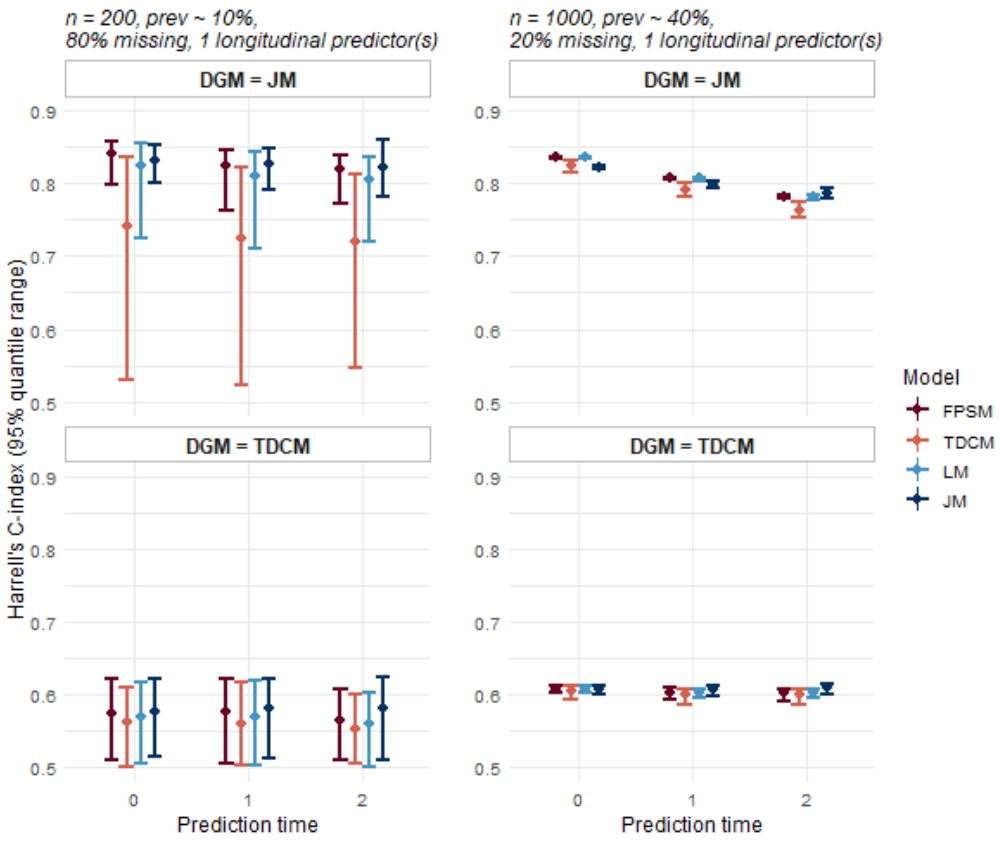

Figure 1: Harrell's C-index (Discrimination) estimated for models fitted under contrasting data generation scenarios.

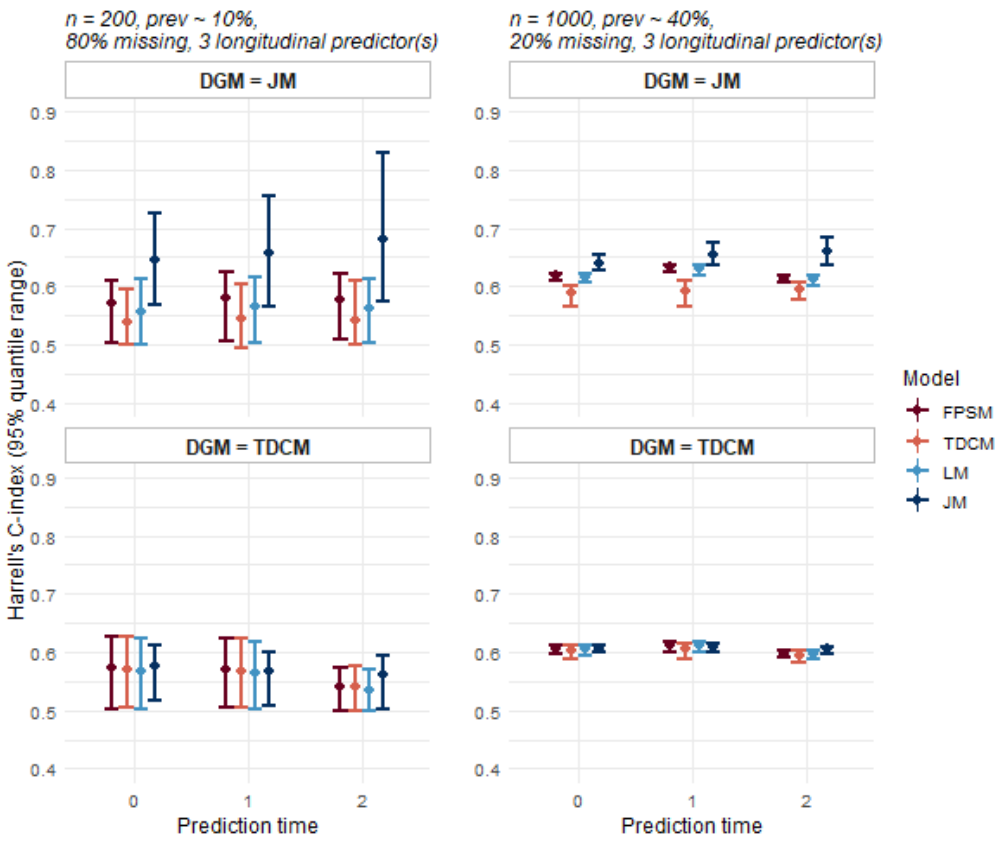

Figure 2: Harrell's C-index (Discrimination) estimated for models fitted under contrasting data generation scenarios.

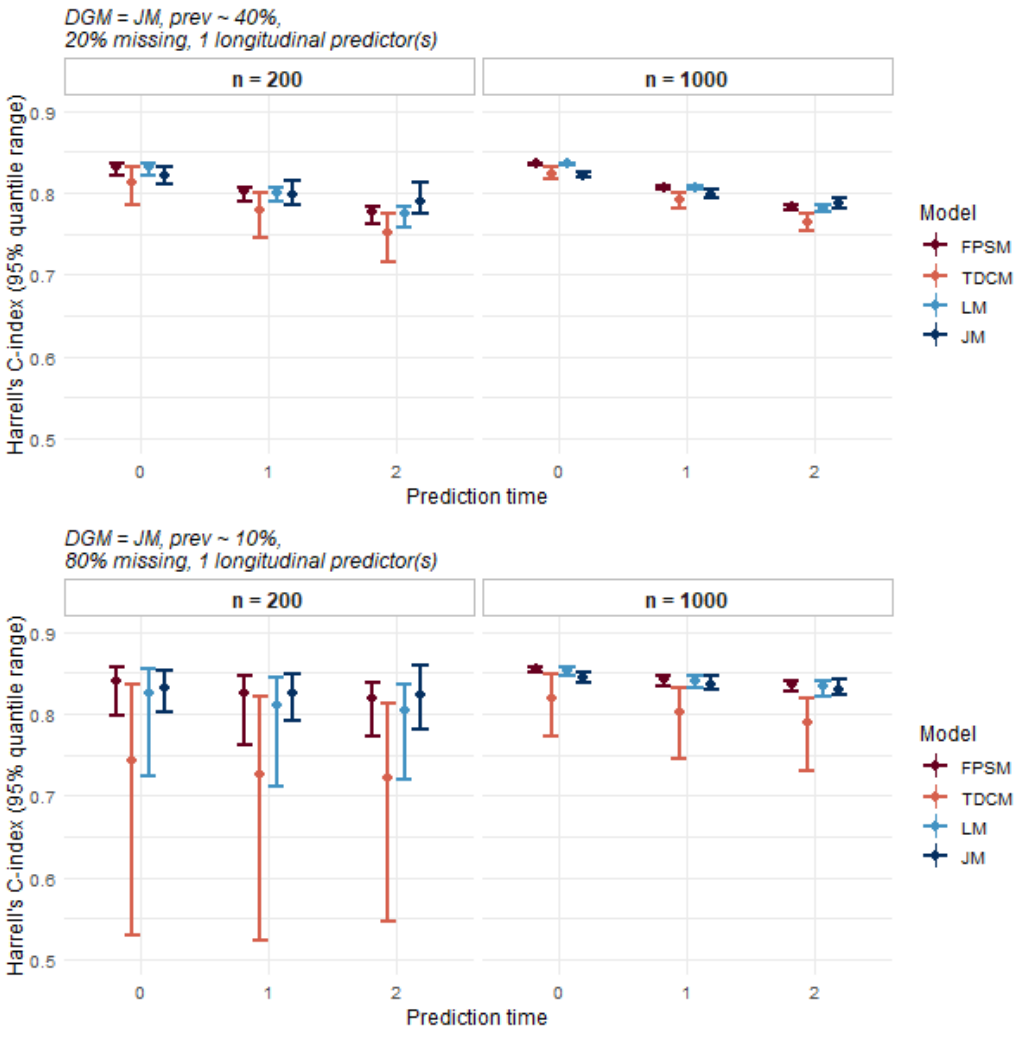

Figure 3: Exploring how Harrell's C-index (Discrimination) was influenced by **sample size**.

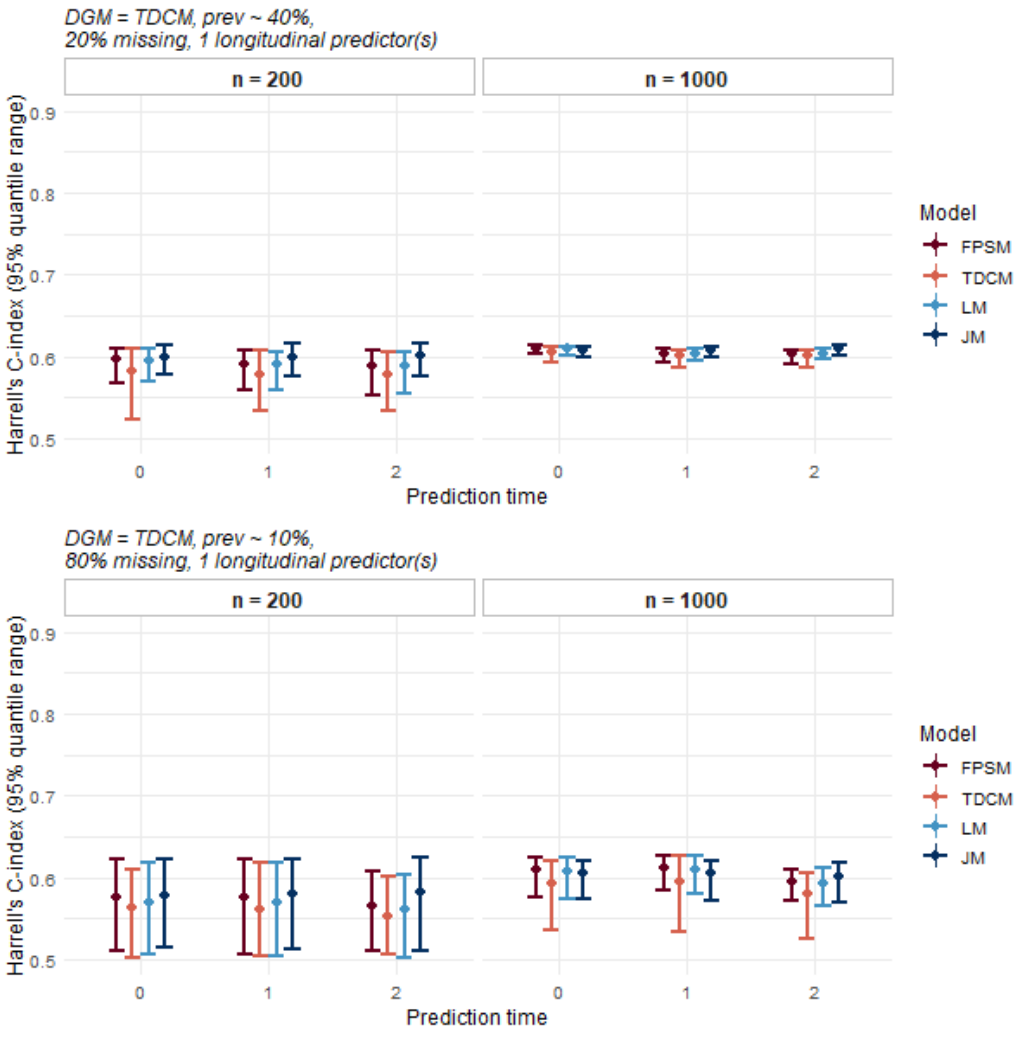

Figure 4: Exploring how Harrell's C-index (Discrimination) was influenced by **sample size**.

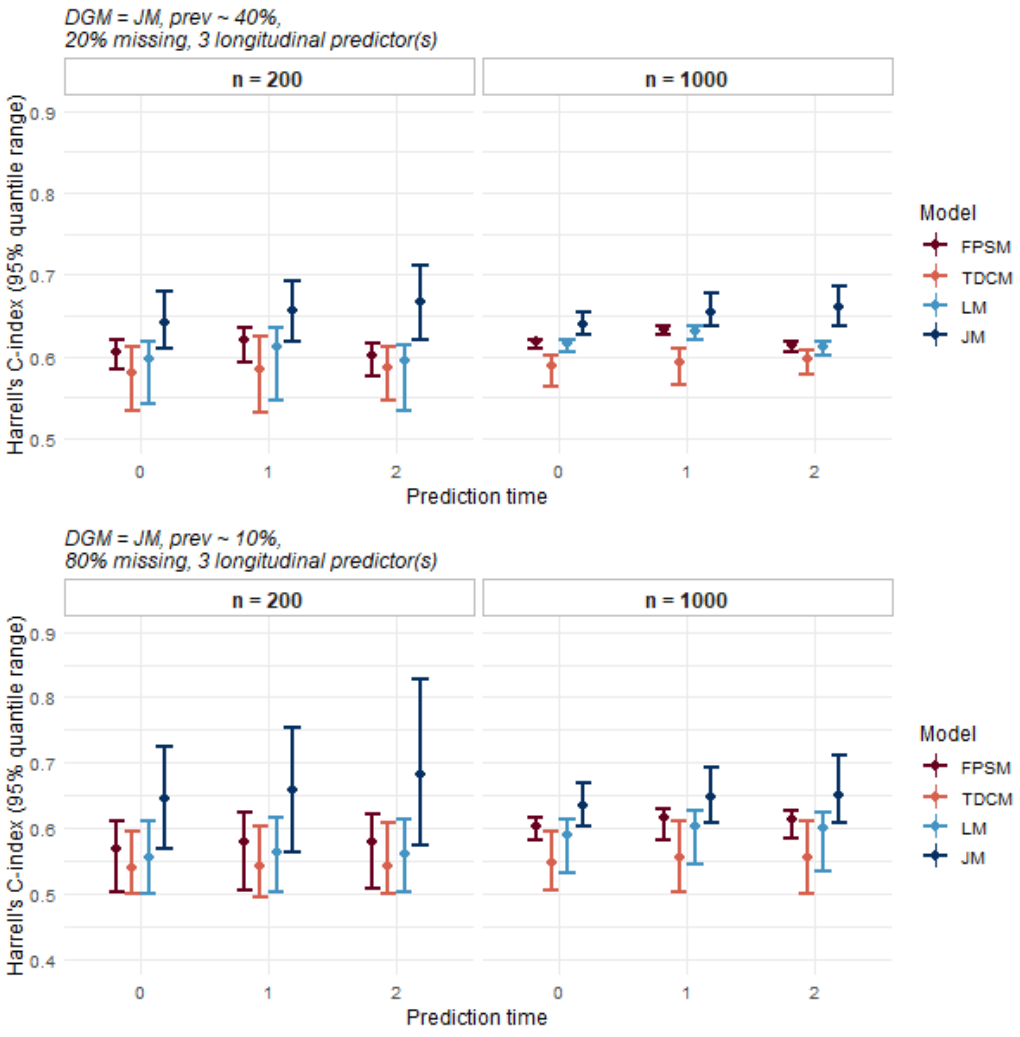

Figure 5: Exploring how Harrell's C-index (Discrimination) was influenced by **sample size**.

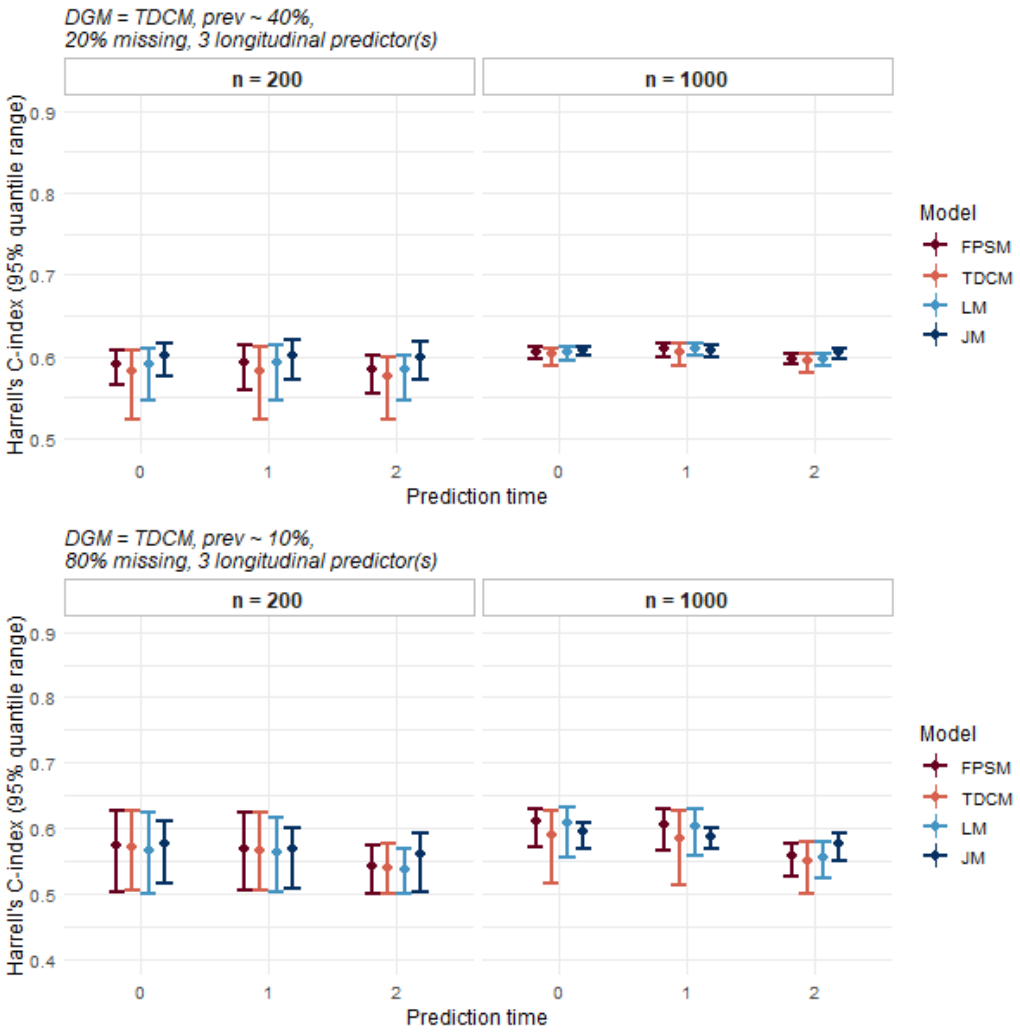

Figure 6: Exploring how Harrell's C-index (Discrimination) was influenced by **sample size**.

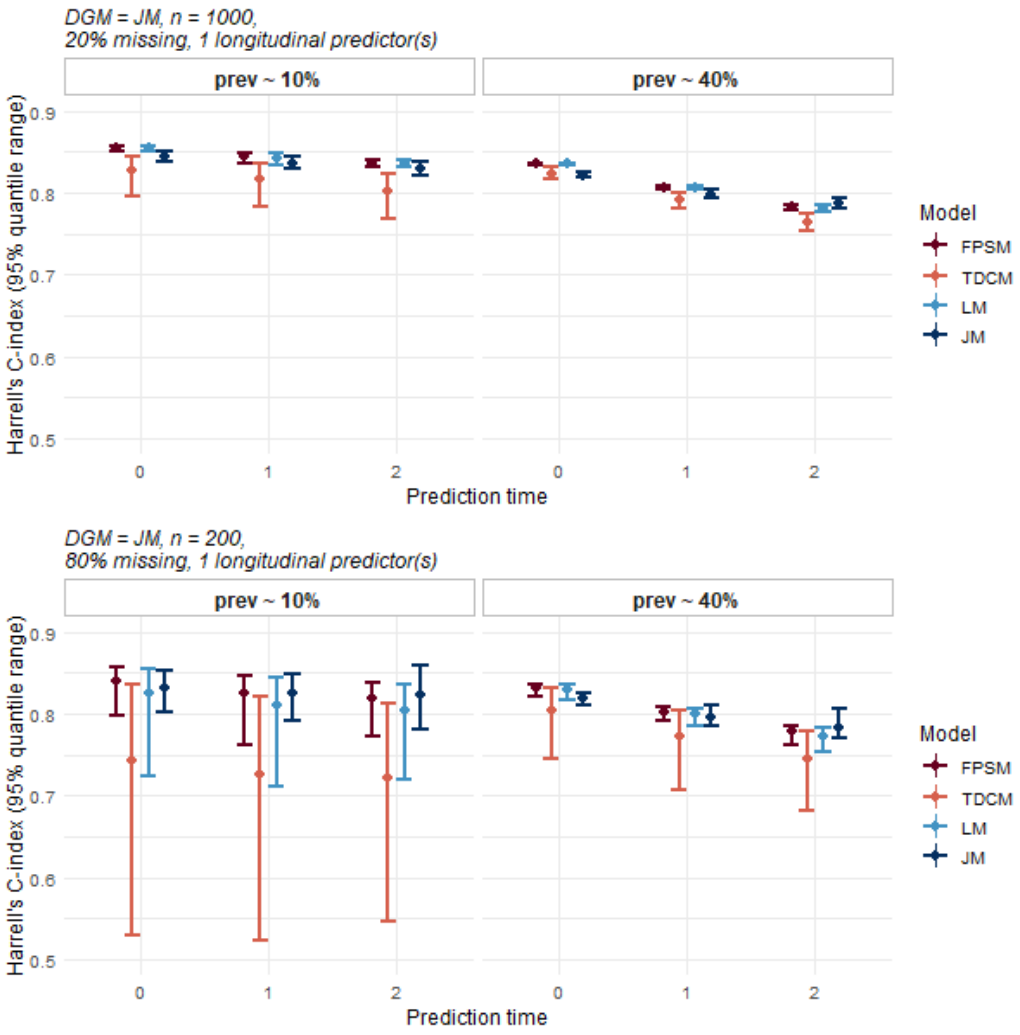

Figure 7: Exploring how Harrell's C-index (Discrimination) was influenced by **event prevalence**.

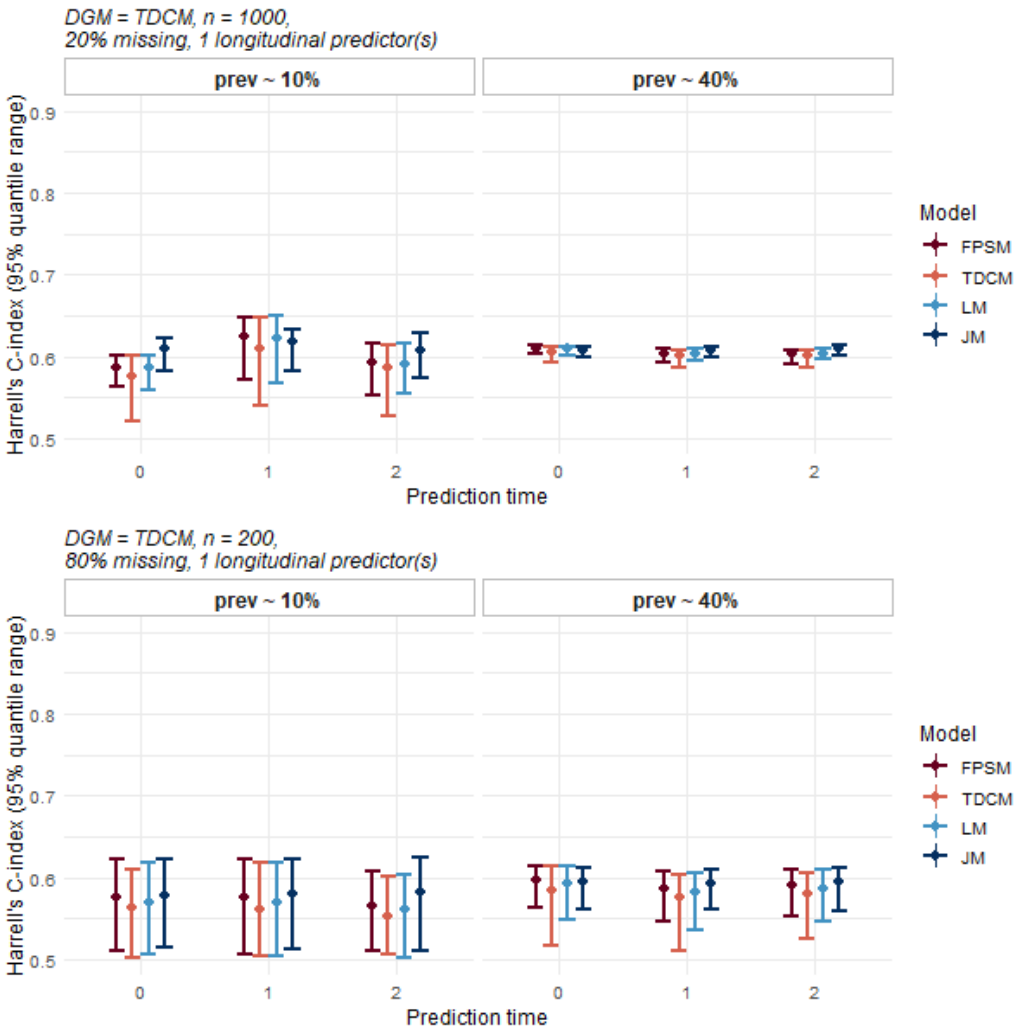

Figure 8: Exploring how Harrell's C-index (Discrimination) was influenced by **event prevalence**.

