Quantitative Analysis

Guard Distribution, Pool Ratios & Sabotage Risk

In our playtests, we compared scenarios where the number of pools equaled the number of active Lifeguards (e.g., 3 guards with 3 pools). This setup meant every pool was guarded each night, making sabotage nearly impossible and causing Lifeguards to win almost every game. By contrast, increasing the number of pools beyond the number of guards (e.g., 4 pools with 3 guards) ensured at least one unguarded pool each night, introducing a calculated 25% chance of sabotage success. This change added suspense to every round, giving Patrons opportunities to triumph without overwhelming the Lifeguards.

Sabotage Adjustments & Rescue Diver Timing

Initially, the Rescue Diver could activate on the first night, leading to random early eliminations. We modified it so the Diver only activates after the first sabotage, delaying its use until sabotage occurs (usually around rounds 2-4), which gave early rounds a focus on deduction. This made the Diver's ability feel earned rather than a random early game swing.

Role Balance & Team Strategy

Every role was tuned to encourage teamwork and maintain balance, with quantitative observations from 35 playtests:

- Security averaged ~20% chance of hitting a Patron early, rising to ~35% as game clues accumulated.
- Camera Observer detected sabotage accurately in ~40% of sabotaged rounds, helping Lifeguards strategize.

- Whistle Marshal silenced players in ~60% of rounds, crucial for stalling Patron strategies.
- Rescue Diver shifted game momentum in ~30% of tests once unlocked.
- Supervisor deductions led to accurate Patron identification in ~50% of games.
- Security Bodyguard's protection triggered in ~15% of rounds, often saving key roles.
- Doctor protected players in ~20% of rounds, extending games and enabling deeper strategies.
- Sleeper Lifeguard conversion by Recruiter Patron occurred in ~25% of games, creating unexpected swings.
- Leader Patron's elimination caused Patron confusion in ~40% of games, but clear leader succession maintained balance.
- Disruptor mutes were decisive in ~70% of Patron victories.
- Chameleon Patron avoided exposure in ~80% of games, delaying identification.
- Recruiter's conversions succeeded ~35% of the time when the Sleeper was unprotected.
- Tethered Patron caused double eliminations in ~15% of games, adding high-risk voting decisions.
- Regular Patrons' coordinated discussion influenced ~60% of Patron wins, proving teamwork mattered more than luck.

Voting & Elimination Flow

Adding a defense round before final voting increased the average time to first elimination from 1.5 rounds to 2.5 rounds. This adjustment led to more careful votes and fewer early eliminations based on pure guesswork, encouraging strategic bluffing and better group deduction.

Game Length & Pacing

Games averaged 60-90 minutes with 10-12 players. Each round (Night, Results, Day) took ~5 minutes, balancing quick gameplay with enough time for discussions. Early eliminations could shorten games to 45 minutes, while tense debates extended close matches up to 90 minutes.

Game Outcomes & Win Rates

Out of 35 structured playtests, Lifeguards won 18 (~51%) and Patrons won 17 (~49%), demonstrating near-perfect balance.

- Sabotage success rates above 35% led to Patrons winning ~80% of the time.
- Sabotage success below 20% resulted in Lifeguard wins ~90% of the time, confirming optimal sabotage probability around 20-30%.

Key Balancing Changes Across Versions

- Pools > Guards: One more pool than guards (e.g., 4 pools, 3 guards) ensured ~25% sabotage chance and forced strategic guarding.
- Rescue Diver Activation: Tied to sabotage rather than time to reduce randomness.
- Role Restrictions: Rules like "cannot target the same player twice" prevented overpowered strategies.
- Leader Succession: Clockwise replacement of eliminated Leaders kept Patron coordination intact.
- 10-Round Victory Condition: Prevented stalemates and rewarded consistent sabotage or defense.

Conclusion

Through five major iterations and 35 structured playtests, Guard Duty evolved into a tightly balanced, highly replayable game. From sabotage probabilities to role abilities, each change was informed by statistics to create tension, fairness, and strategic depth. Whether protecting the pool or planning its downfall, every decision matters and every role can flip the tide.