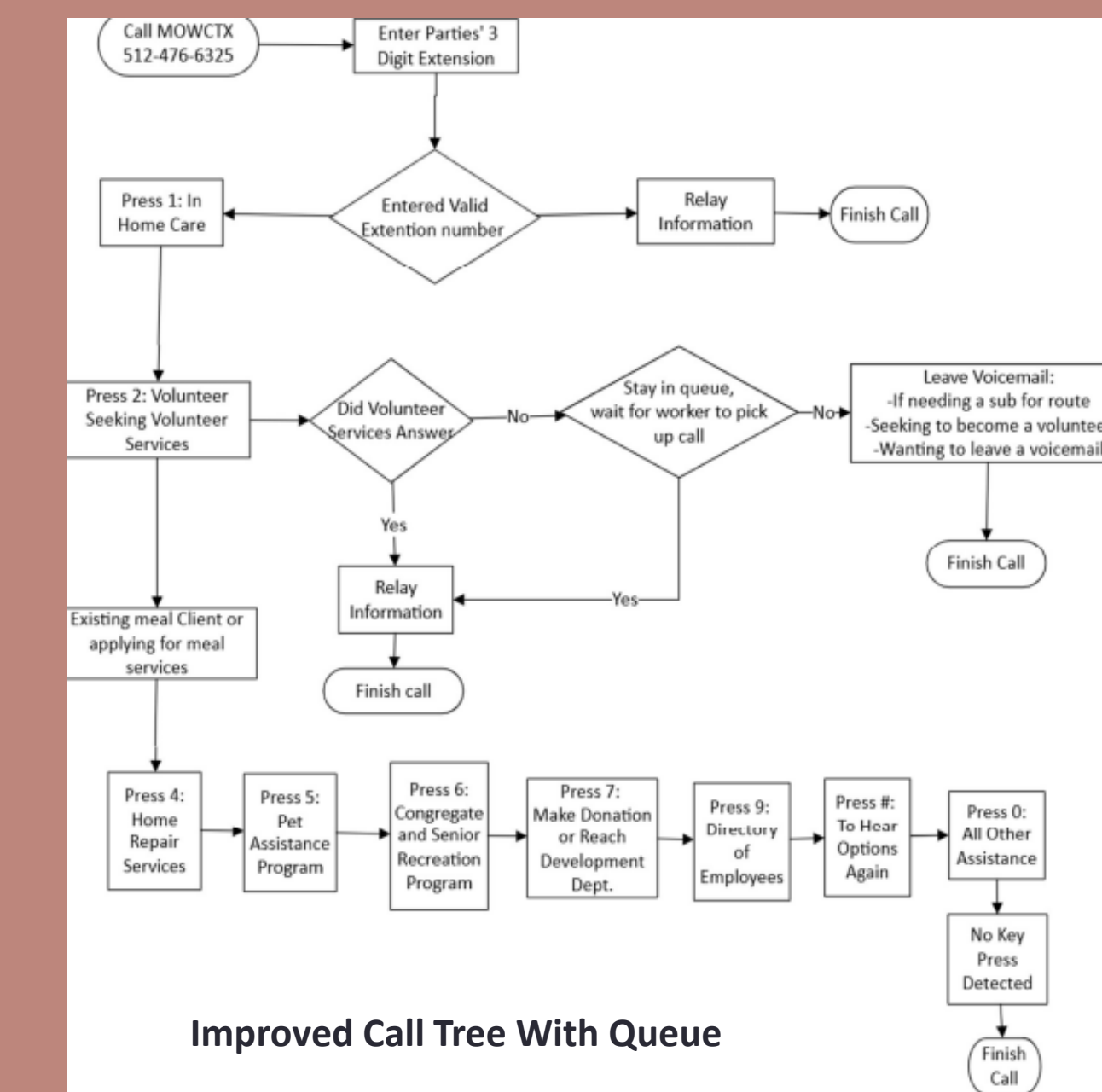
Loop Queue:
- Due to backlog of current callers, place them into a queue function to ensure reduction of voicemails (distribute inbound calls concurrently to the longest-idle, least busy employee).

- Show within our analysis phase we can anticipate a 50% reduction in call volume with this implementation.

CONTROL

- The control phase is the final step in DMAIC, and its purpose is to sustain the improvements made during the previous phases.