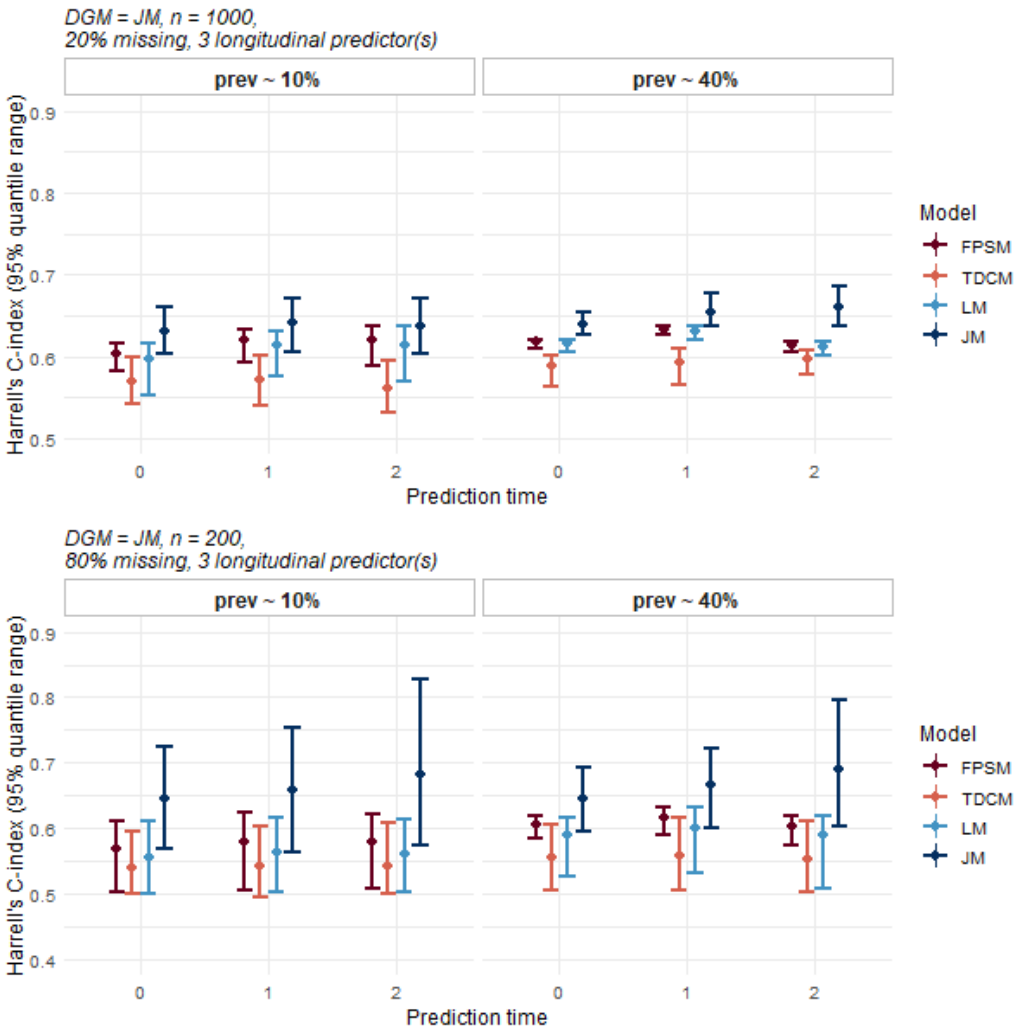

Figure 9: Exploring how Harrell's C-index (Discrimination) was influenced by **event prevalence**.

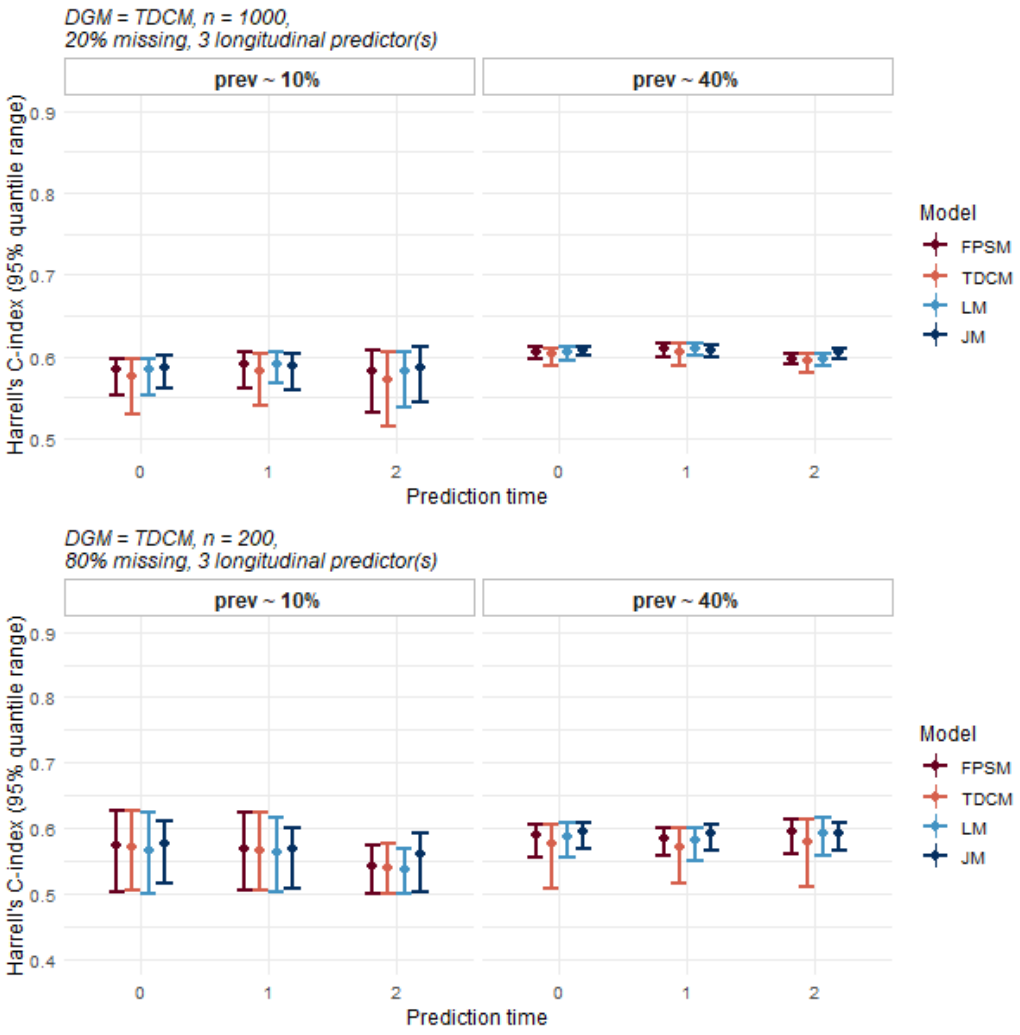

Figure 10: Exploring how Harrell's C-index (Discrimination) was influenced by **event prevalence**.

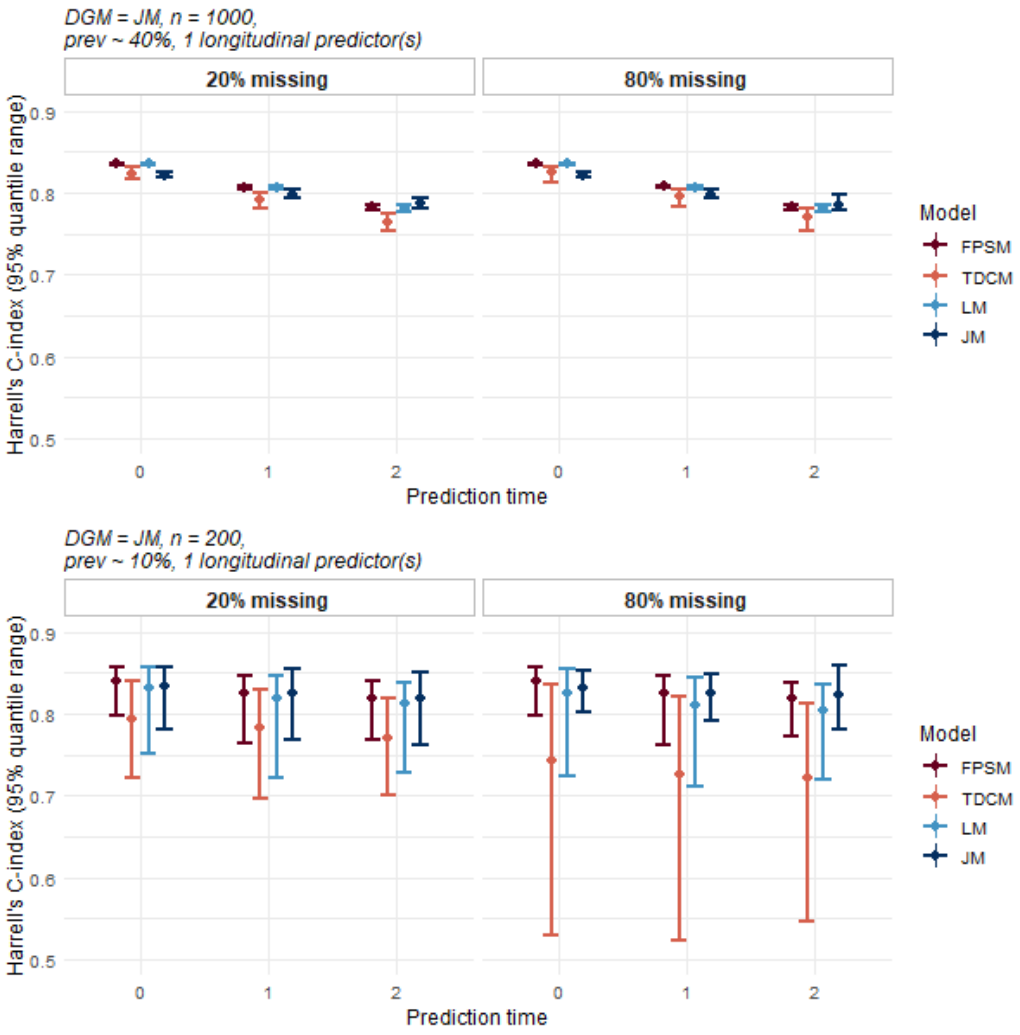

Figure 11: Exploring how Harrell's C-index (Discrimination) was influenced by **follow-up missingness**.

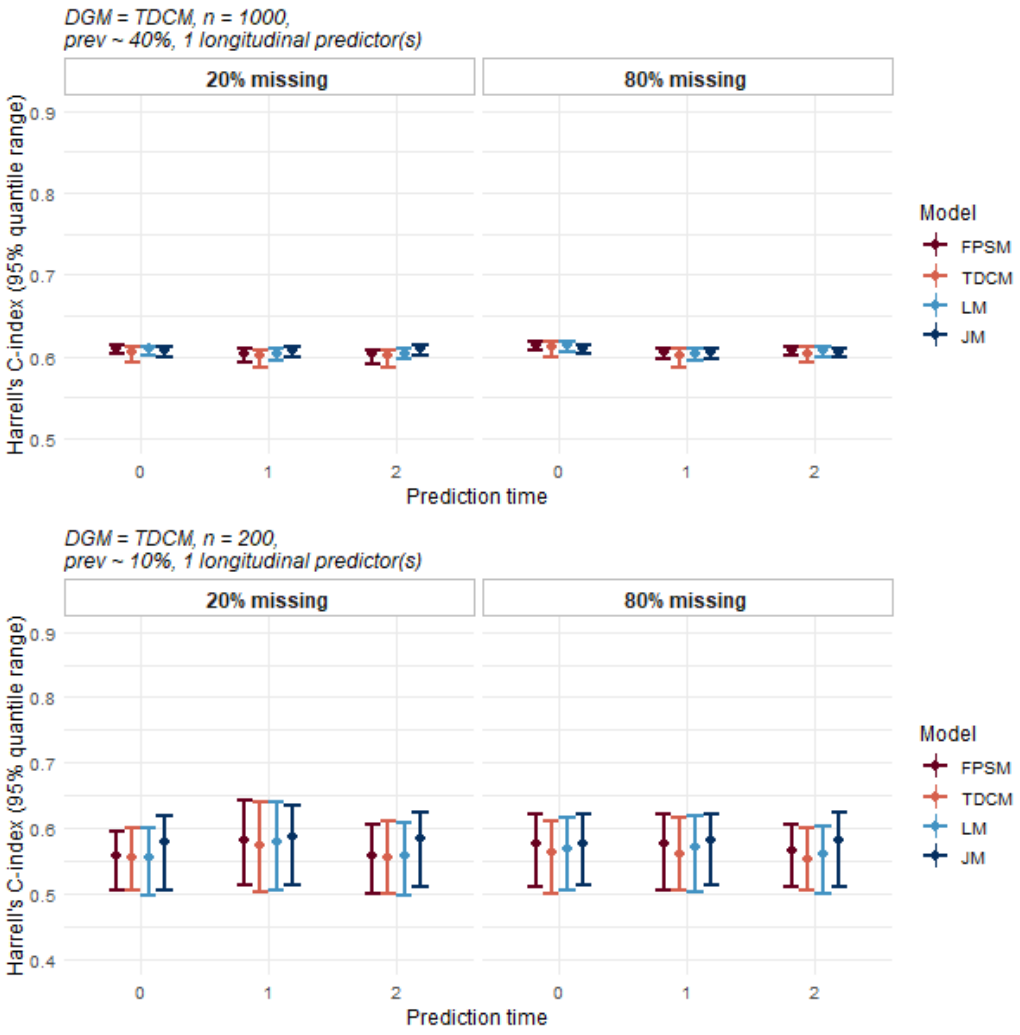

Figure 12: Exploring how Harrell's C-index (Discrimination) was influenced by **follow-up missingness**.

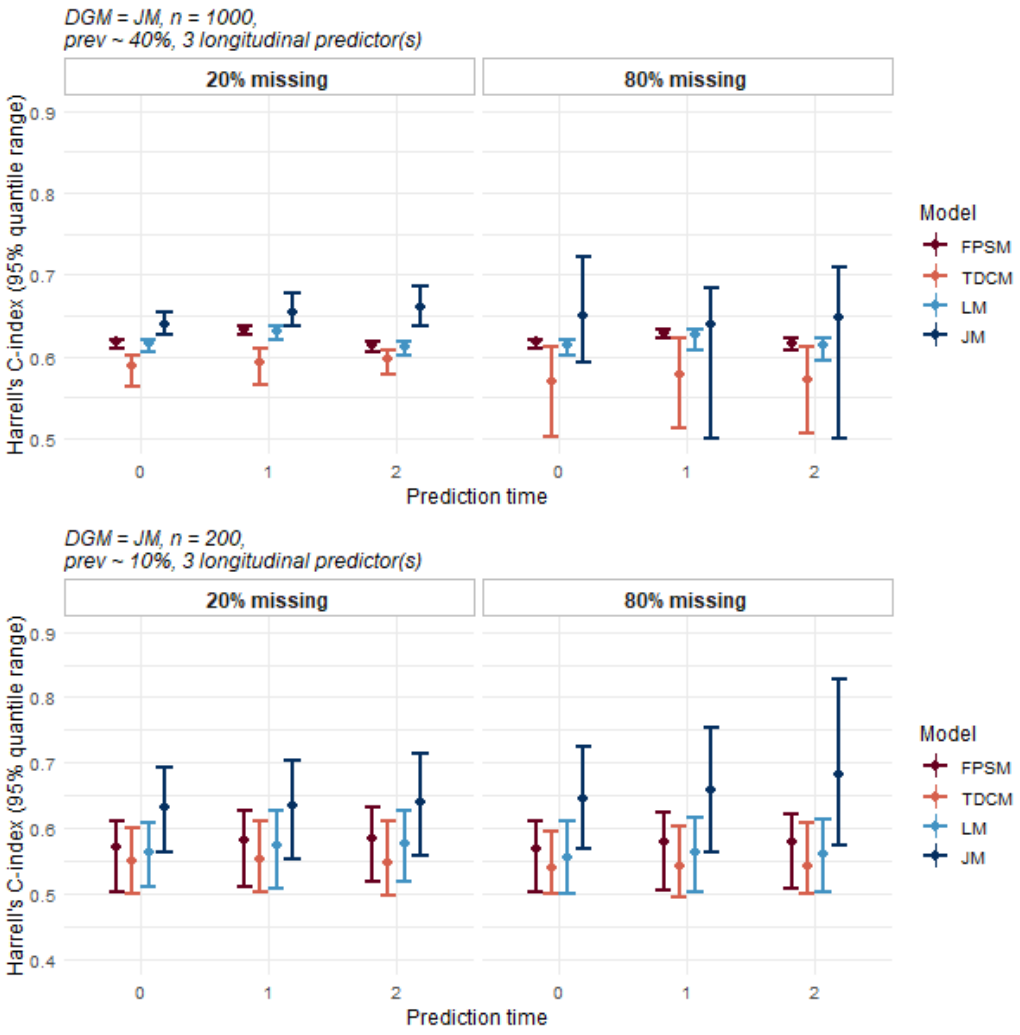

Figure 13: Exploring how Harrell's C-index (Discrimination) was influenced by **follow-up missingness**.

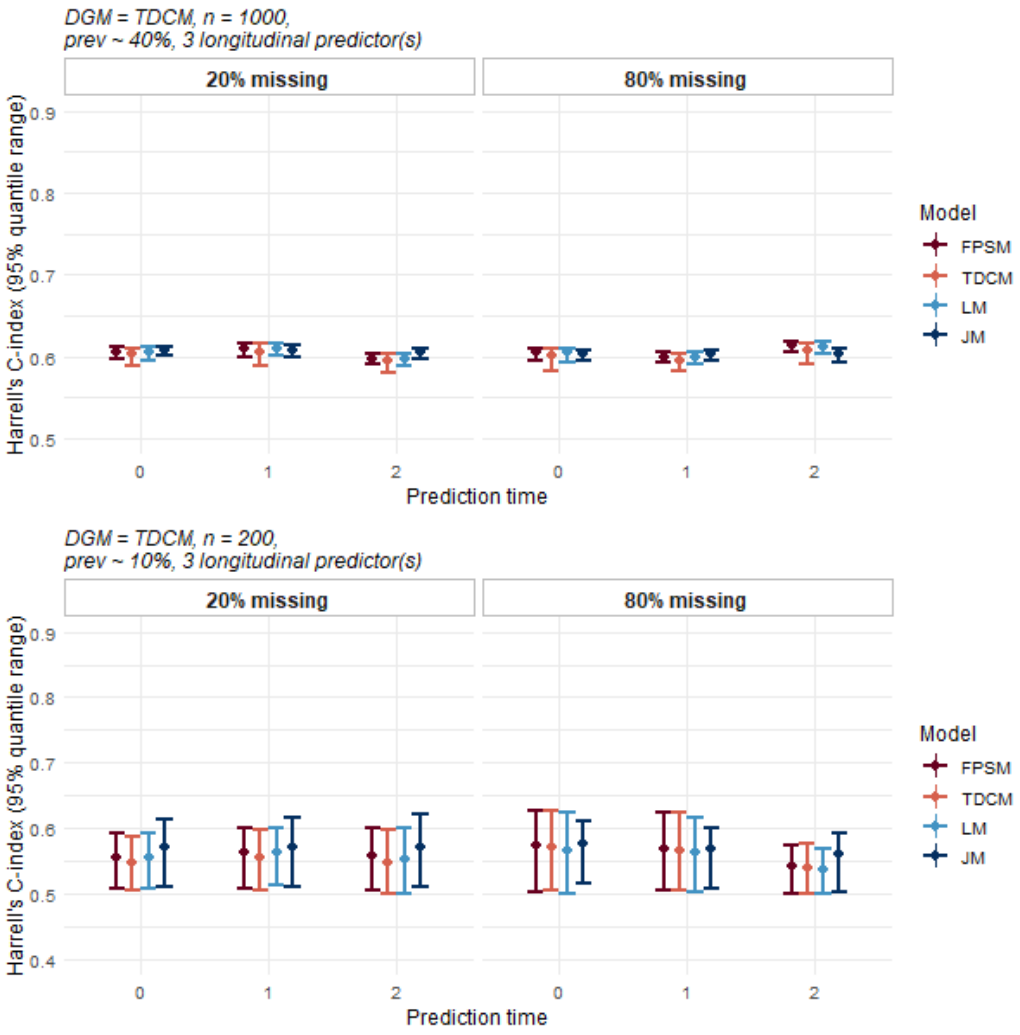

Figure 14: Exploring how Harrell's C-index (Discrimination) was influenced by **follow-up missingness**.

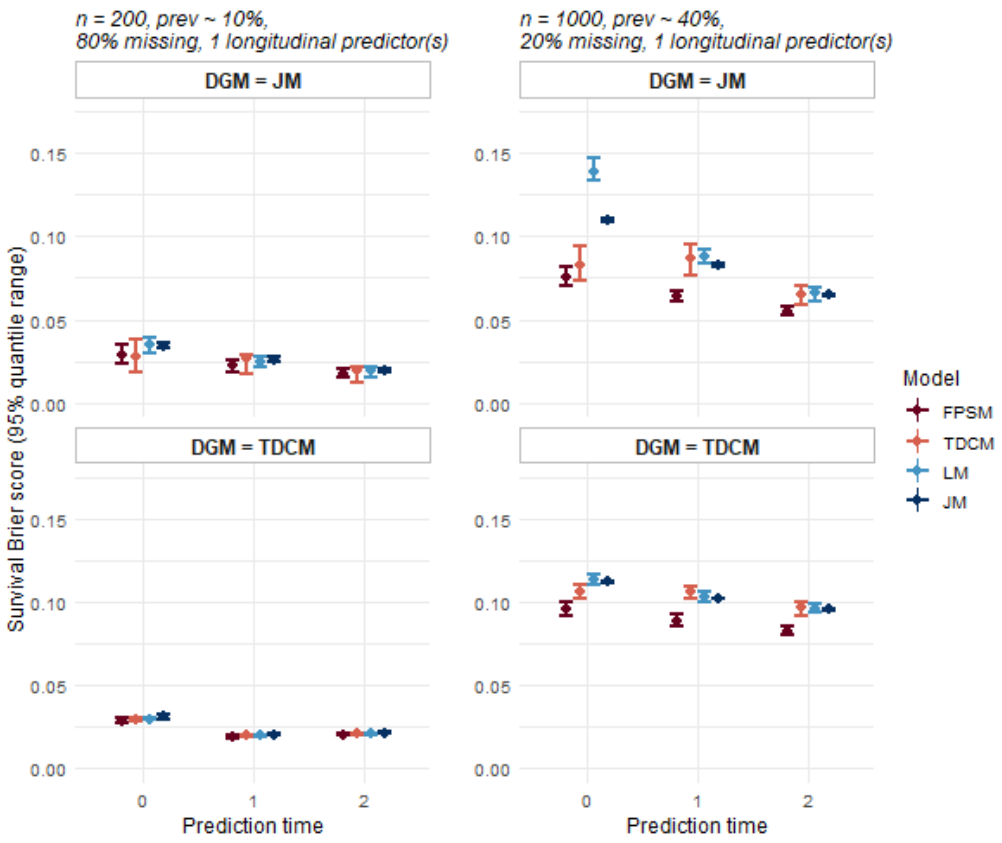

Figure 15: Survival Brier Score (Overall performance) estimated for models fitted under contrasting data generation scenarios.

