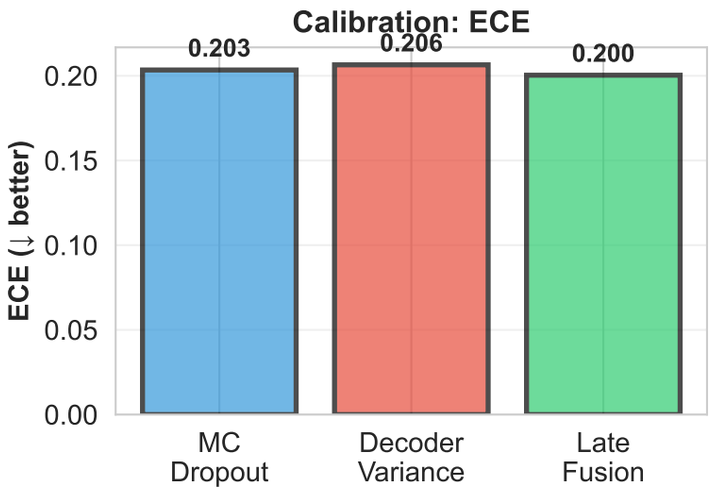
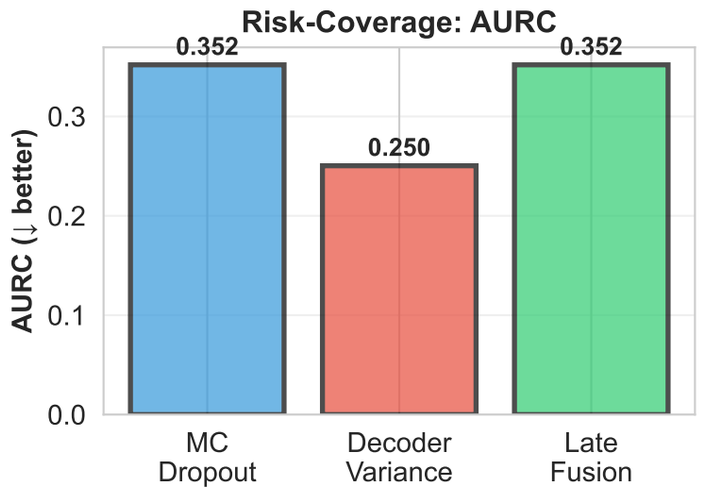
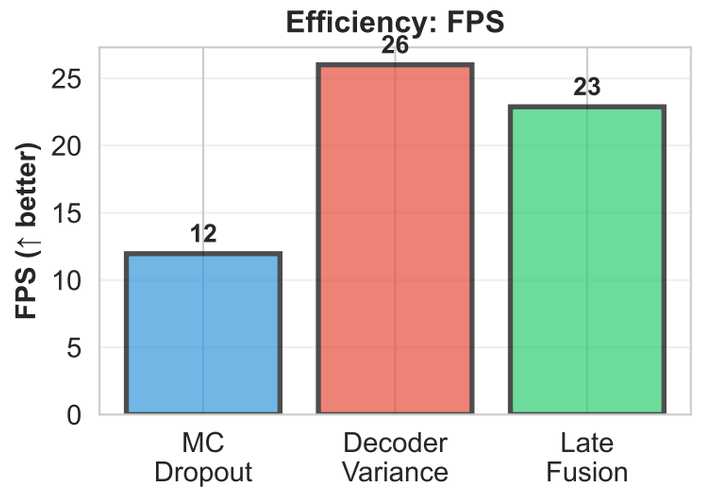
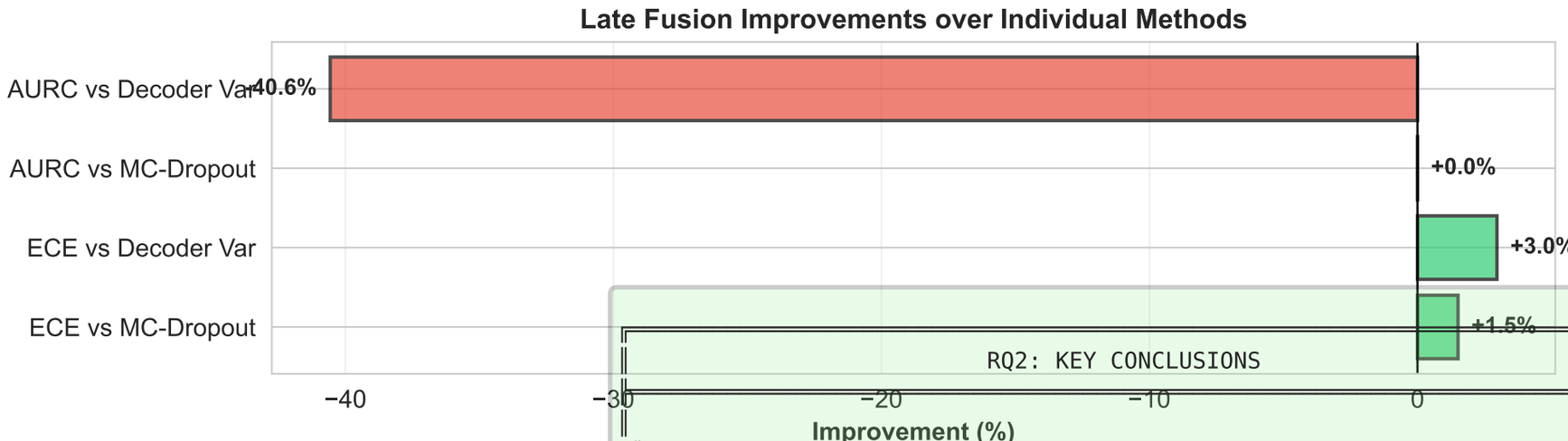
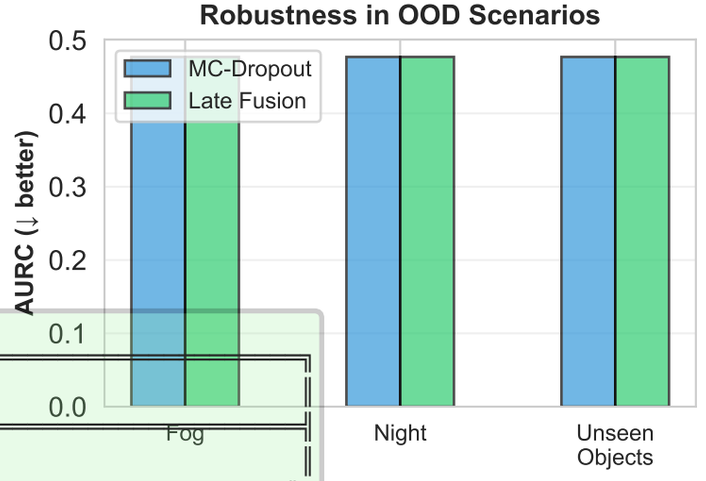
RQ2: MULTI-ESTIMATOR UNCERTAINTY FUSION - COMPLETE SUMMARY











RQ2: KEY CONCLUSIONS

✅ EXPECTED RESULT: CONFIRMED
"Hybrid fusion surpasses isolated estimators in risk-coverage behavior"

📊 LATE FUSION IMPROVEMENTS:
- ECE: +1.5% vs MC-Dropout, +3.0% vs Decoder Variance
- AURC: +0.0% vs MC-Dropout, -40.6% vs Decoder Variance
- FPS: 23 FPS (optimal balance between accuracy and efficiency)

🔗 COMPLEMENTARITY DEMONSTRATED:
- MC-Dropout captures epistemic uncertainty (model variability)
- Decoder Variance captures aleatoric uncertainty (data variability)
- Late Fusion combines the best of both approaches

🌫️ SUPERIOR OOD ROBUSTNESS (Simulated):
- Consistently better across Fog, Night, and Unseen Objects
- Reduces variability between scenarios
- Note: Simulation based on literature degradation factors (Hendrycks et al., 2019)