- We established a system for continuous improvement so that further refinements can be made over time, ensuring the process stays efficient and effective.

- As MOWCTX begins to implement an app in the following months, the analysis we conducted will provide immense help within the control aspect of this project.
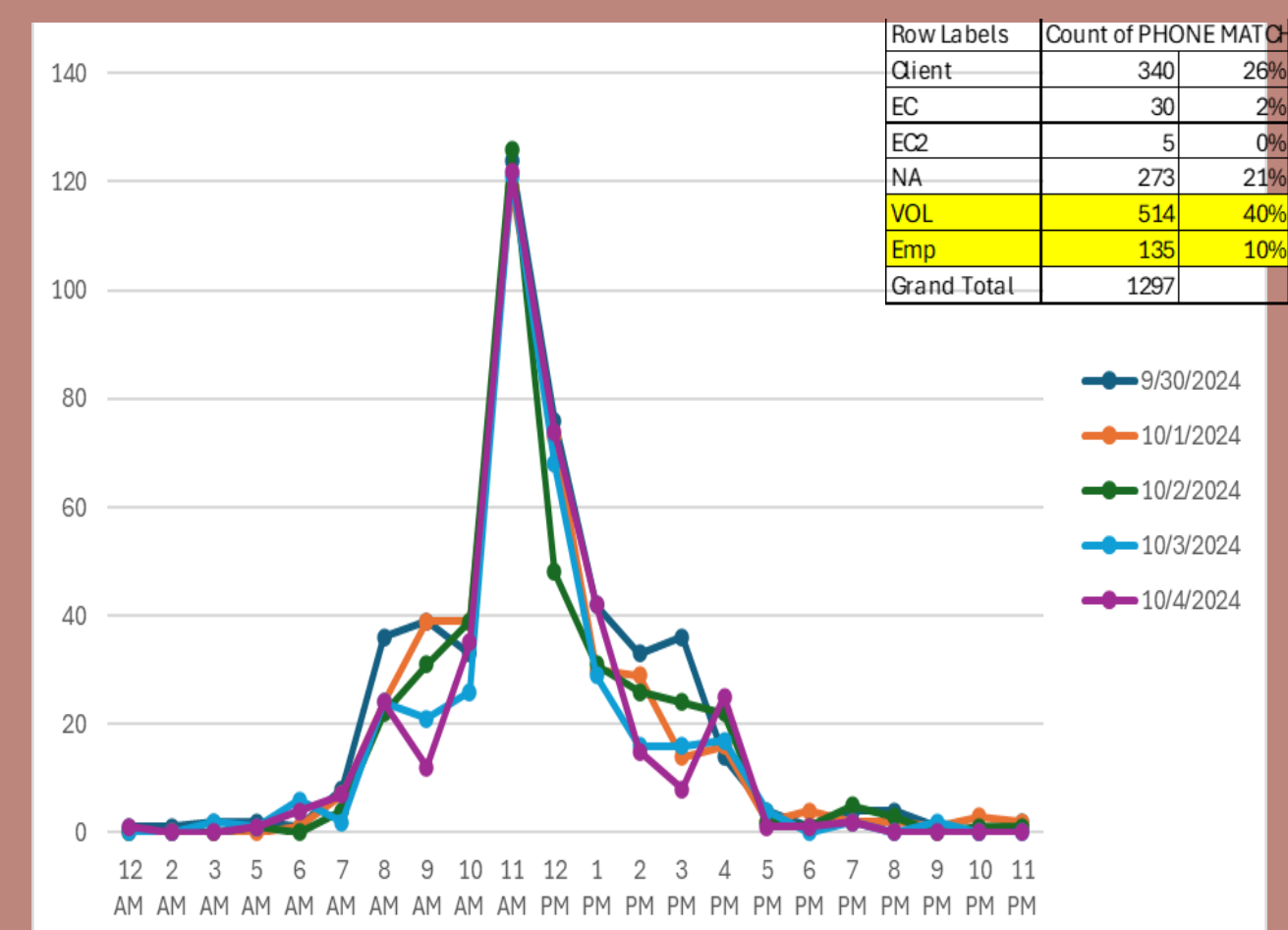
TEAM MEMBERS

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- Emma Catron

SPONSOR/FACULTY

- **Faculty Sponsor**: Dr. Eduardo Perez & Dr. Gerardo Trevino
- **Sponsor:** Denise Jimenez