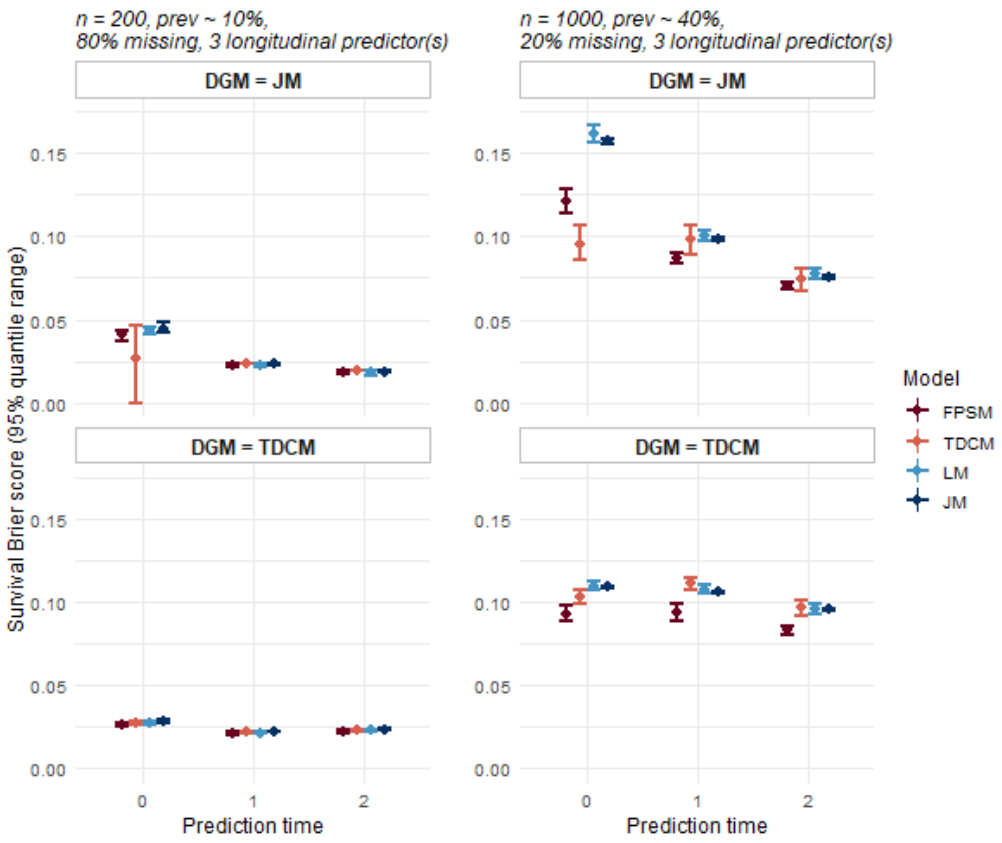

Figure 16: Survival Brier Score (Overall performance) estimated for models fitted under contrasting data generation scenarios.

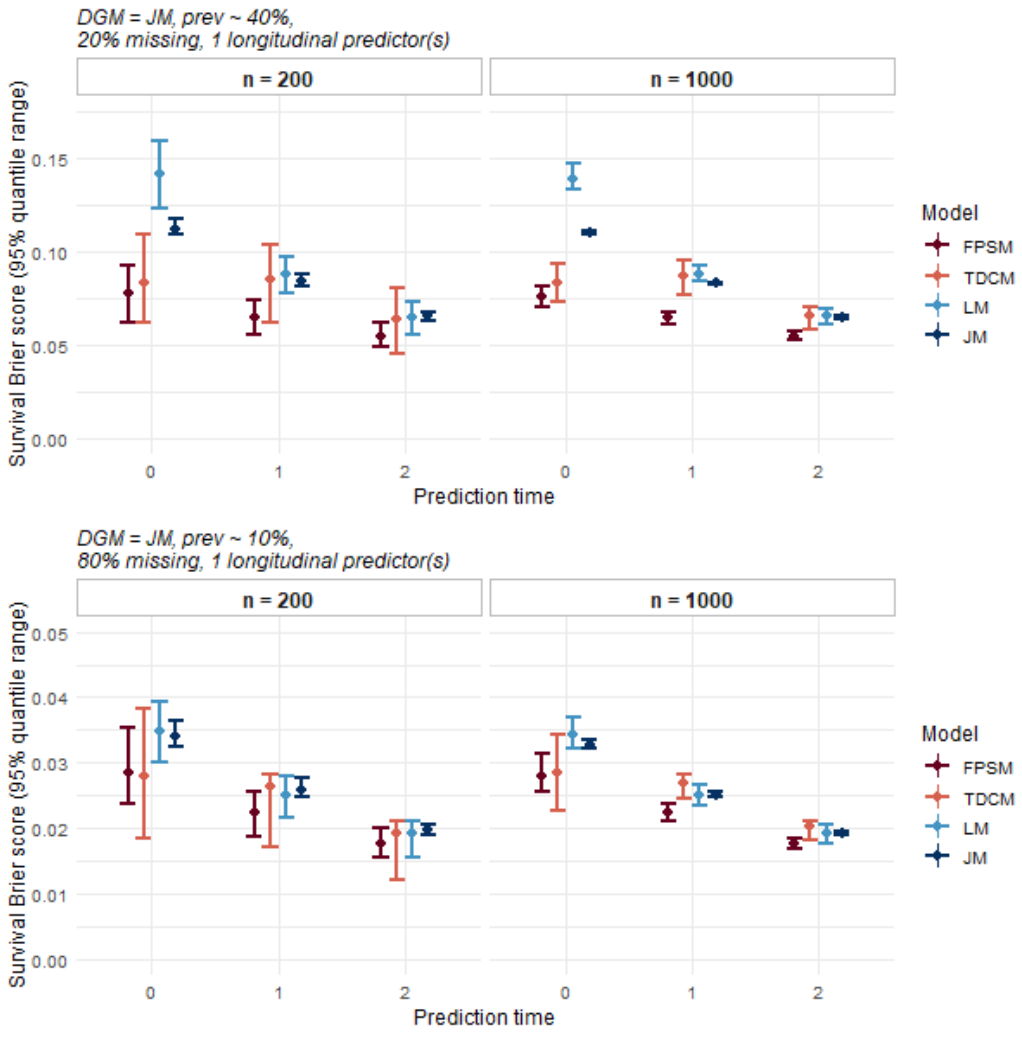

Figure 17: Exploring how the Survival Brier Score (Overall performance) was influenced by **sample size**.

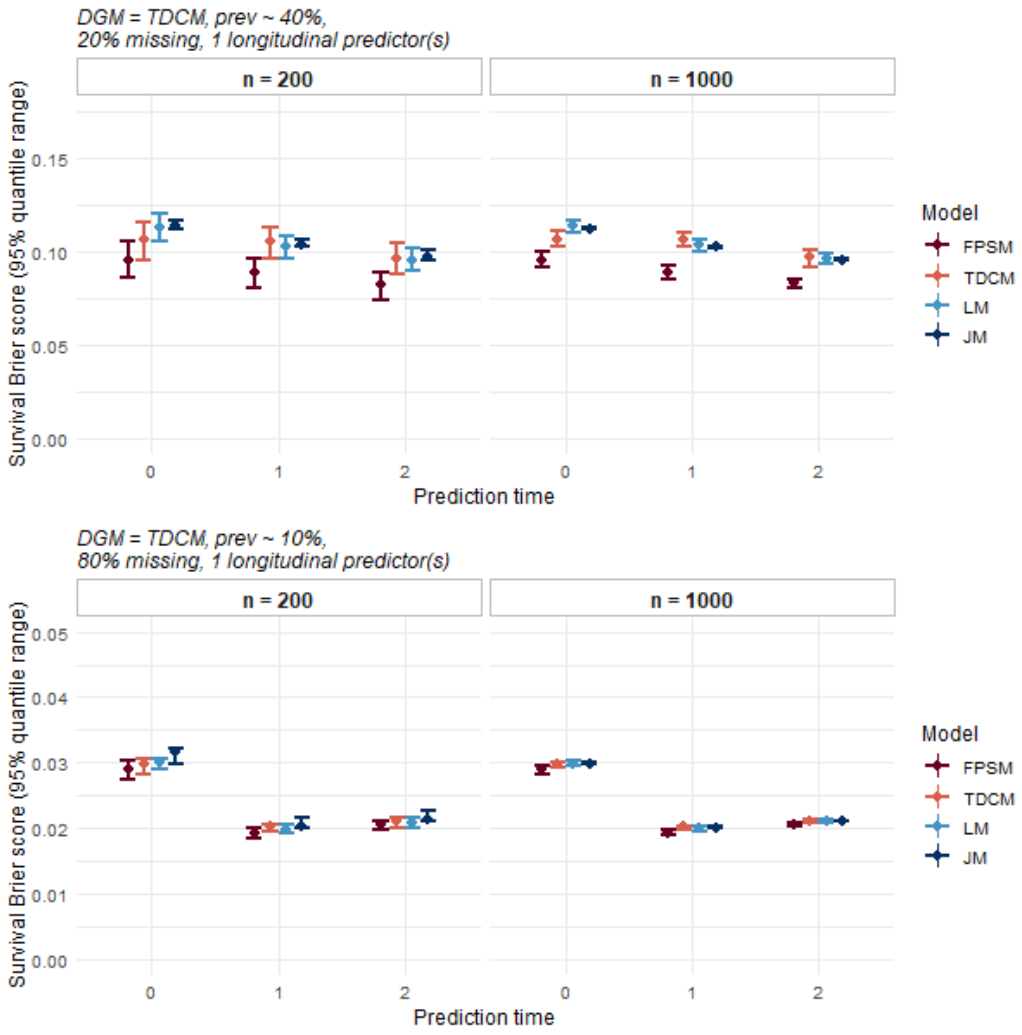

Figure 18: Exploring how the Survival Brier Score (Overall performance) was influenced by **sample size**.

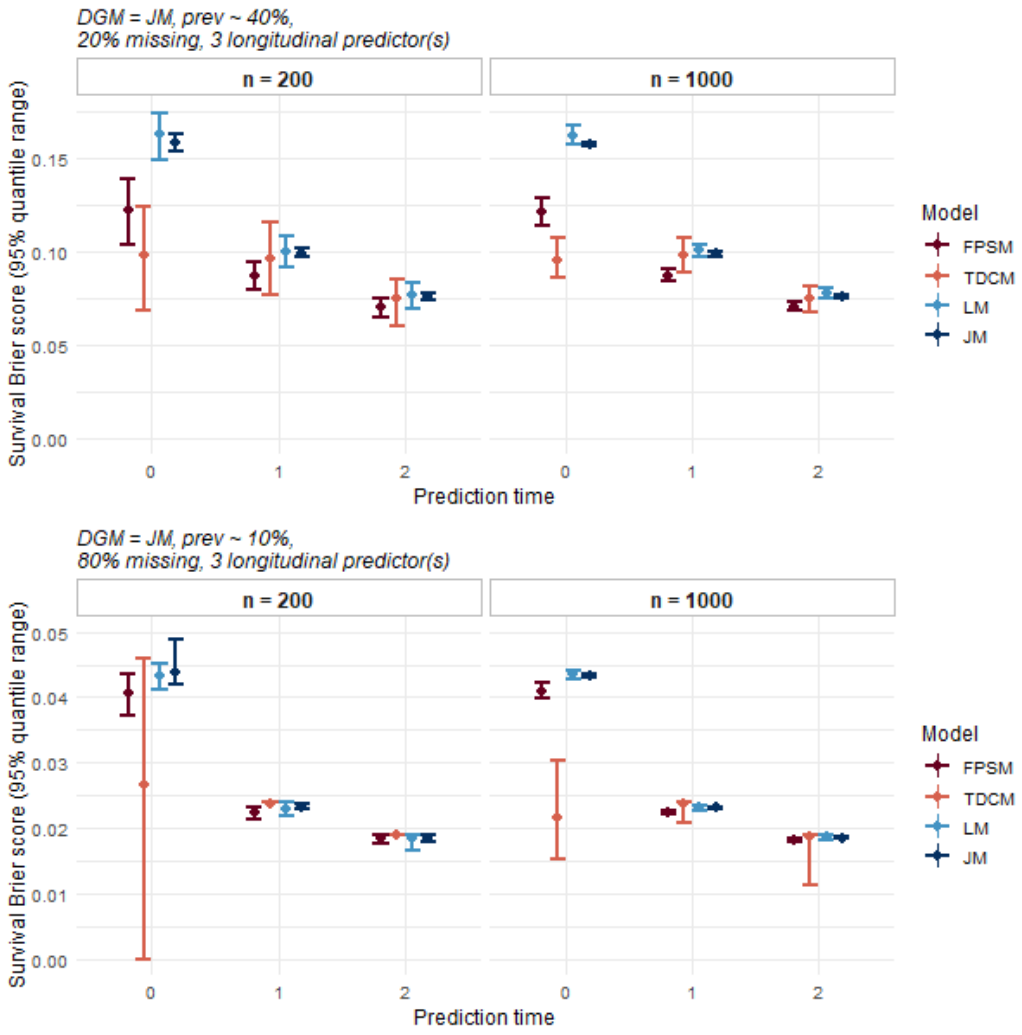

Figure 19: Exploring how the Survival Brier Score (Overall performance) was influenced by **sample size**.

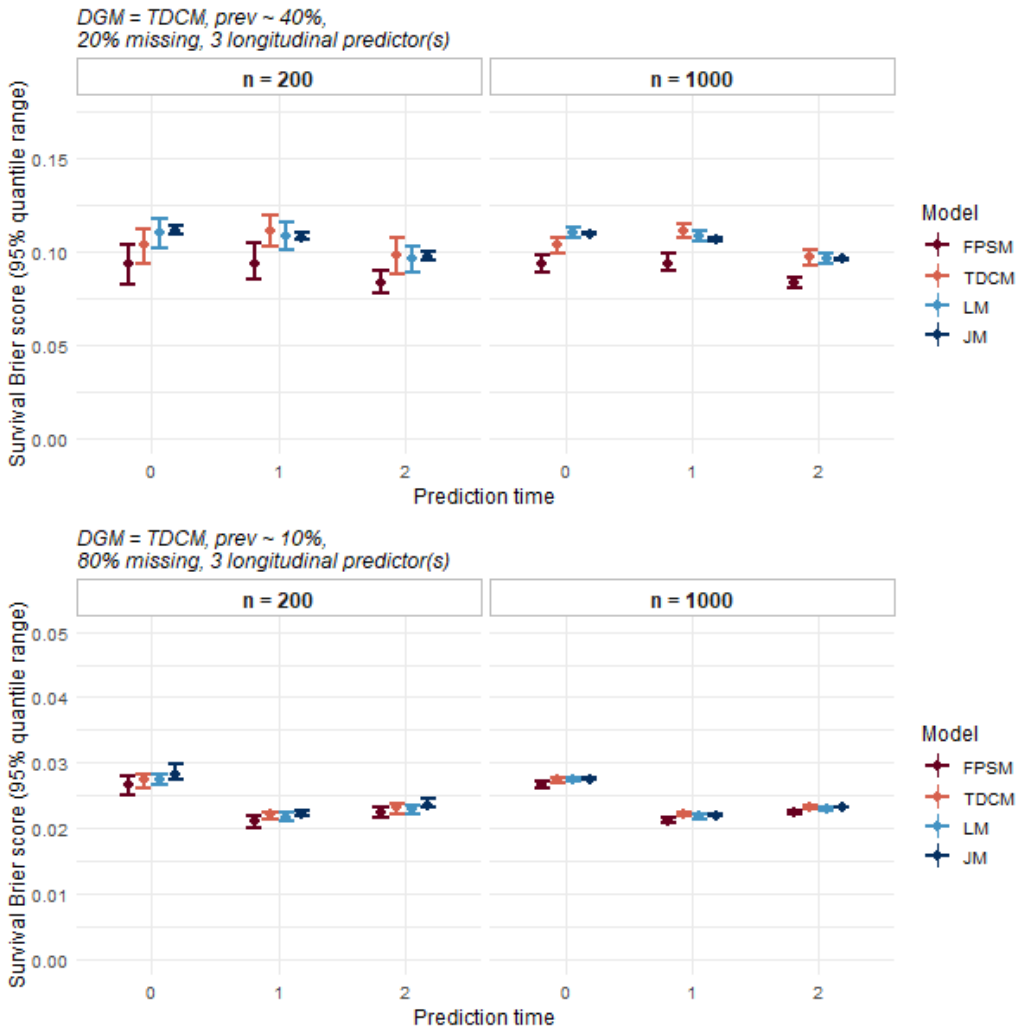

Figure 20: Exploring how the Survival Brier Score (Overall performance) was influenced by **sample size**.

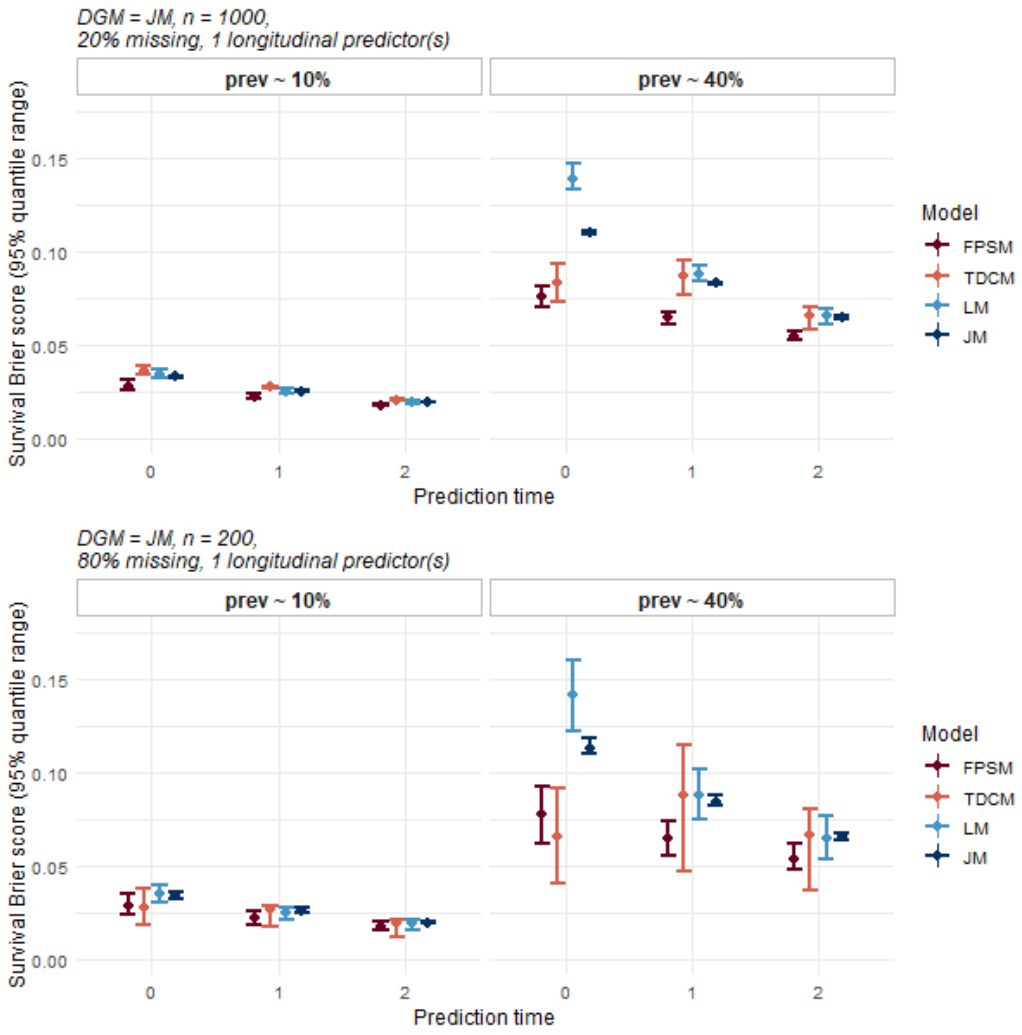

Figure 21: Exploring how the Survival Brier Score (Overall performance) was influenced by **event prevalence**.

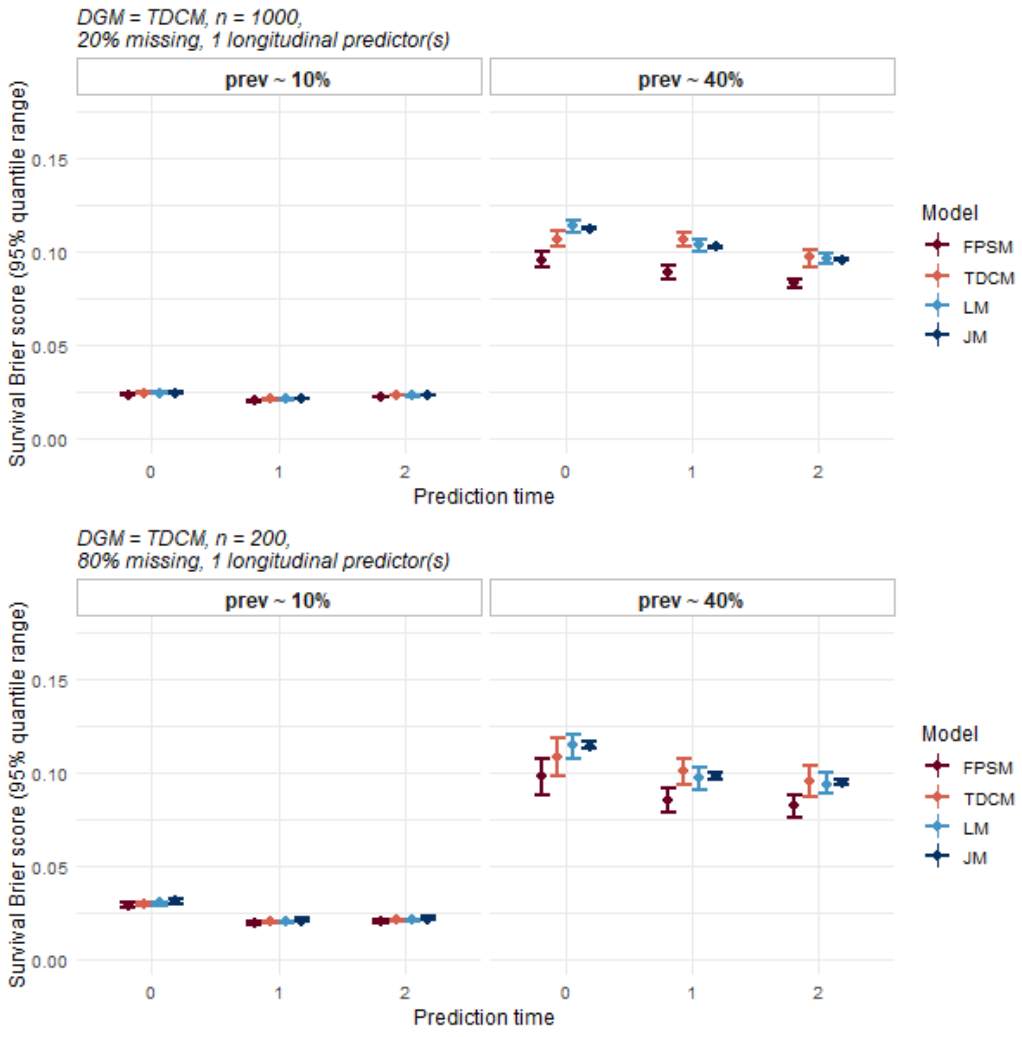

Figure 22: Exploring how the Survival Brier Score (Overall performance) was influenced by **event prevalence**.

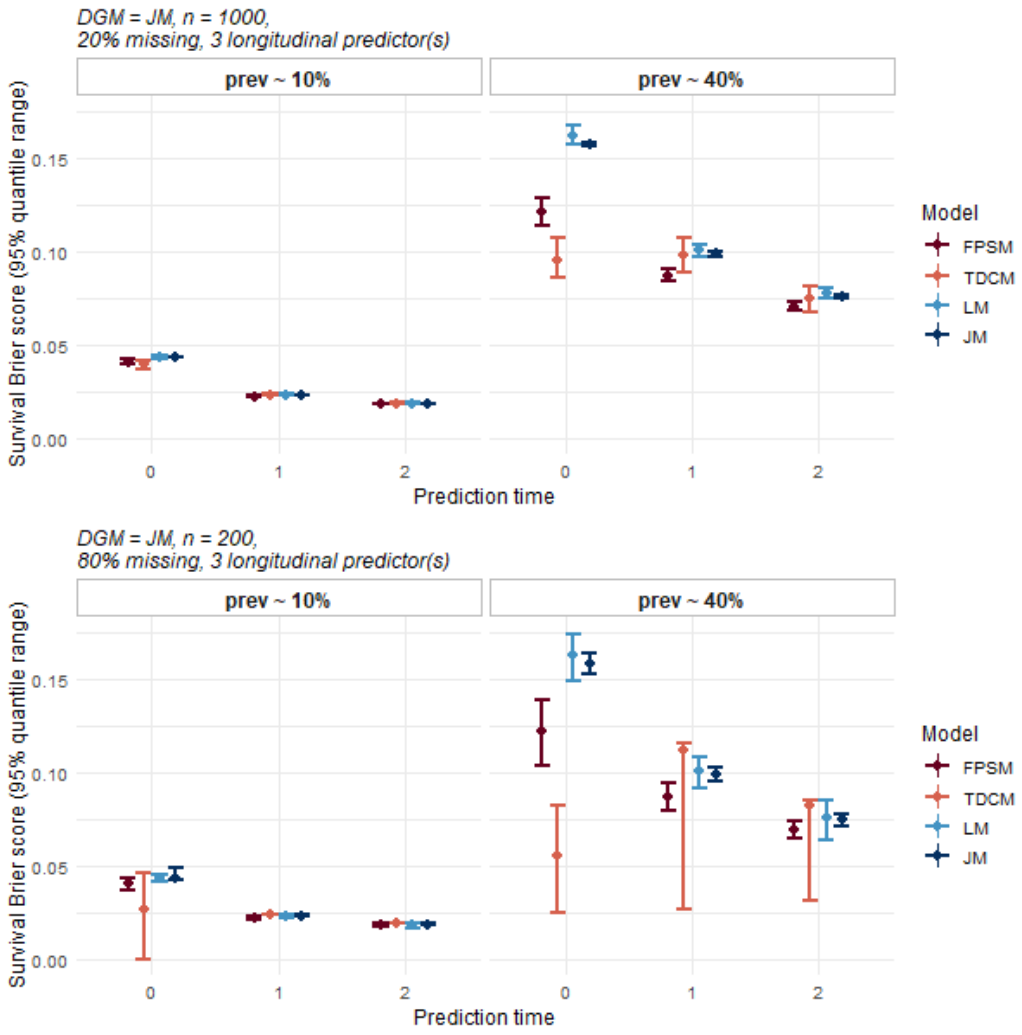

Figure 23: Exploring how the Survival Brier Score (Overall performance) was influenced by **event prevalence**.

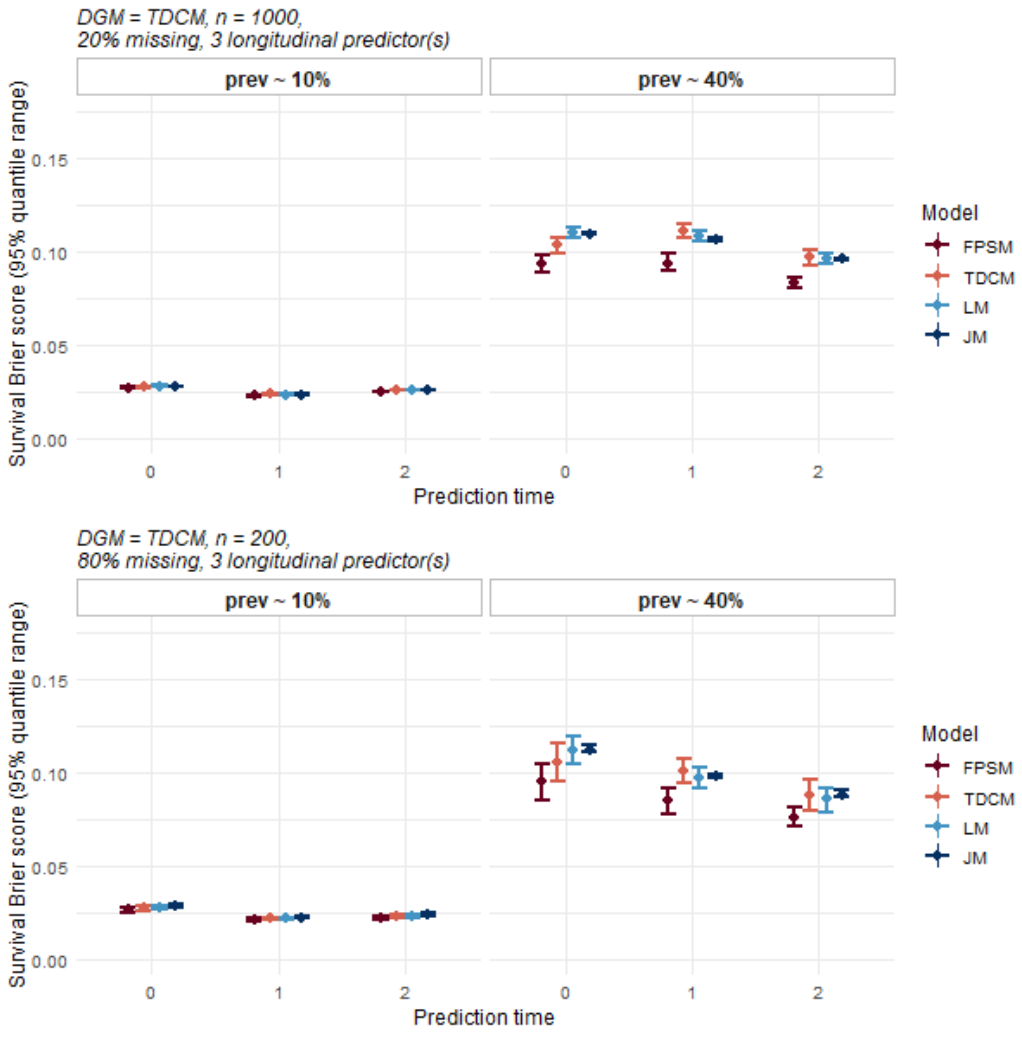

Figure 24: Exploring how the Survival Brier Score (Overall performance) was influenced by **event prevalence**.

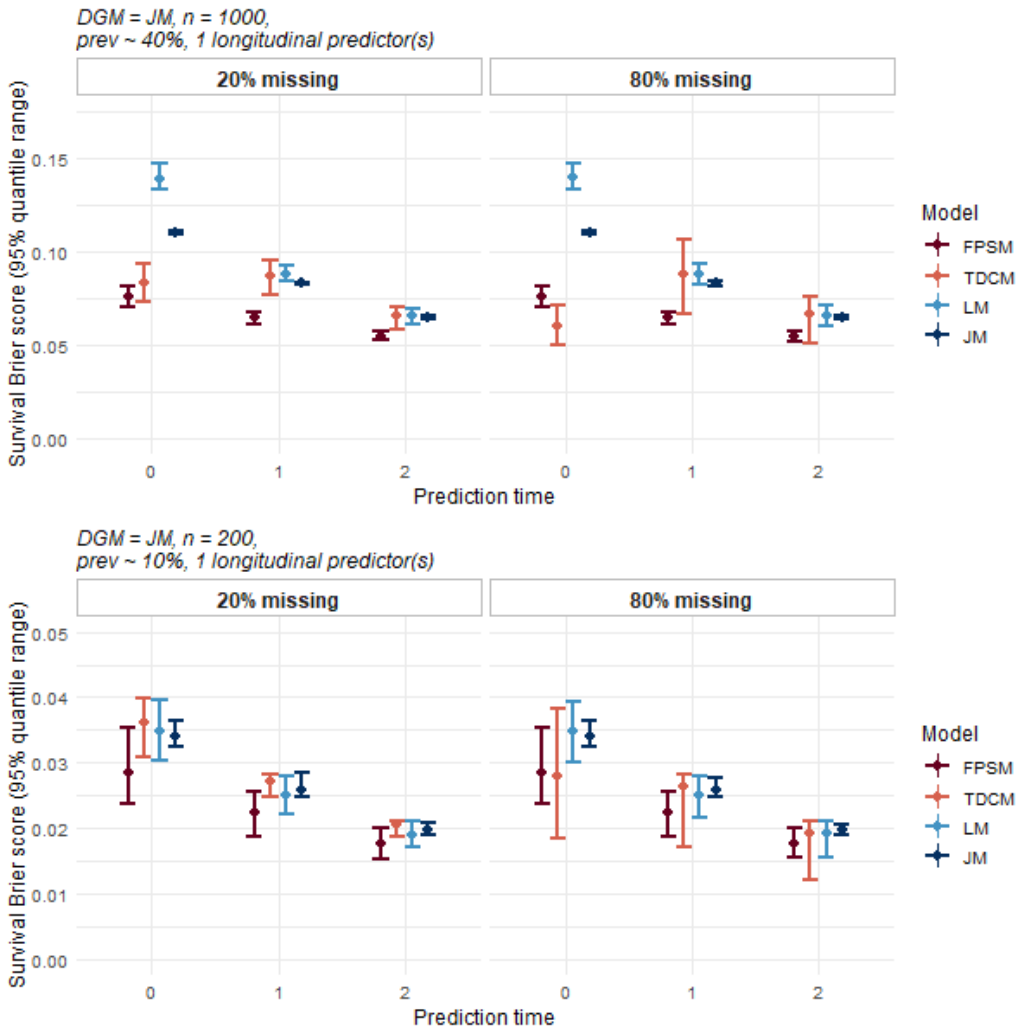

Figure 25: Exploring how the Survival Brier Score (Overall performance) was influenced by **follow-up missingness**.

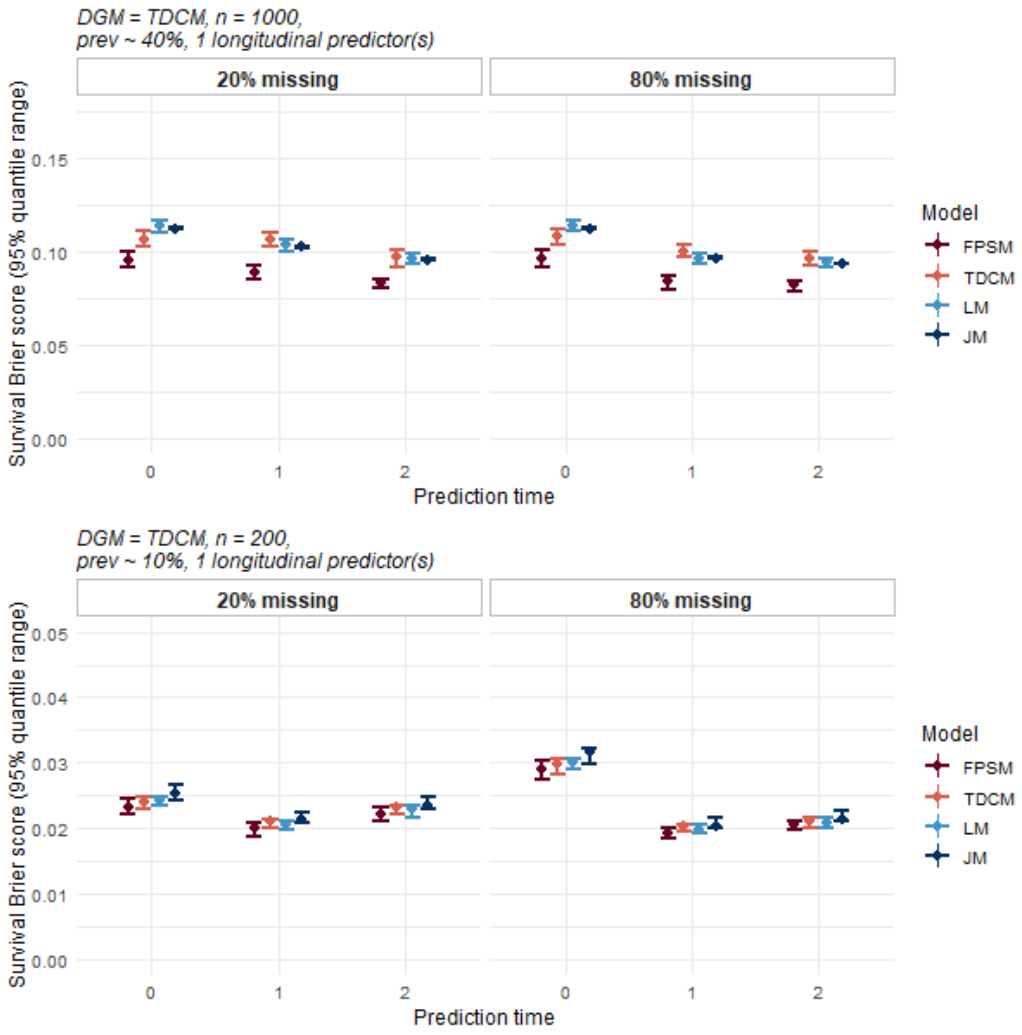

Figure 26: Exploring how the Survival Brier Score (Overall performance) was influenced by **follow-up missingness**.

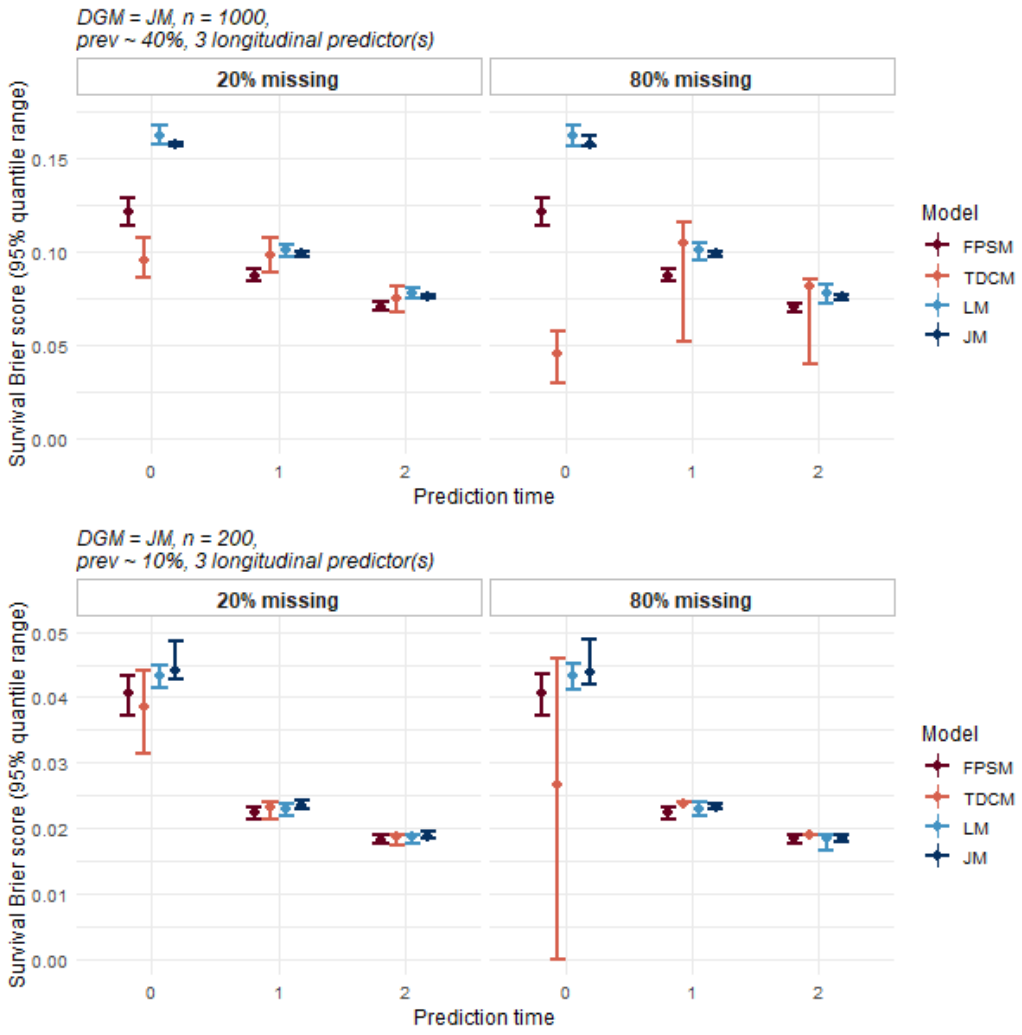

Figure 27: Exploring how the Survival Brier Score (Overall performance) was influenced by **follow-up missingness**.

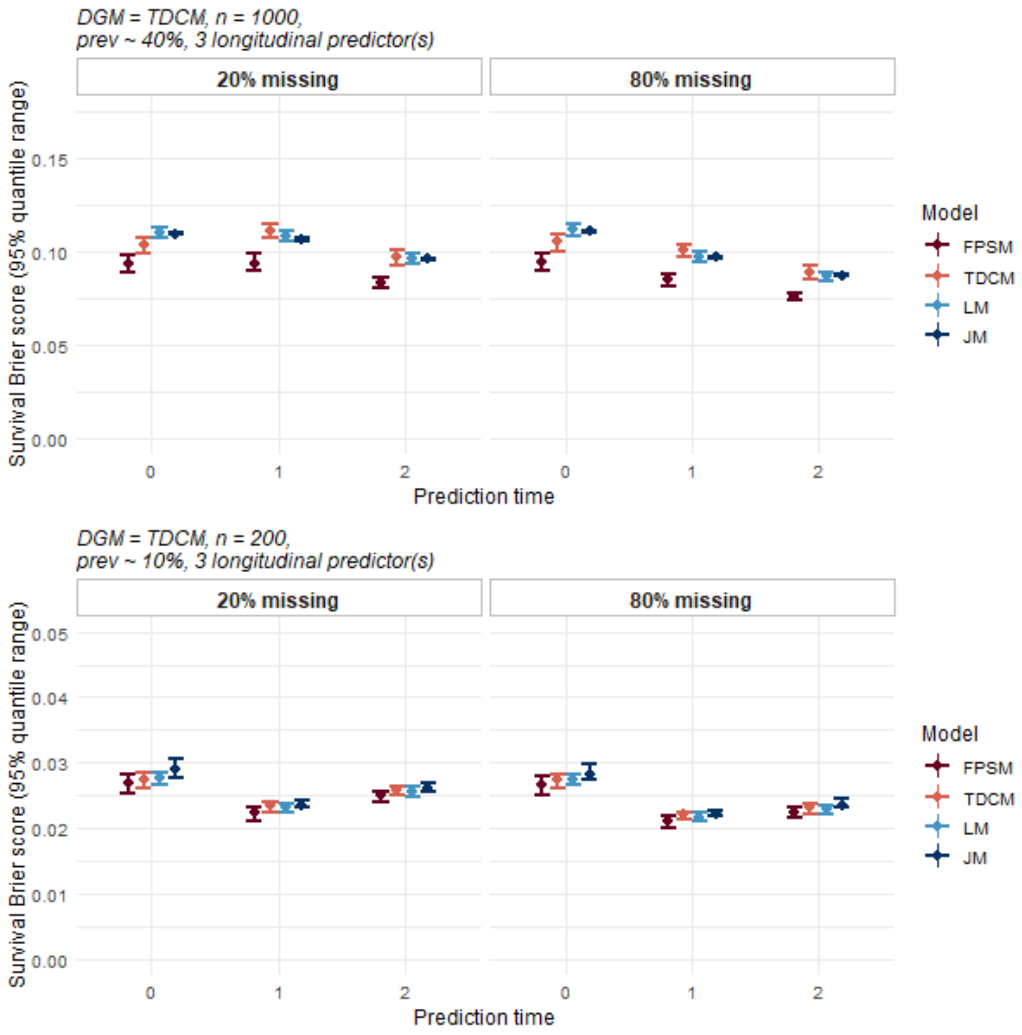

Figure 28: Exploring how the Survival Brier Score (Overall performance) was influenced by **follow-up missingness**.

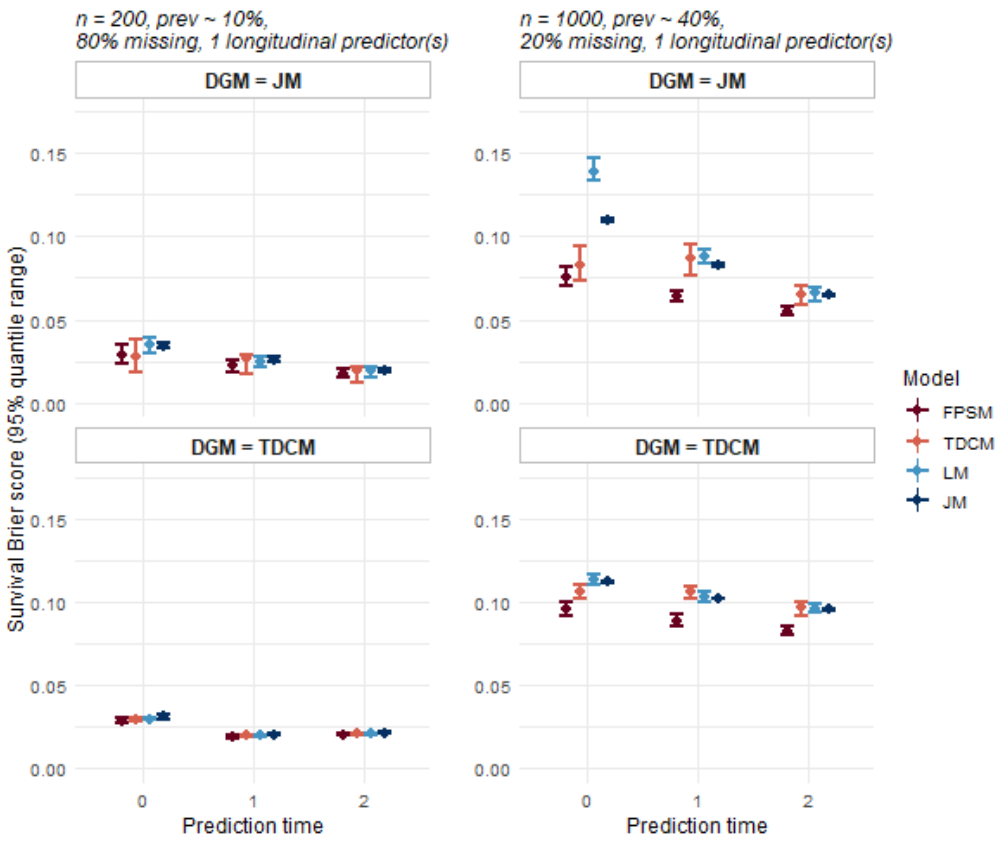

Figure 29: Index of Predictive Accuracy (Overall performance) estimated for models fitted under contrasting data generation scenarios.

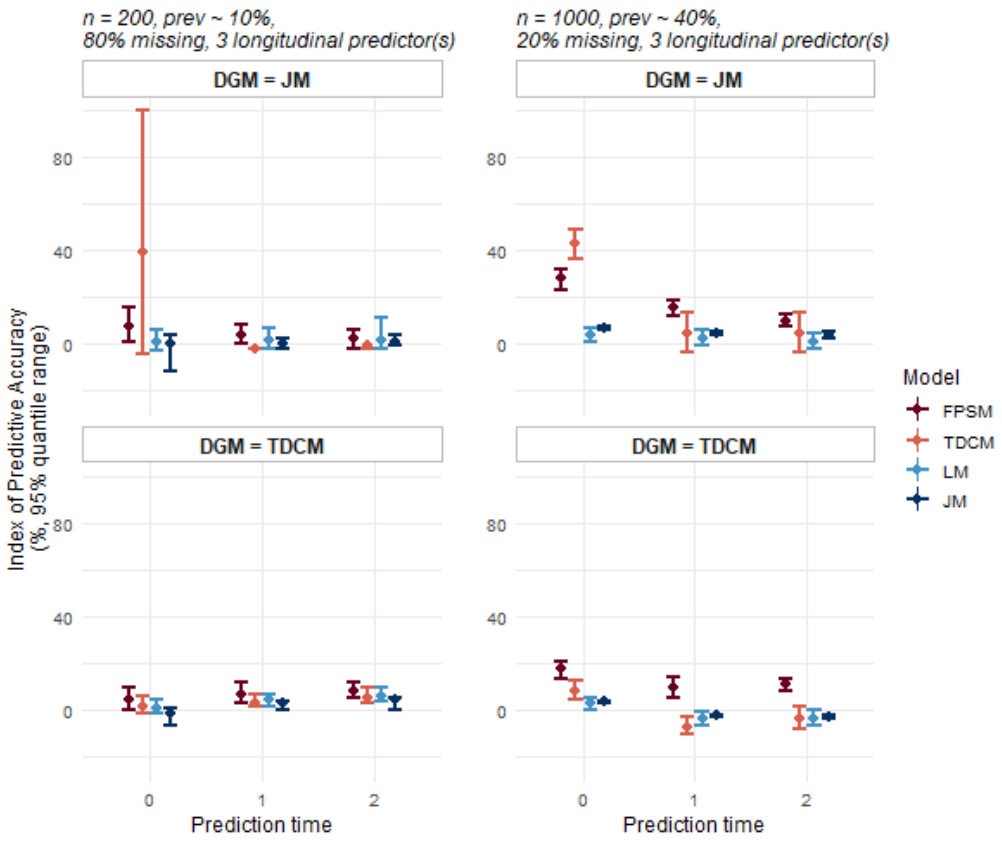

Figure 30: Index of Predictive Accuracy (Overall performance) estimated for models fitted under contrasting data generation scenarios.

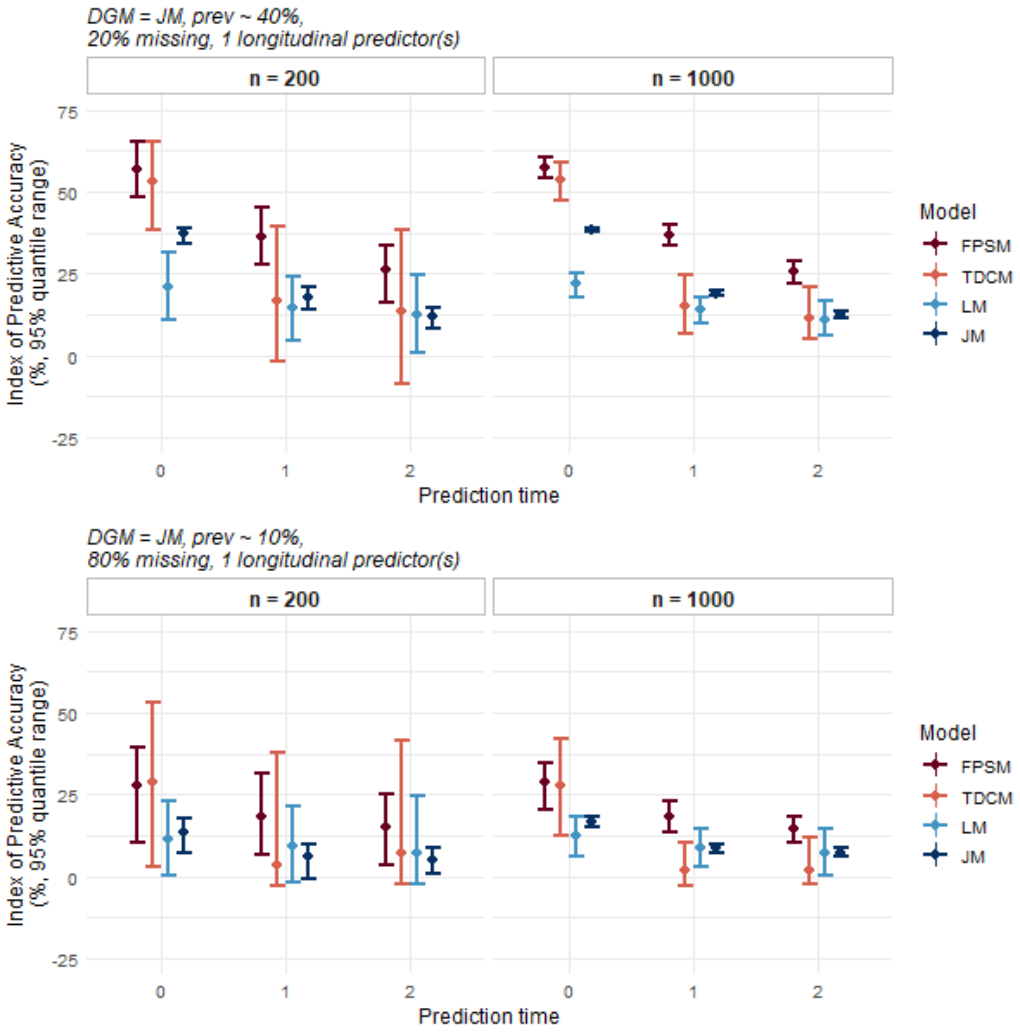

Figure 31: Exploring how the Index of Predictive Accuracy (Overall performance) was influenced by **sample size**.

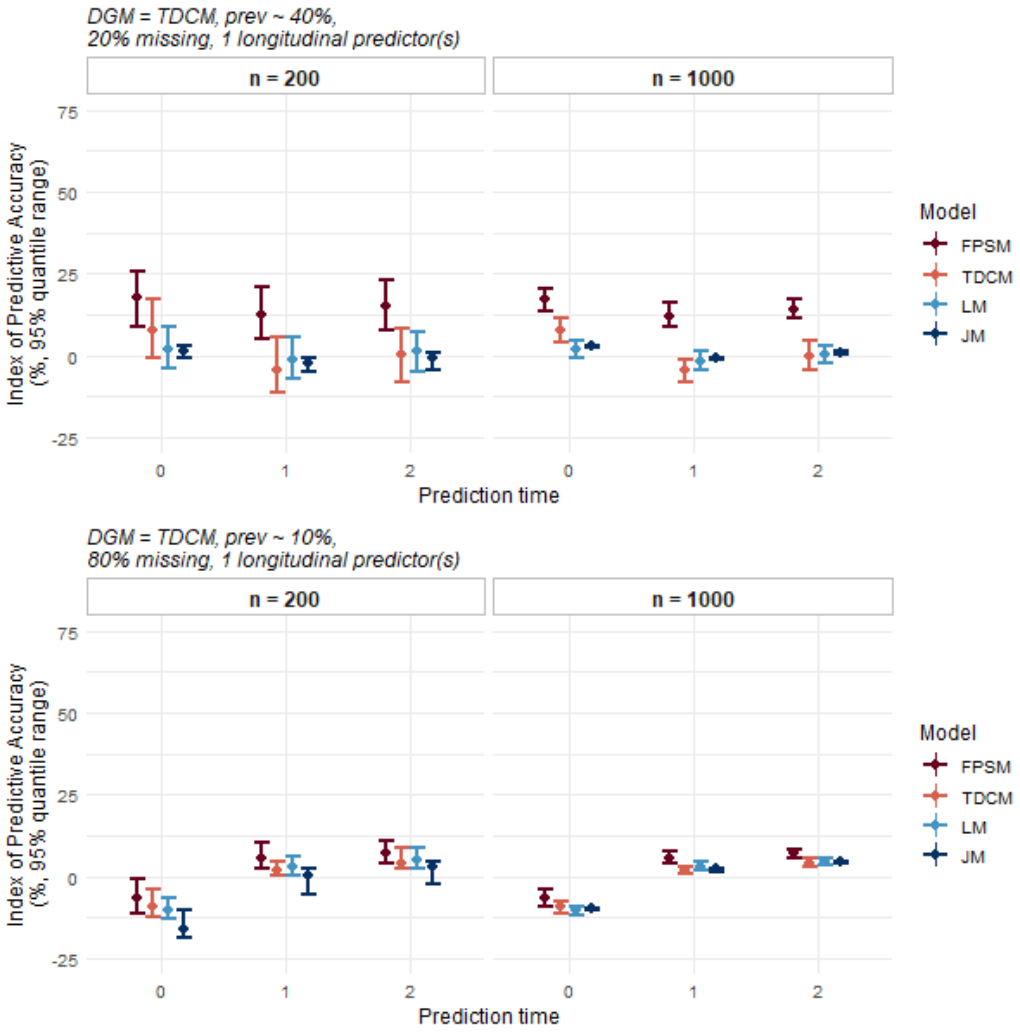

Figure 32: Exploring how the Index of Predictive Accuracy (Overall performance) was influenced by **sample size**.

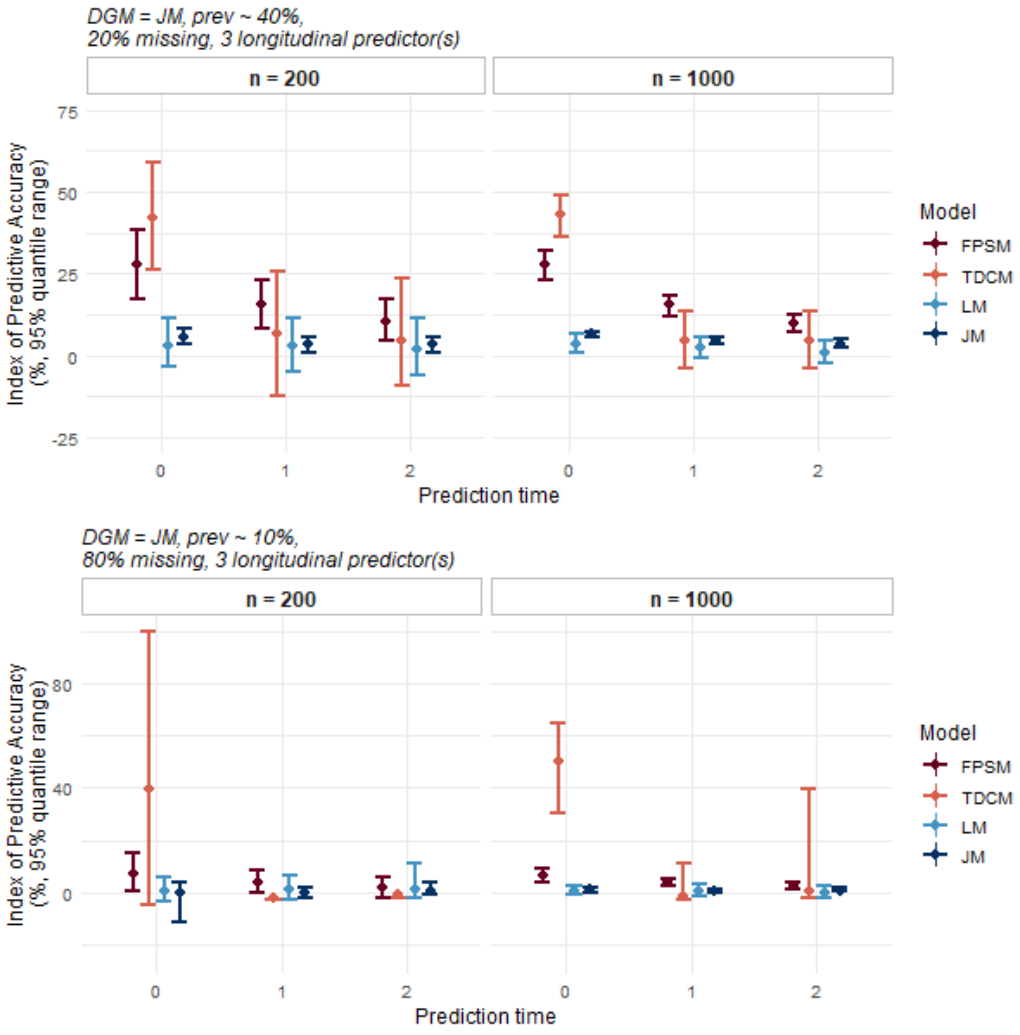

Figure 33: Exploring how the Index of Predictive Accuracy (Overall performance) was influenced by **sample size**.

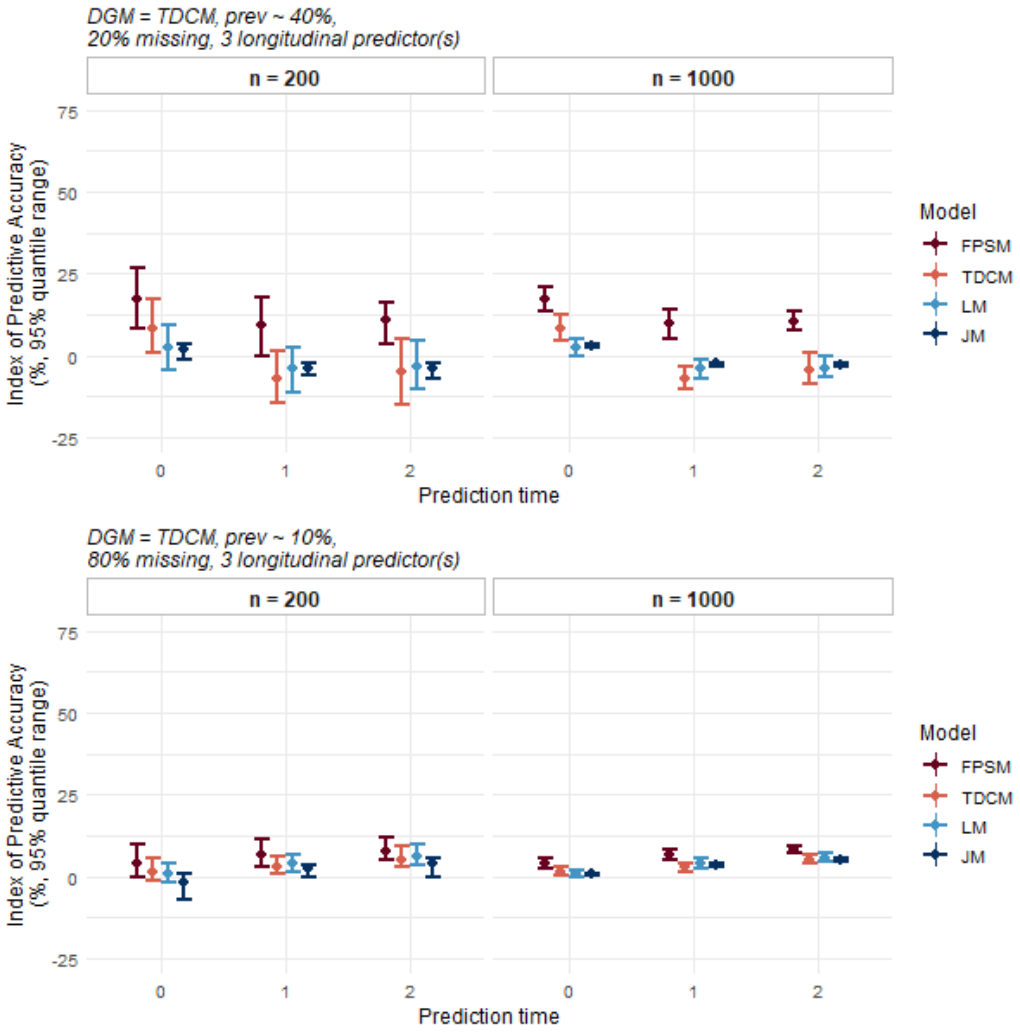

Figure 34: Exploring how the Index of Predictive Accuracy (Overall performance) was influenced by **sample size**.

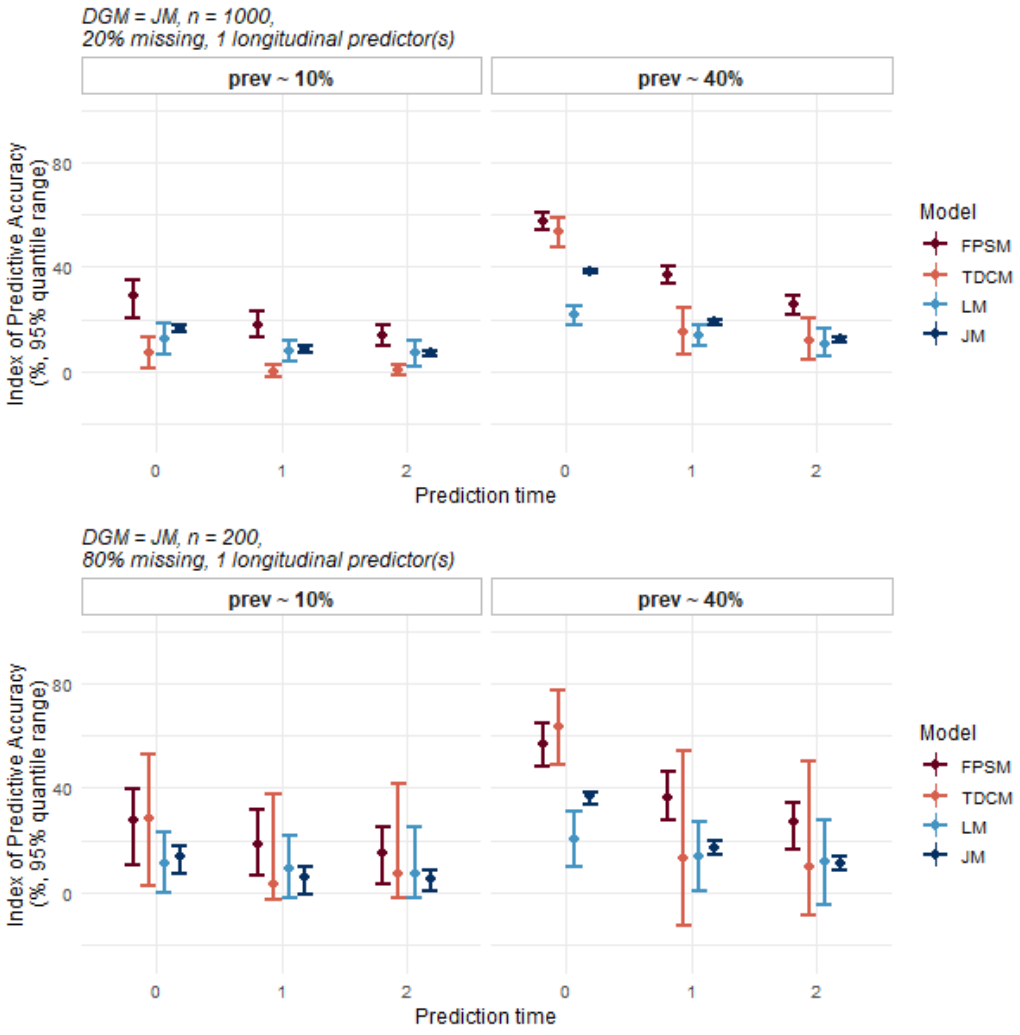

Figure 35: Exploring how the Index of Predictive Accuracy (Overall performance) was influenced by **event prevalence**.

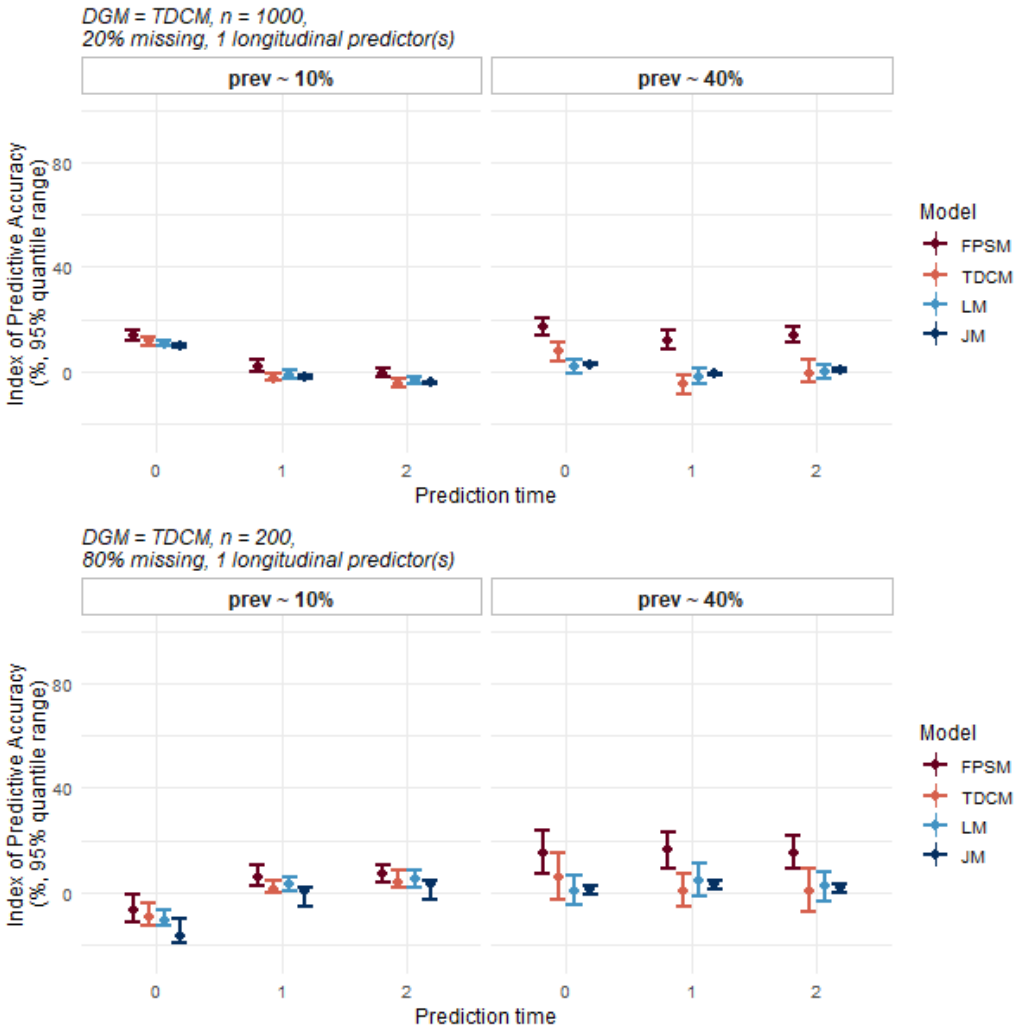

Figure 36: Exploring how the Index of Predictive Accuracy (Overall performance) was influenced by **event prevalence**.

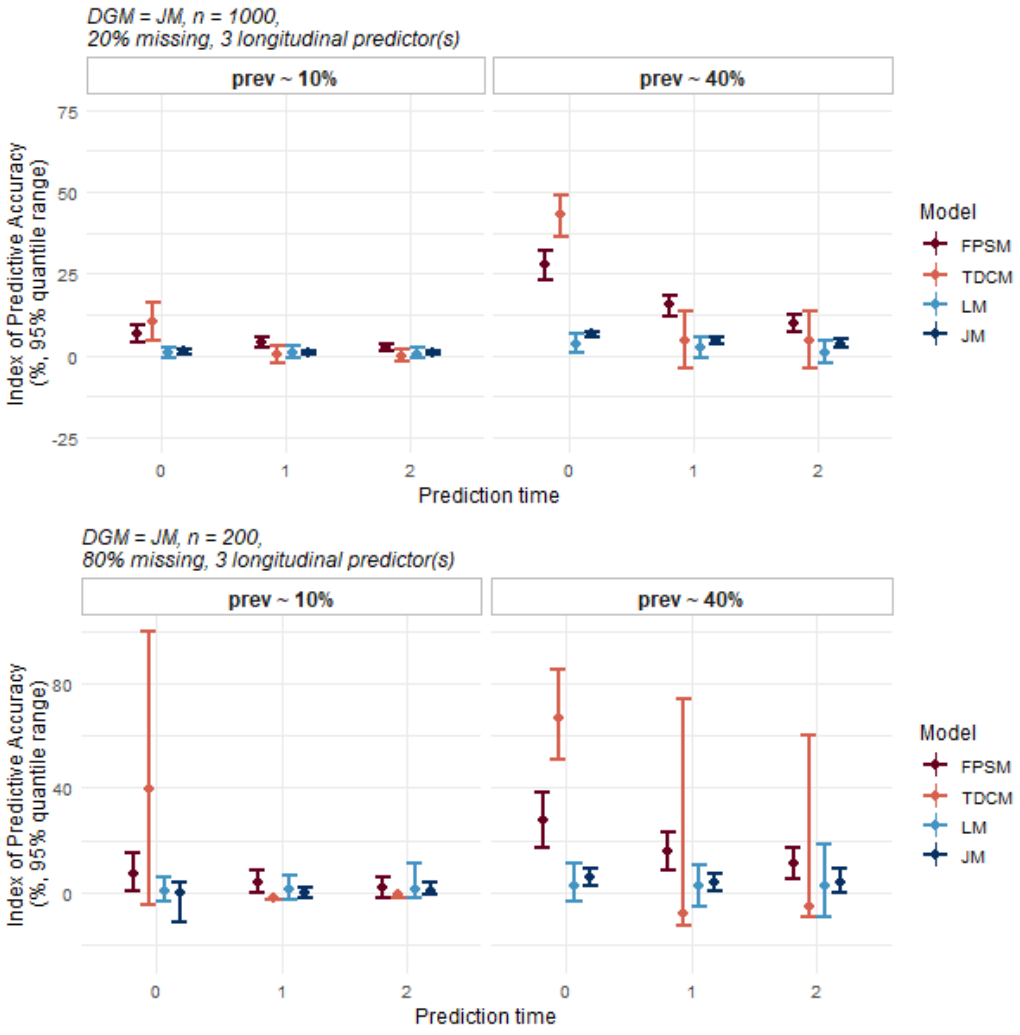

Figure 37: Exploring how the Index of Predictive Accuracy (Overall performance) was influenced by **event prevalence**.

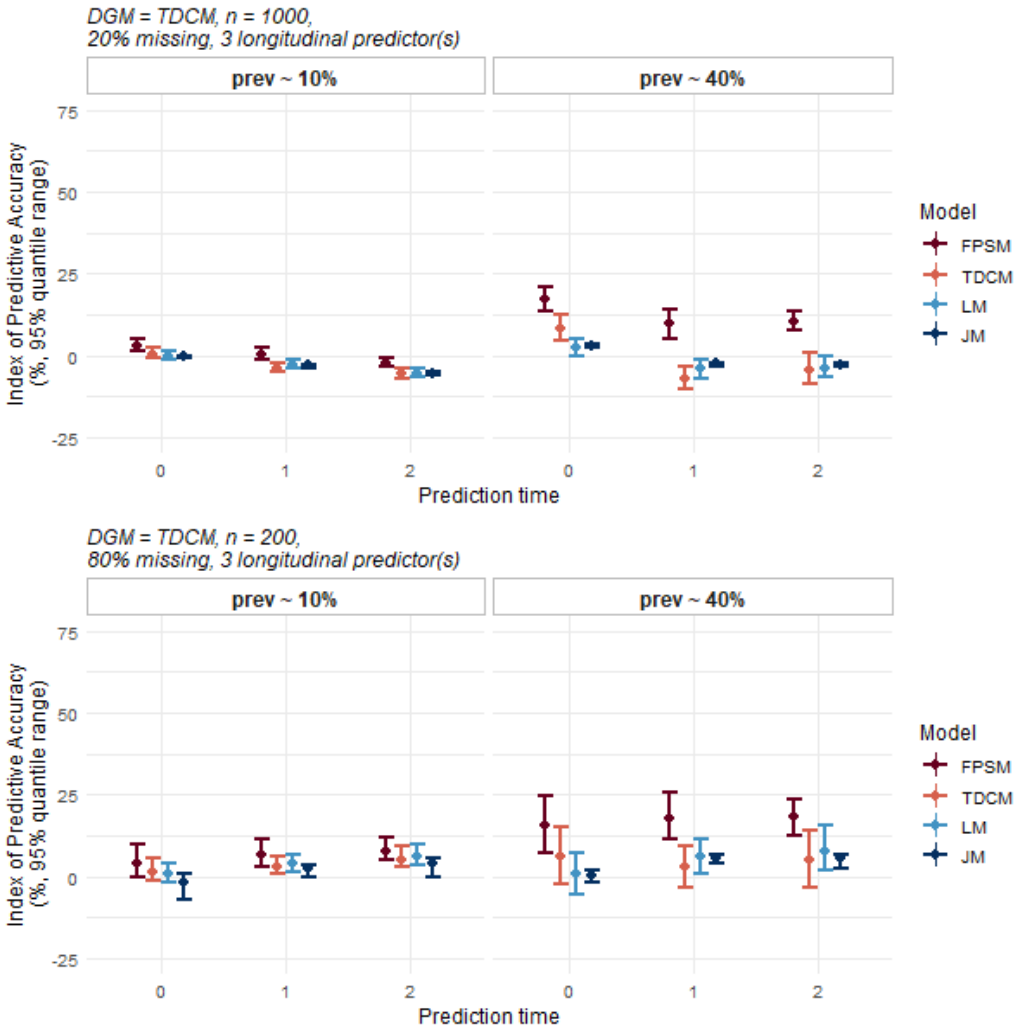

Figure 38: Exploring how the Index of Predictive Accuracy (Overall performance) was influenced by **event prevalence**.

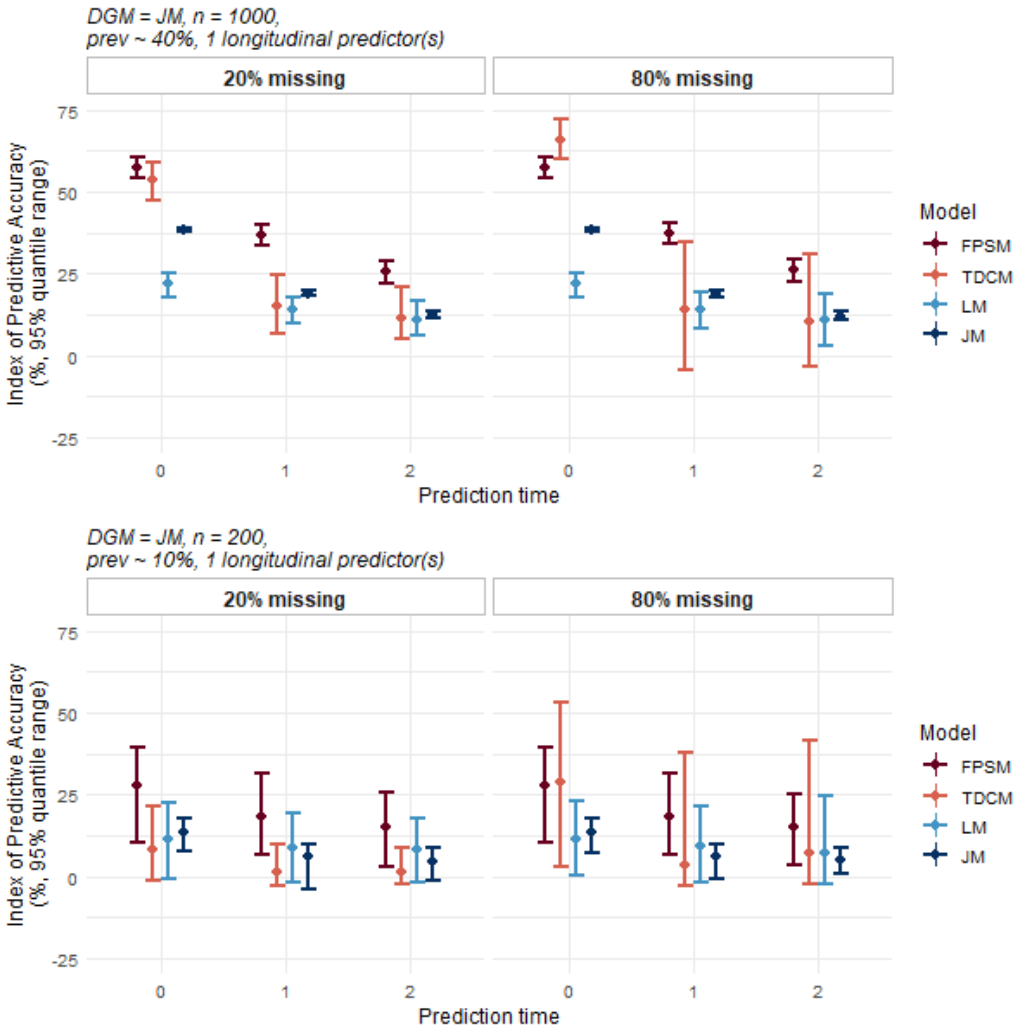

Figure 39: Exploring how the Index of Predictive Accuracy (Overall performance) was influenced by **follow-up missingness**.

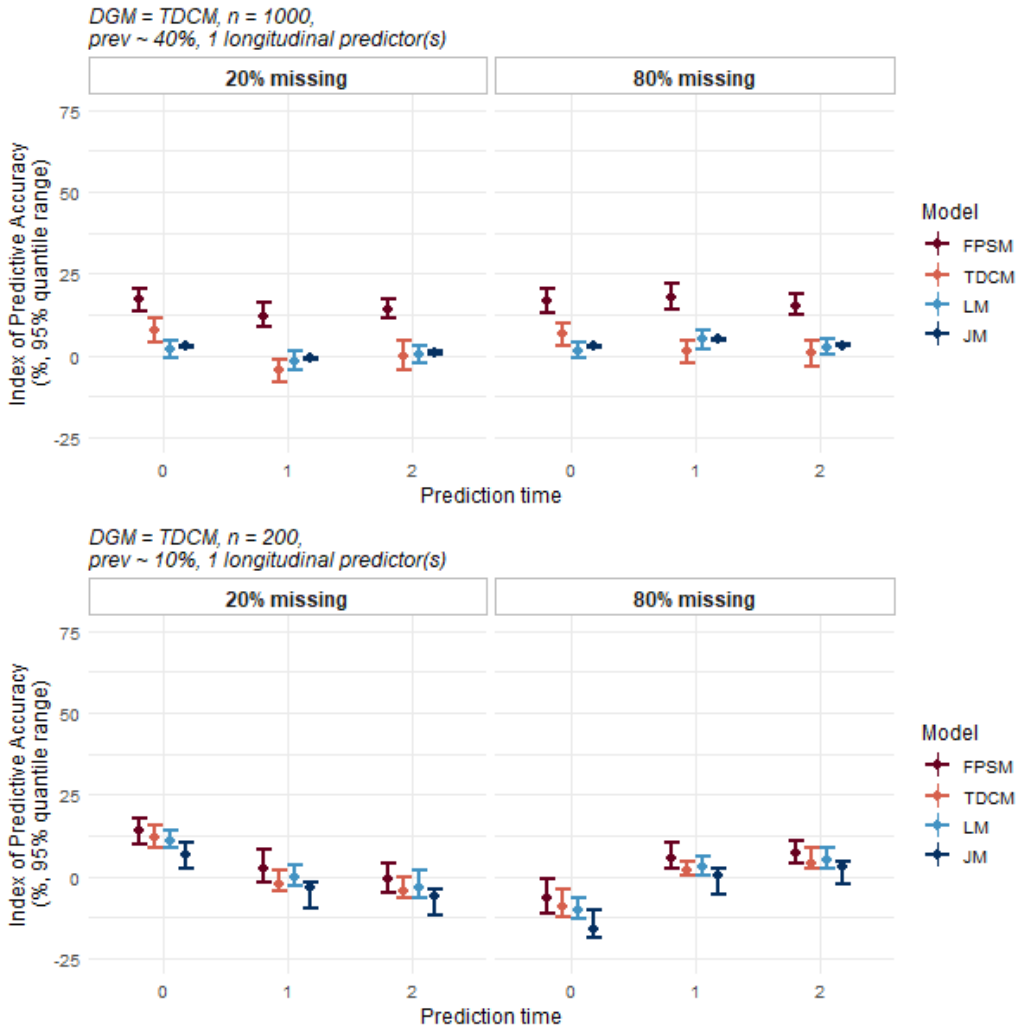

Figure 40: Exploring how the Index of Predictive Accuracy (Overall performance) was influenced by **follow-up missingness**.

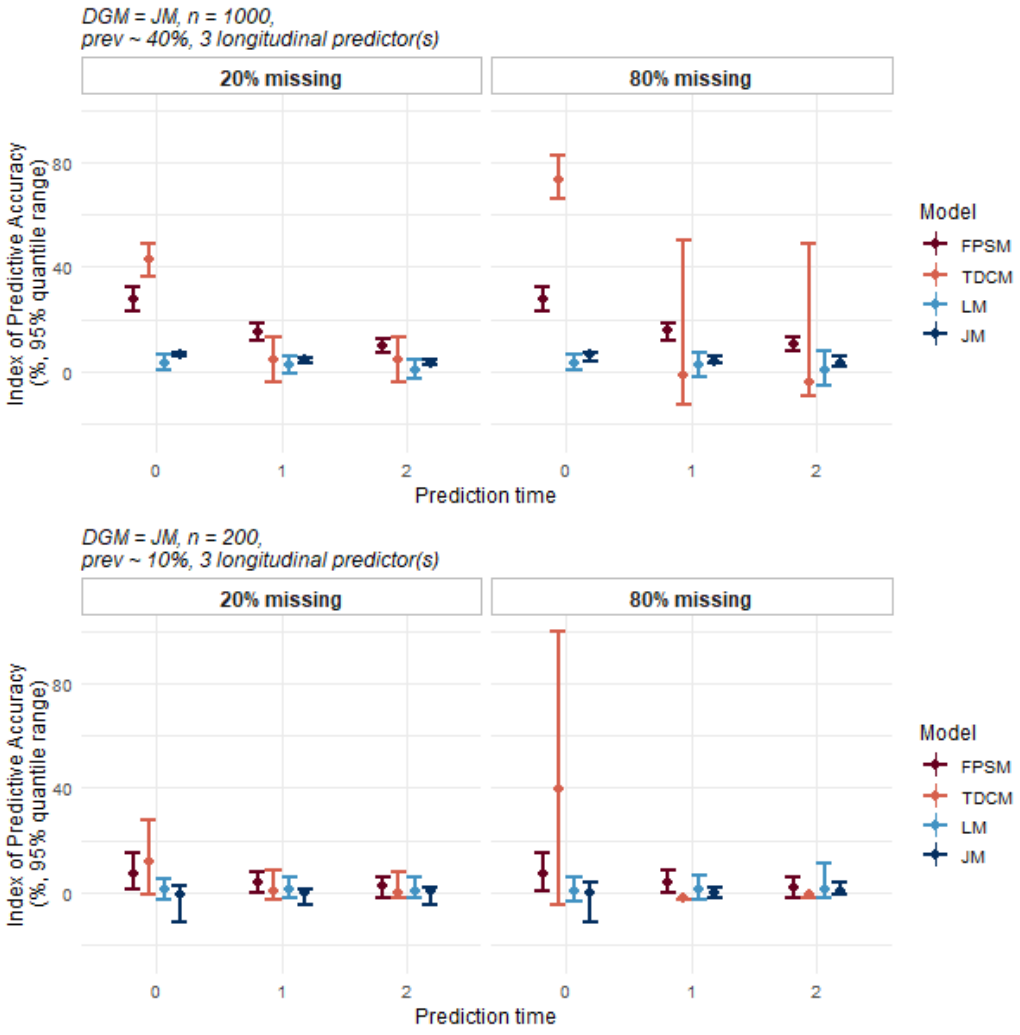

Figure 41: Exploring how the Index of Predictive Accuracy (Overall performance) was influenced by **follow-up missingness**.

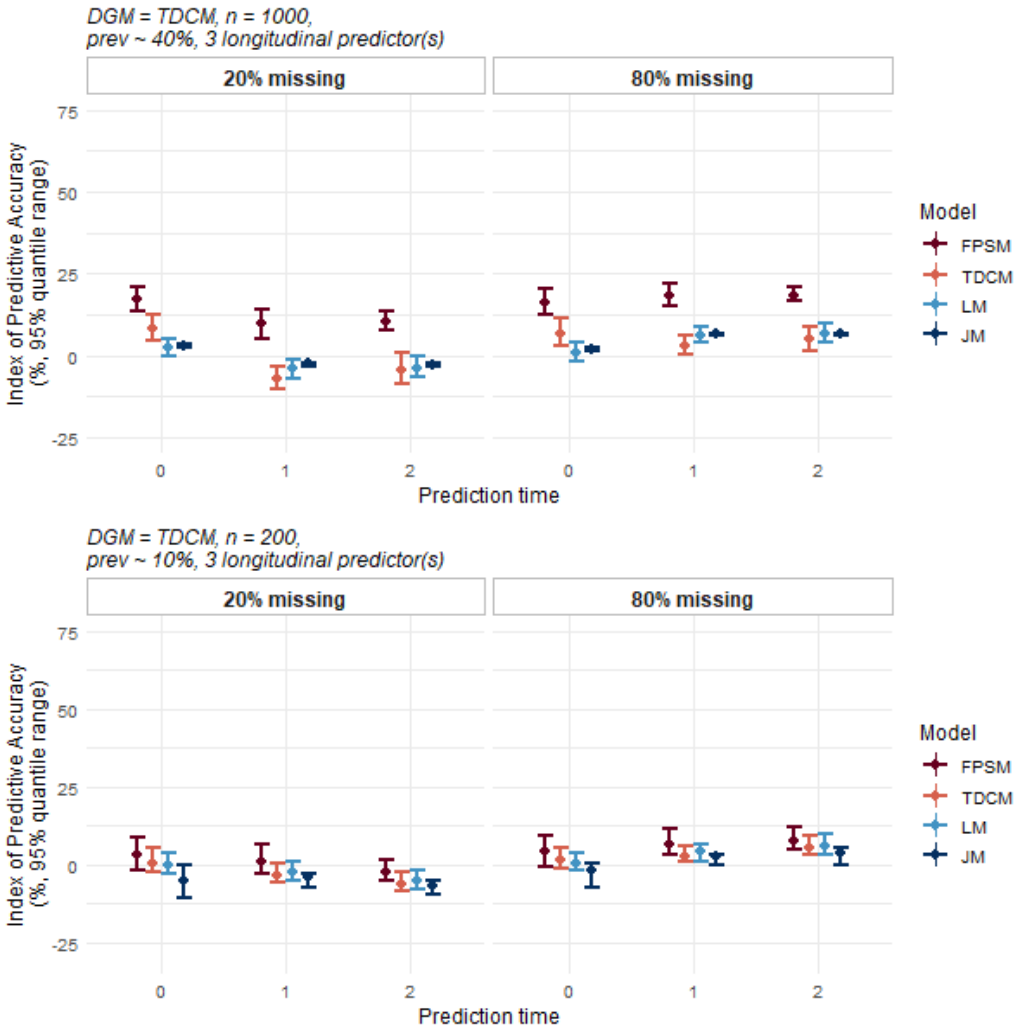

Figure 42: Exploring how the Index of Predictive Accuracy (Overall performance) was influenced by **follow-up missingness**.

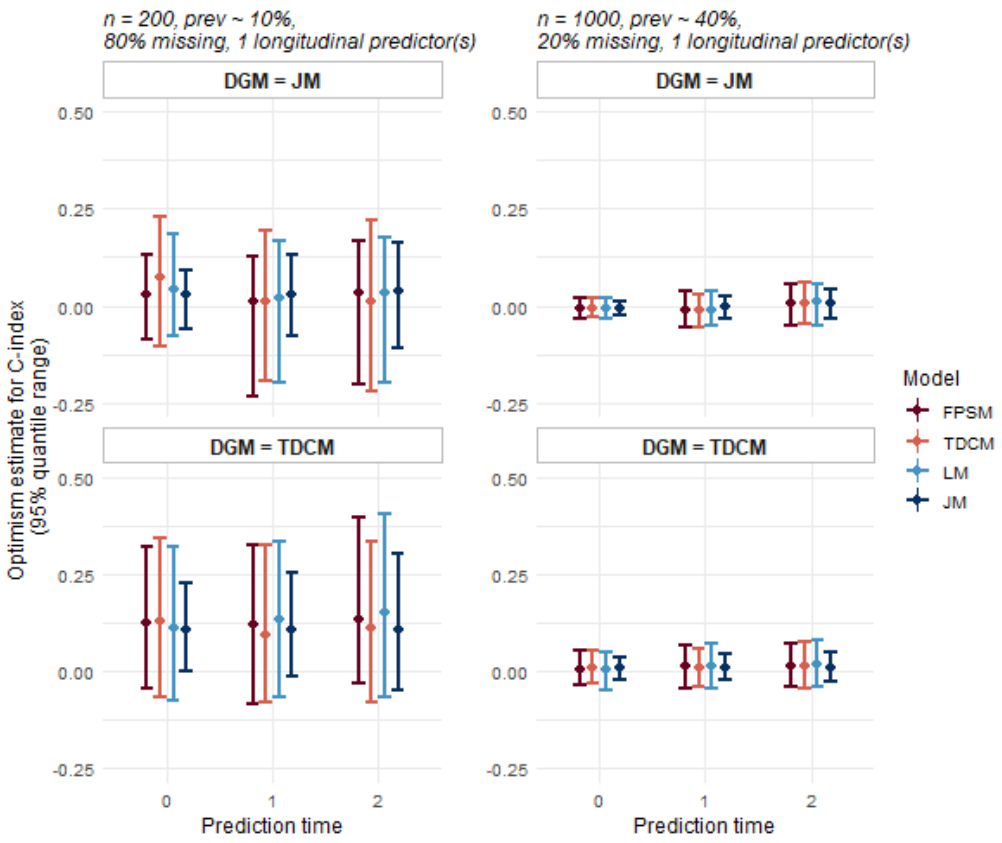

Figure 43: Optimism estimated for Harrell's C-index (Discrimination) under contrasting data generation scenarios.

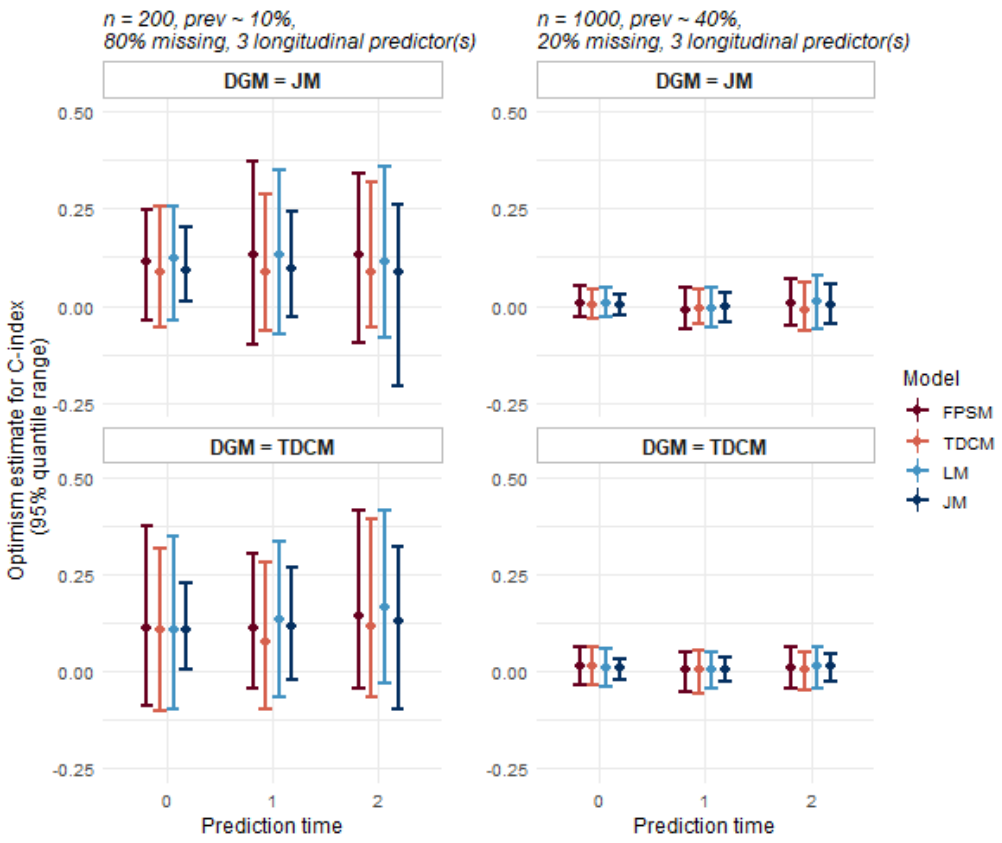

Figure 44: Optimism estimated for Harrell's C-index (Discrimination) under contrasting data generation scenarios.

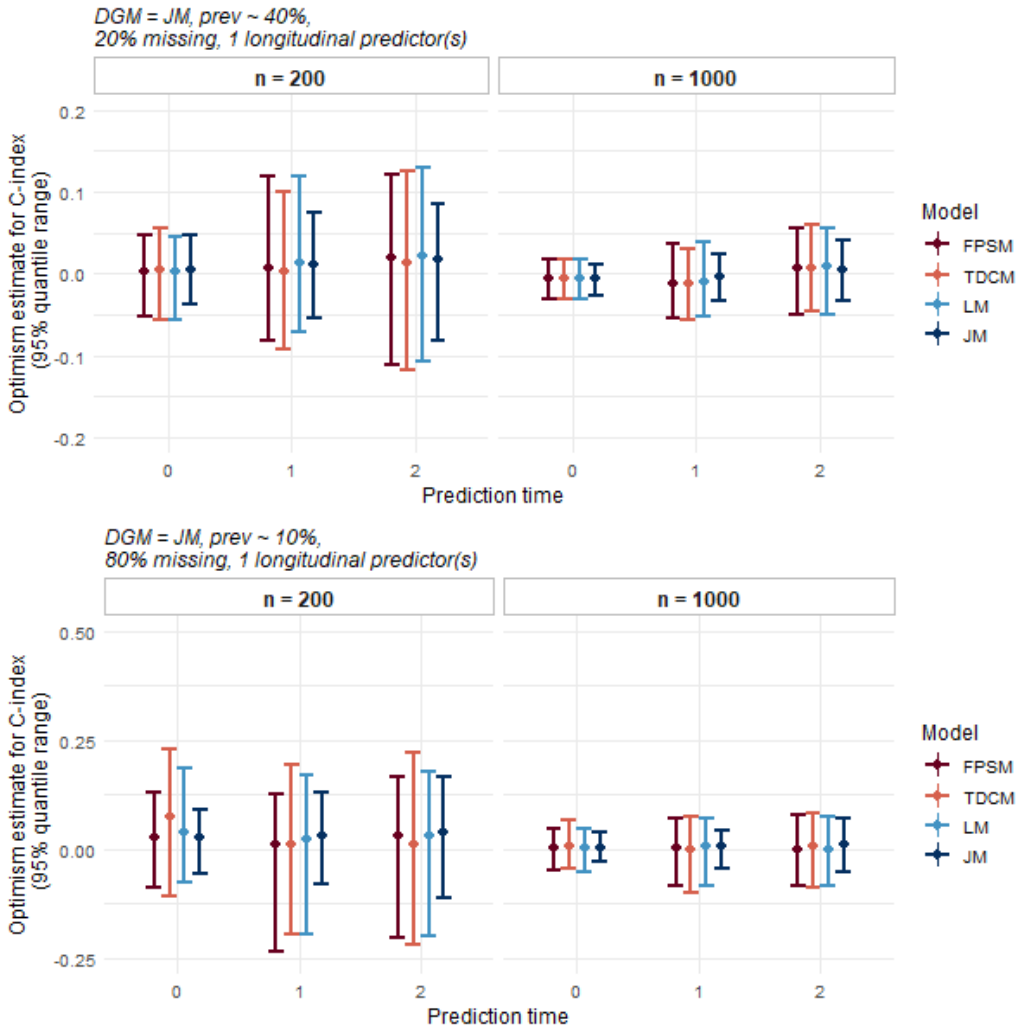

Figure 45: Exploring how optimism estimated for Harrell's C-index (Discrimination) was influenced by **sample size**.

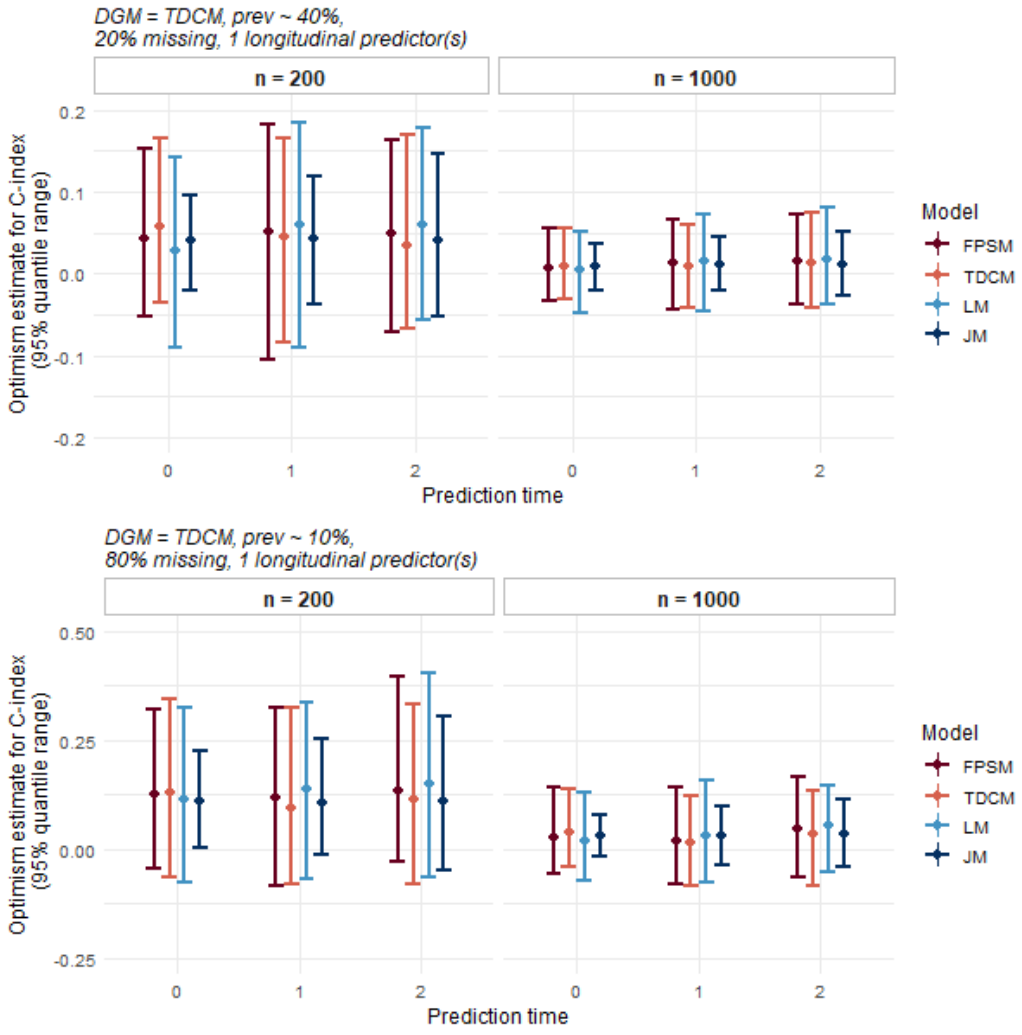

Figure 46: Exploring how optimism estimated for Harrell's C-index (Discrimination) was influenced by **sample size**.

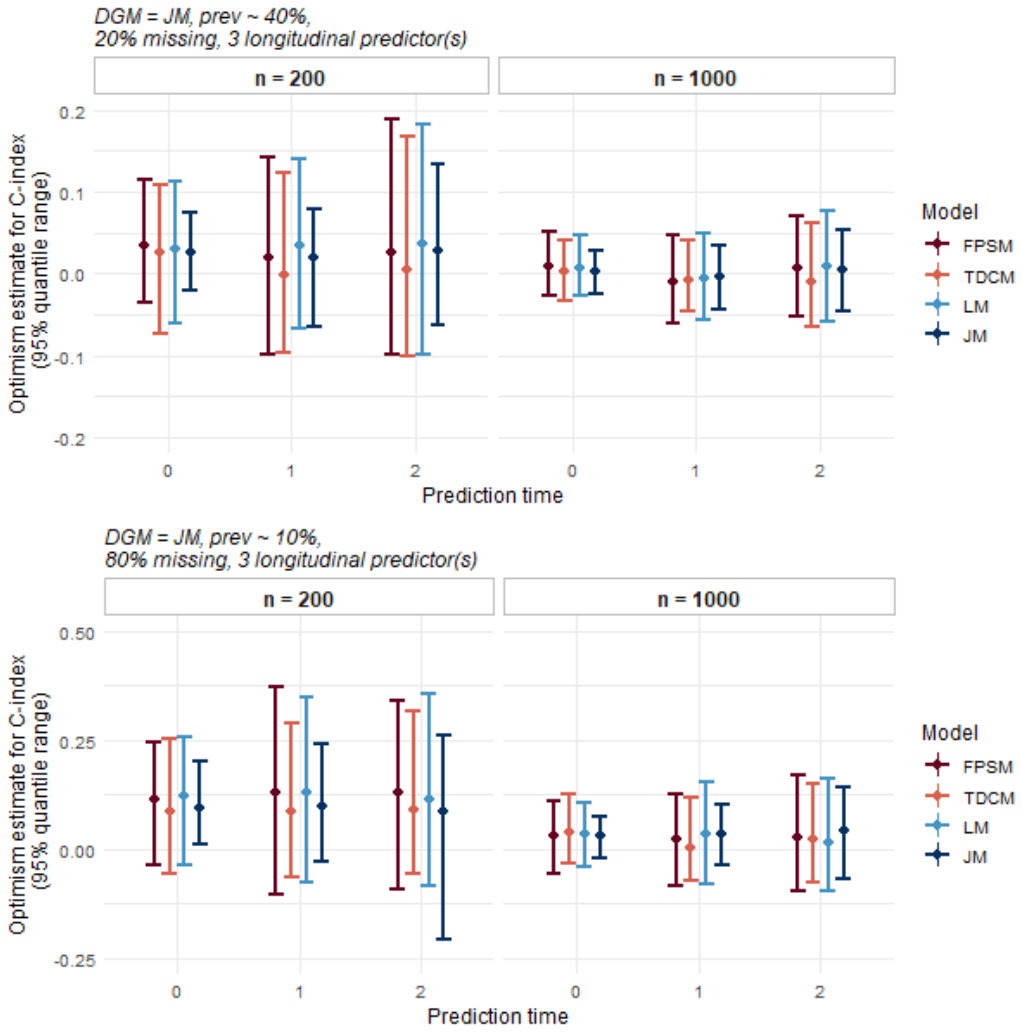

Figure 47: Exploring how optimism estimated for Harrell's C-index (Discrimination) was influenced by **sample size**.

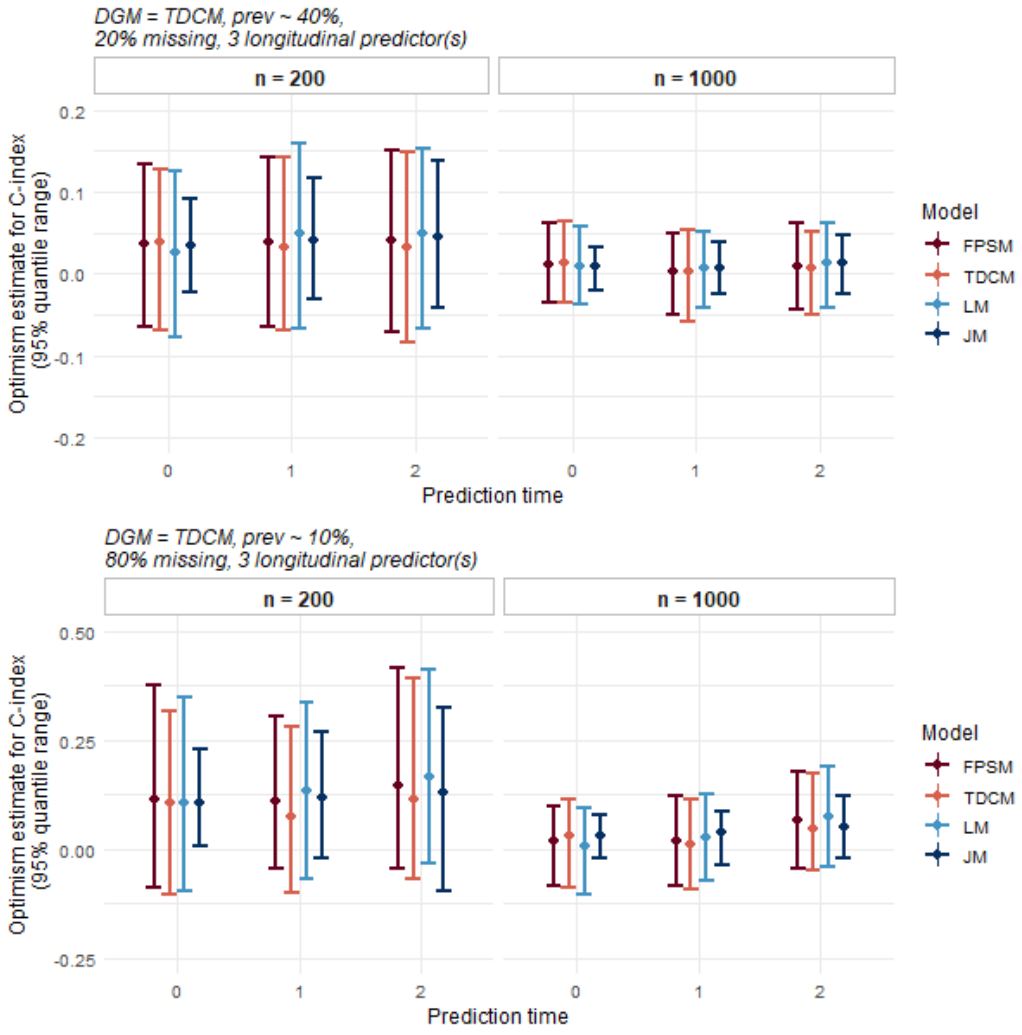

Figure 48: Exploring how optimism estimated for Harrell's C-index (Discrimination) was influenced by **sample size**.

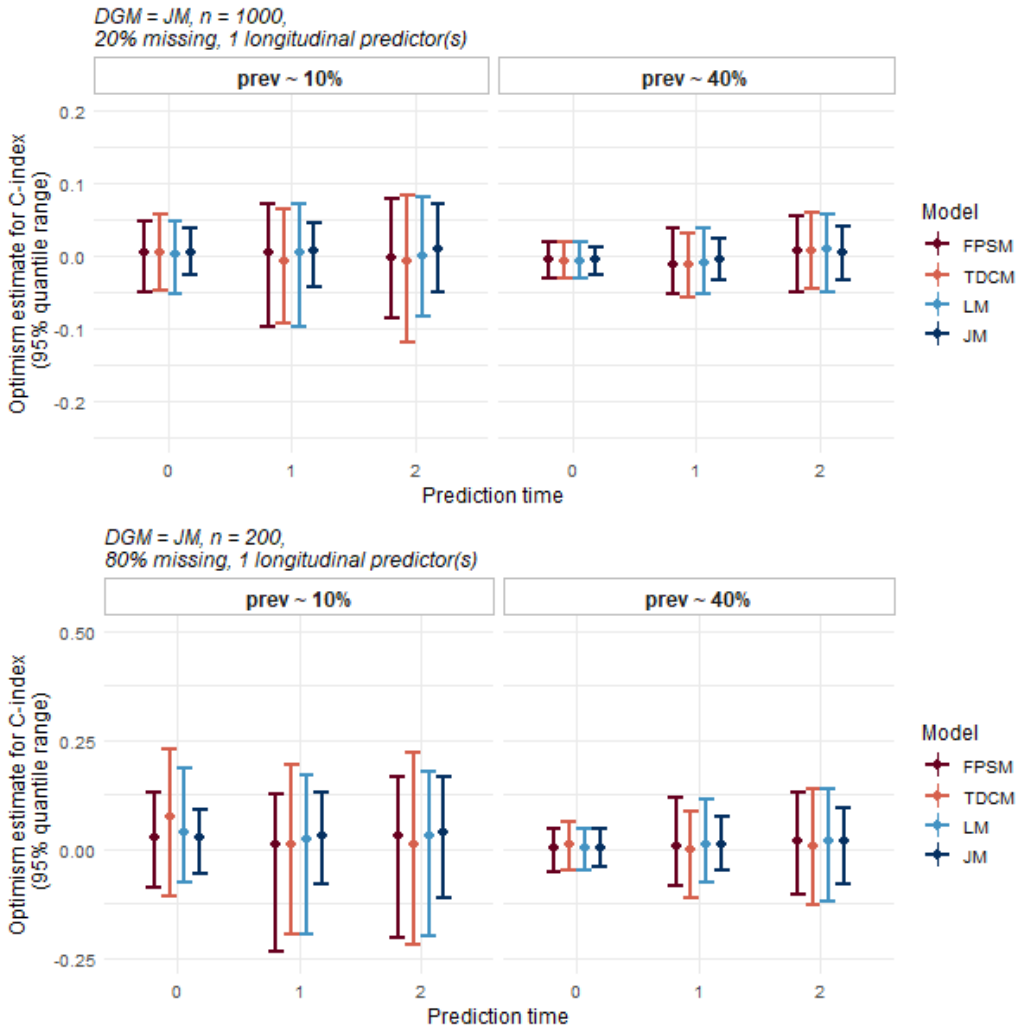

Figure 49: Exploring how optimism estimated for Harrell's C-index (Discrimination) was influenced by **event prevalence**.

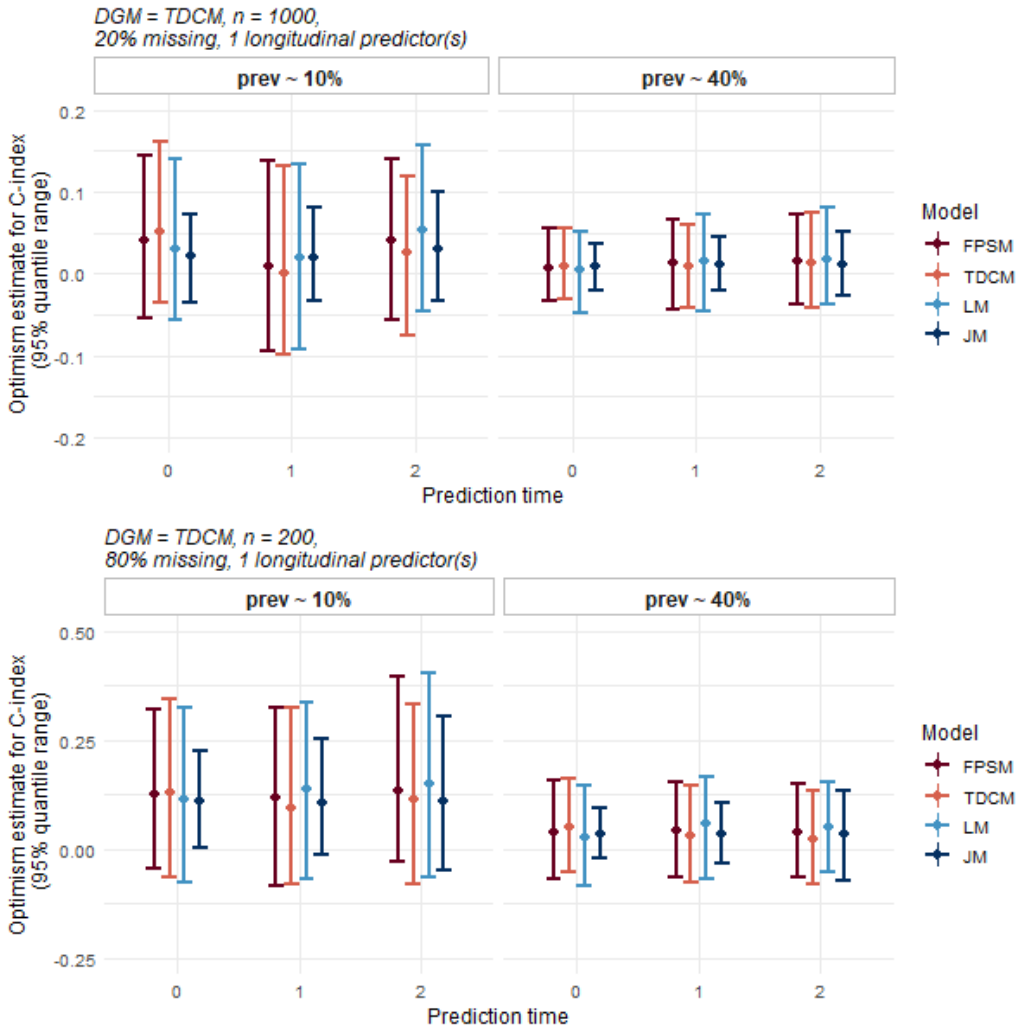

Figure 50: Exploring how optimism estimated for Harrell's C-index (Discrimination) was influenced by **event prevalence**.

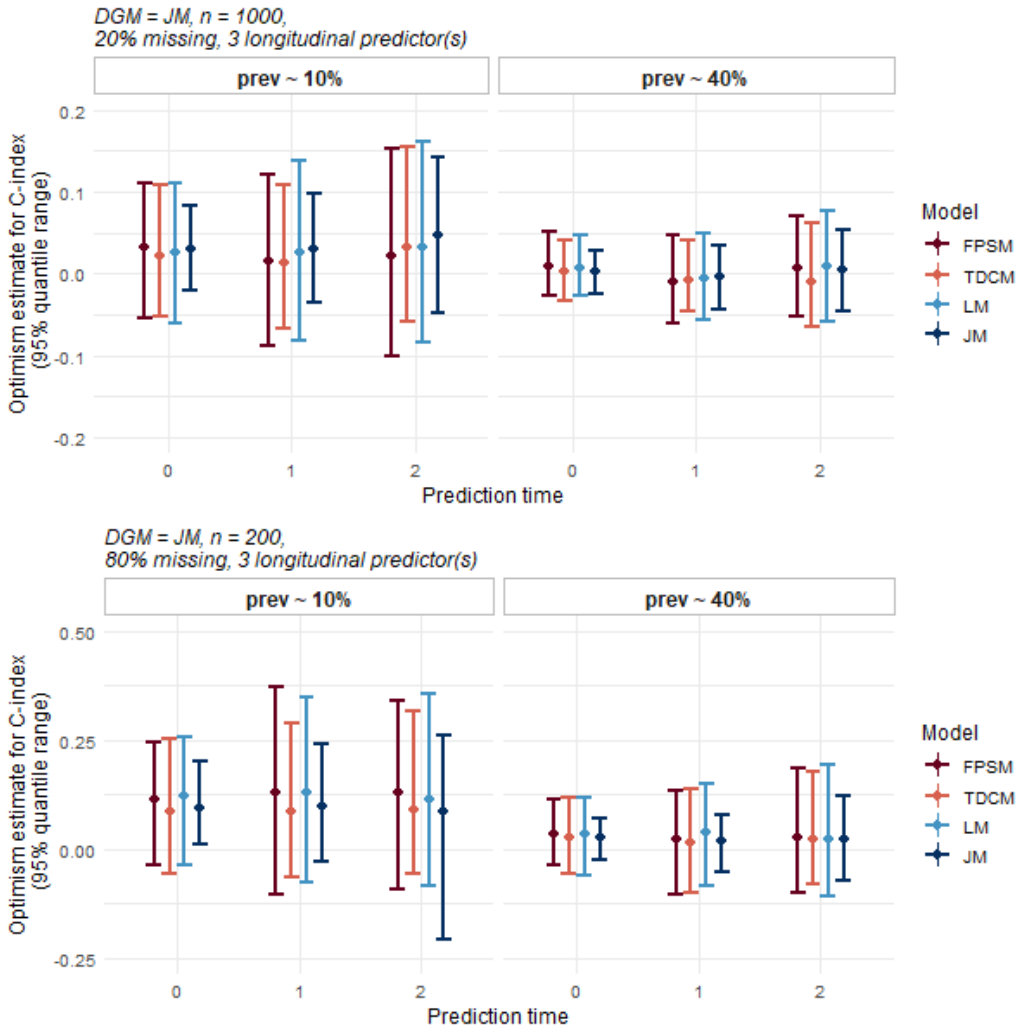

Figure 51: Exploring how optimism estimated for Harrell's C-index (Discrimination) was influenced by **event prevalence**.

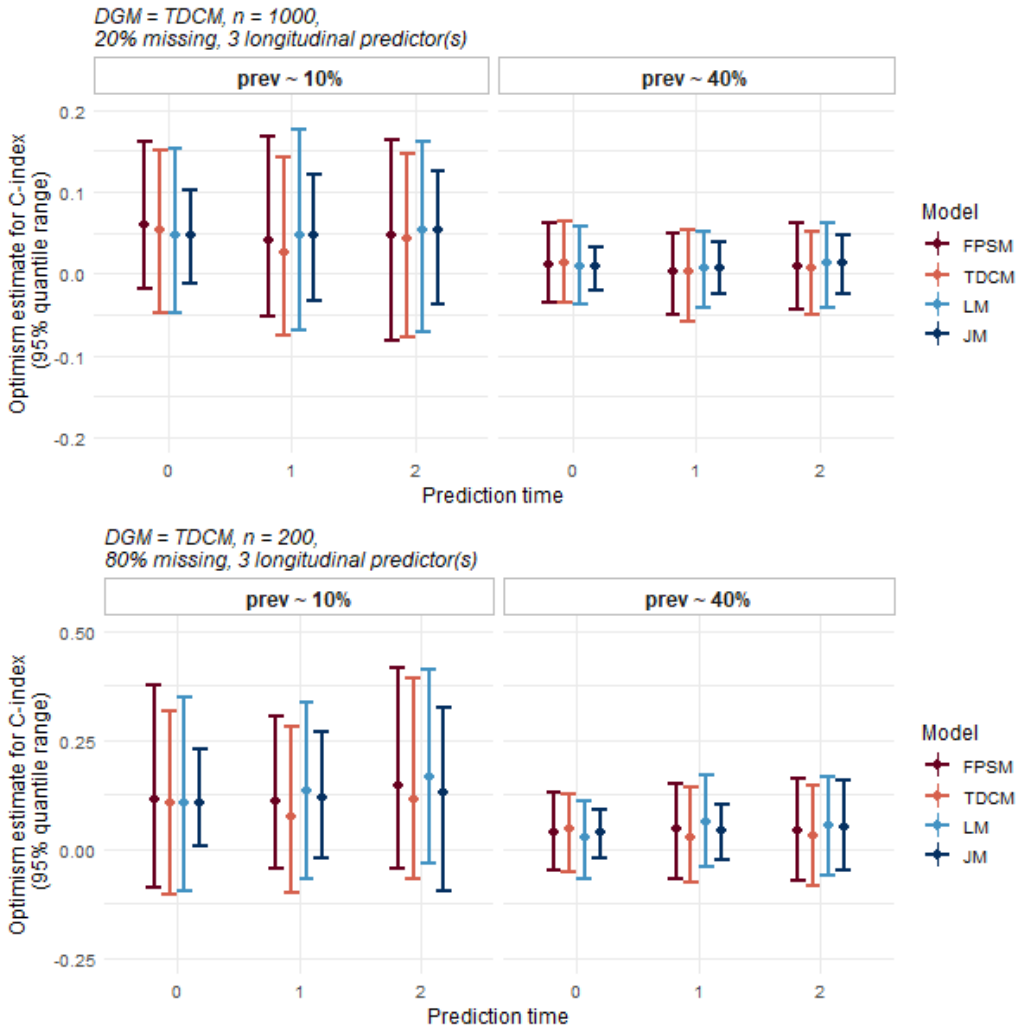

Figure 52: Exploring how optimism estimated for Harrell's C-index (Discrimination) was influenced by **event prevalence**.

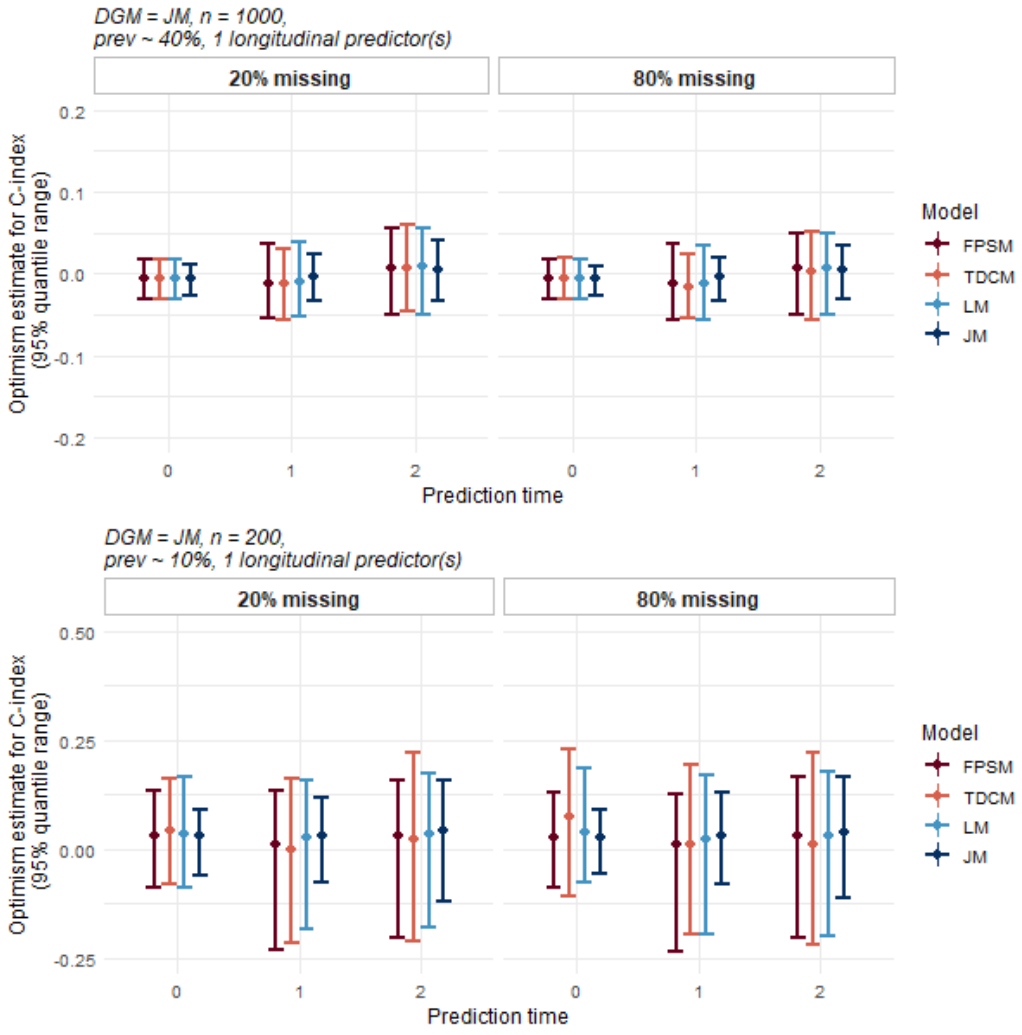

Figure 53: Exploring how optimism estimated for Harrell's C-index (Discrimination) was influenced by **follow-up missingness**.

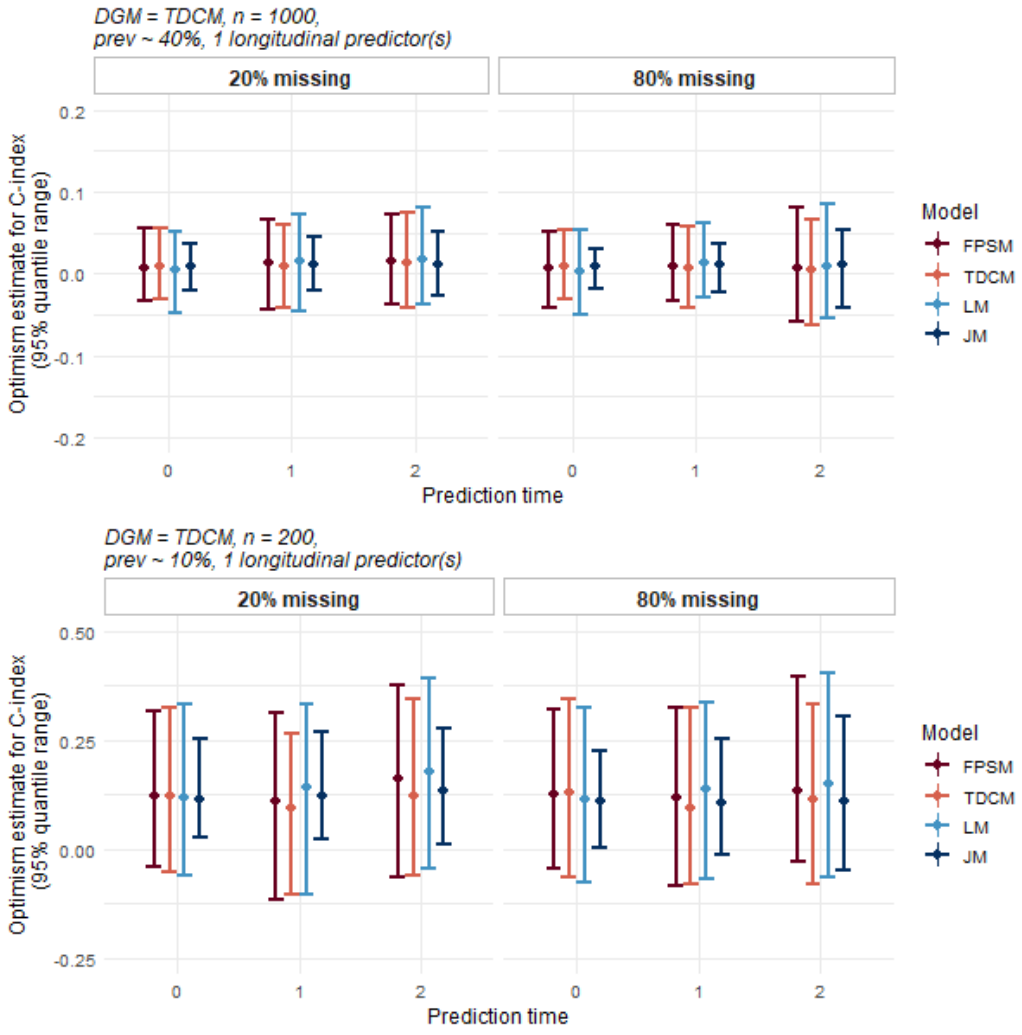

Figure 54: Exploring how optimism estimated for Harrell's C-index (Discrimination) was influenced by **follow-up missingness**.

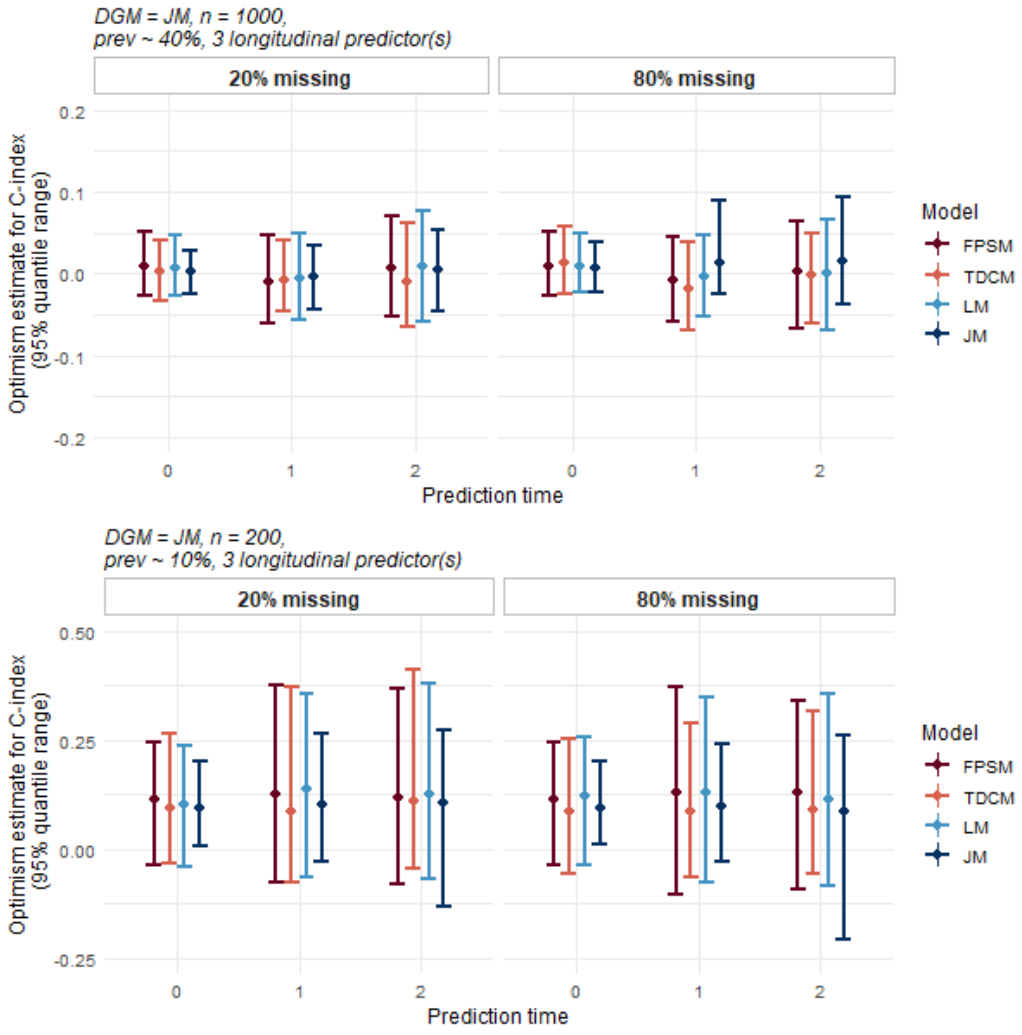

Figure 55: Exploring how optimism estimated for Harrell's C-index (Discrimination) was influenced by **follow-up missingness**.

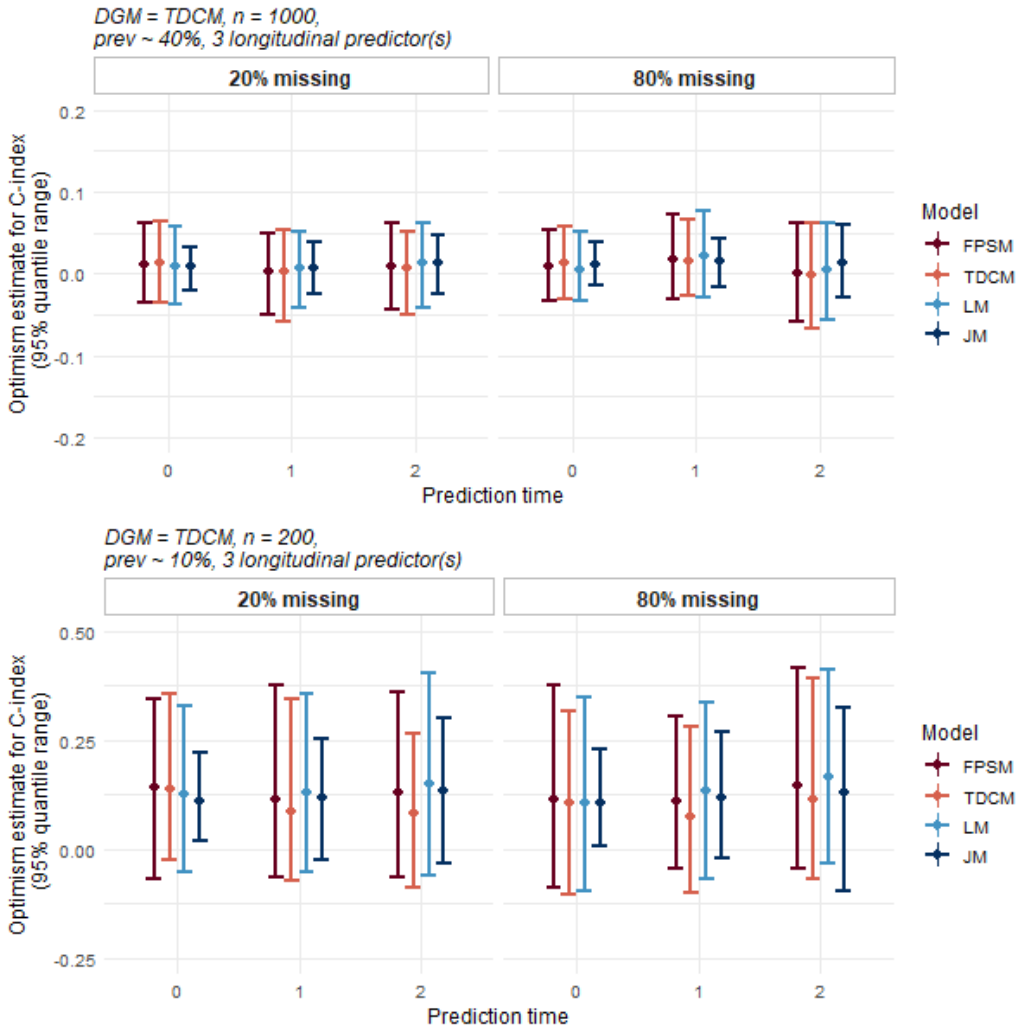

Figure 56: Exploring how optimism estimated for Harrell's C-index (Discrimination) was influenced by **follow-up missingness**.

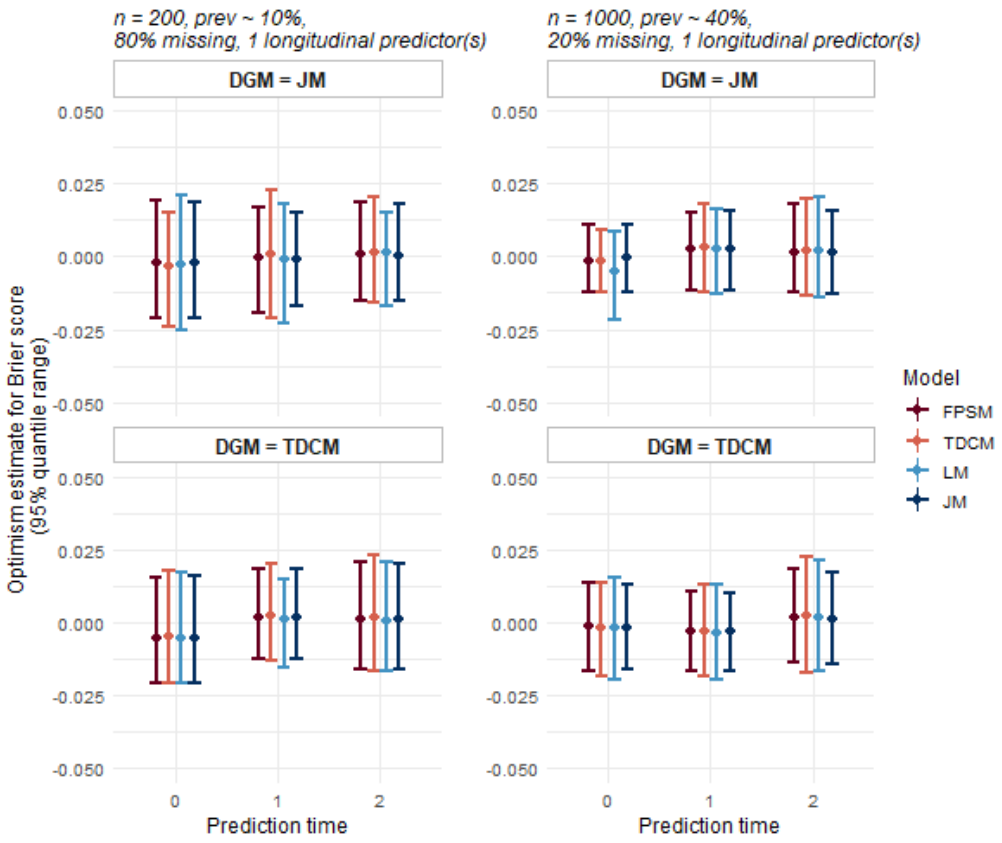

Figure 57: Optimism estimated for Survival Brier Score (Overall performance) under contrasting data generation scenarios.

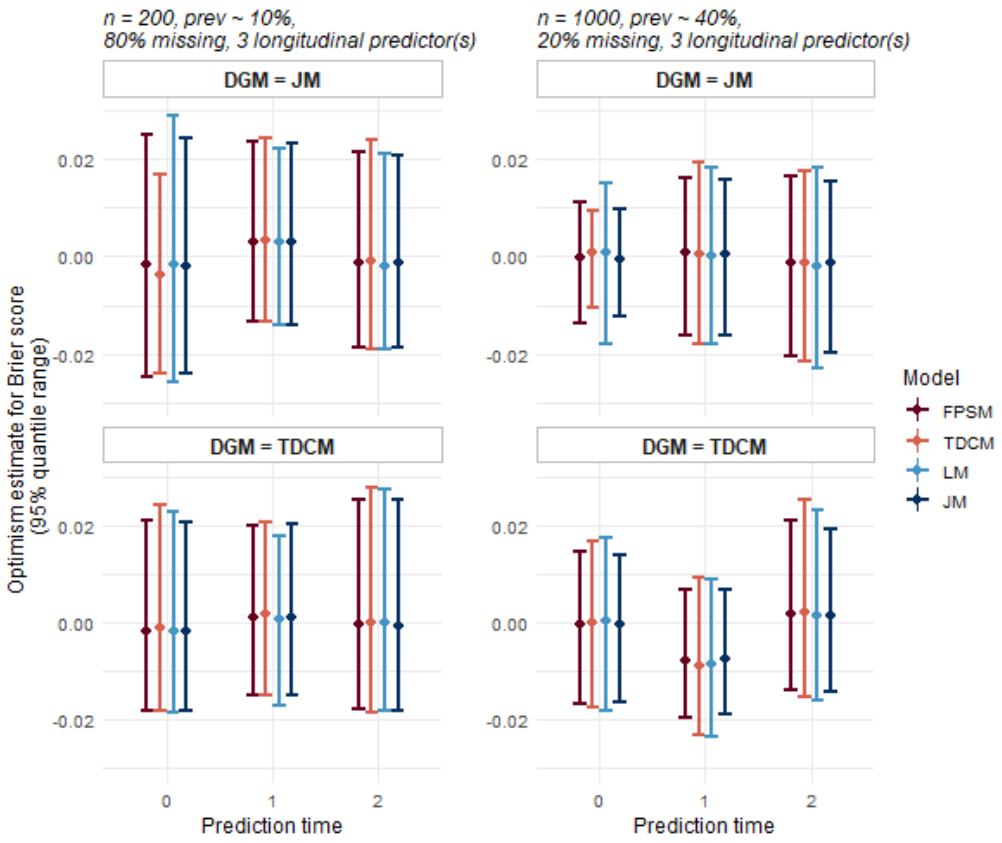

Figure 58: Optimism estimated for Survival Brier Score (Overall performance) under contrasting data generation scenarios.

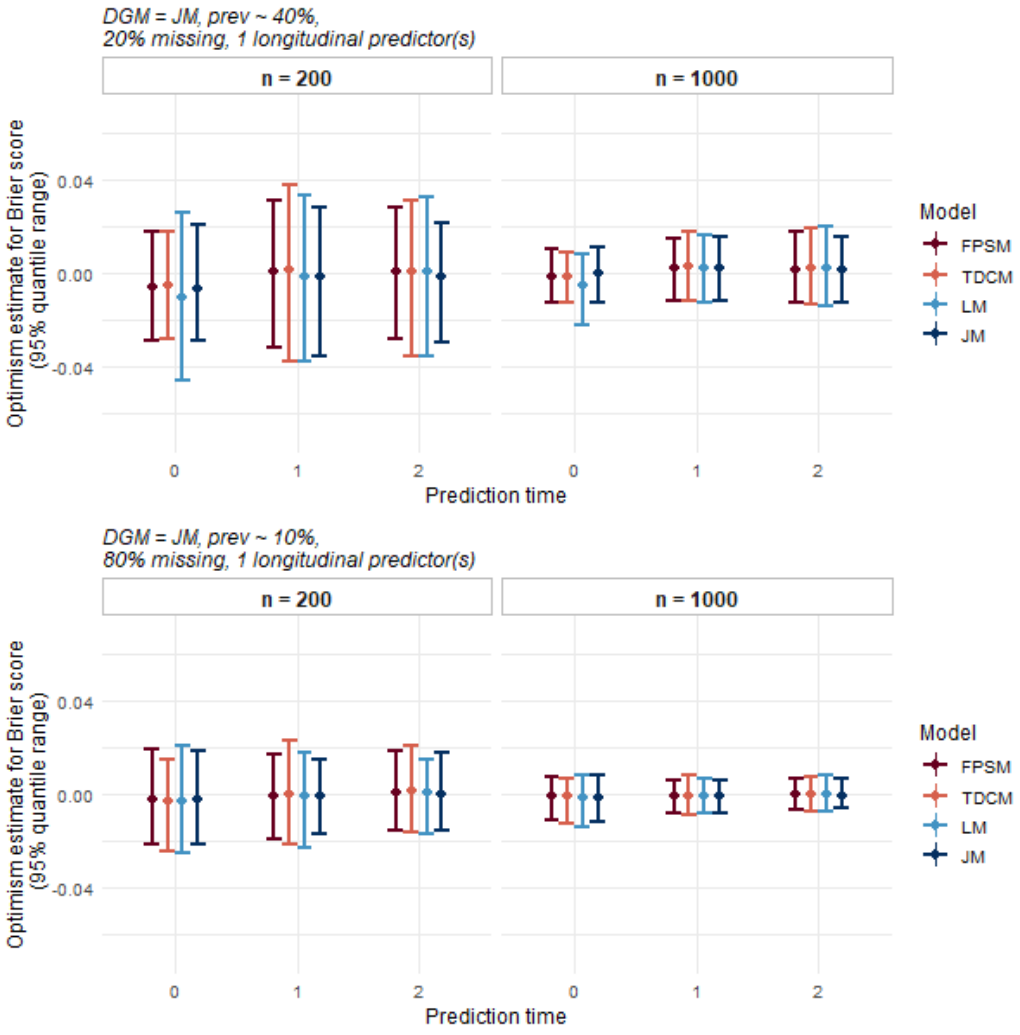

Figure 59: Exploring how the optimism estimated for the Survival Brier Score (Overall performance) was influenced by **sample size**.

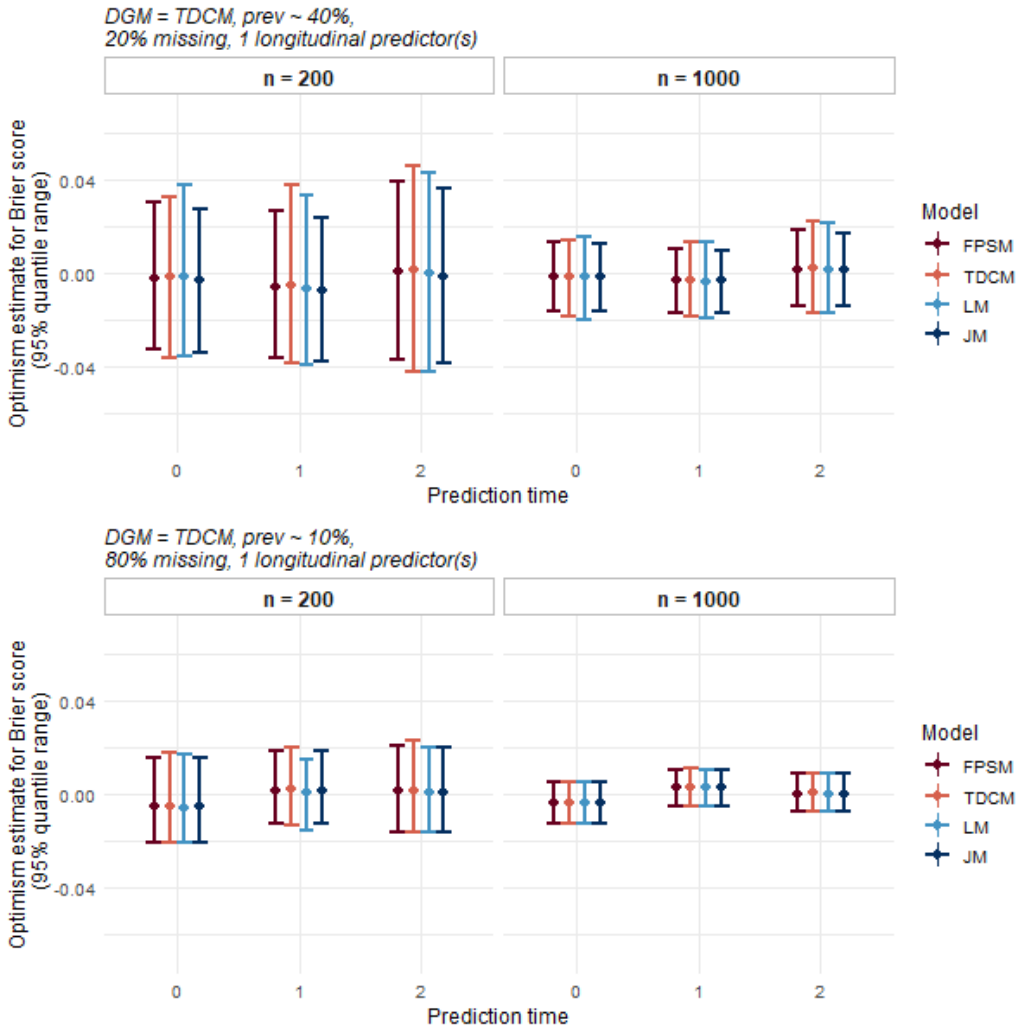

Figure 60: Exploring how the optimism estimated for the Survival Brier Score (Overall performance) was influenced by **sample size**.

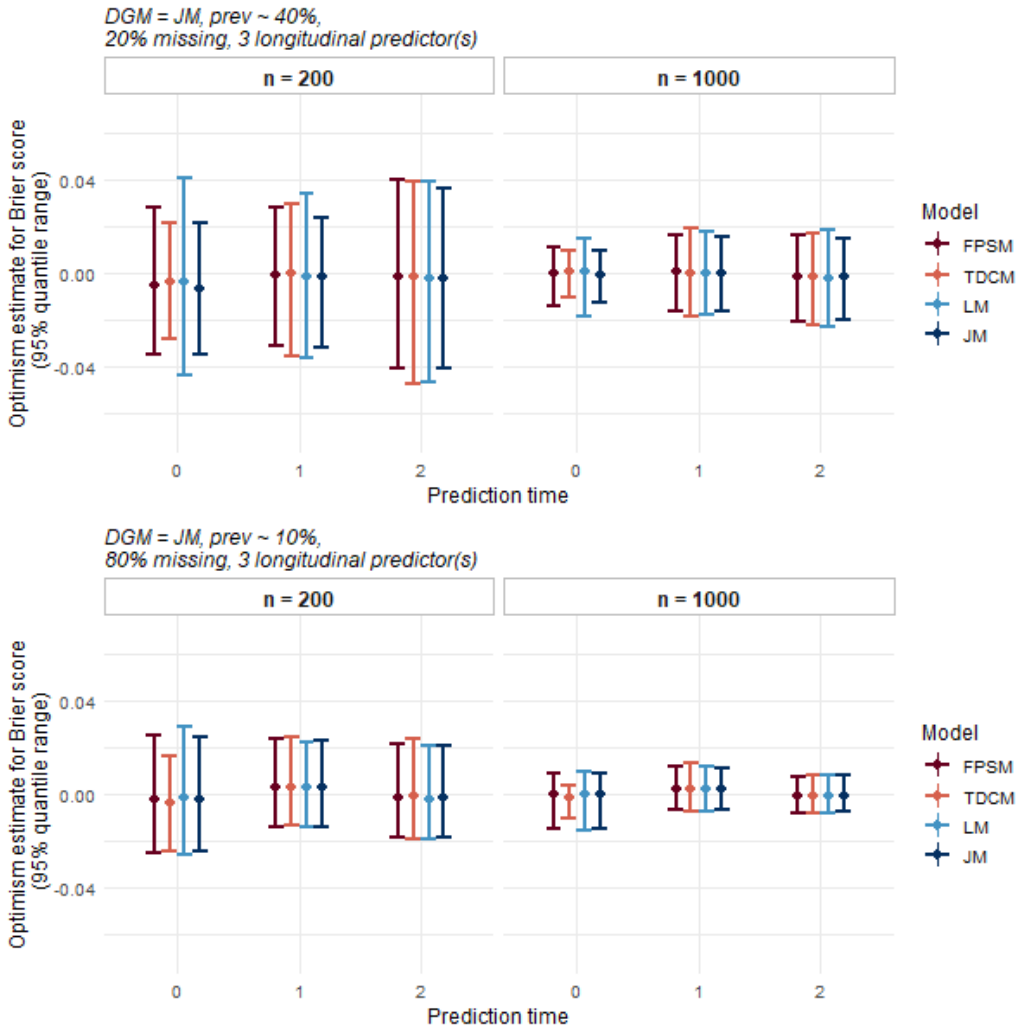

Figure 61: Exploring how the optimism estimated for the Survival Brier Score (Overall performance) was influenced by **sample size**.

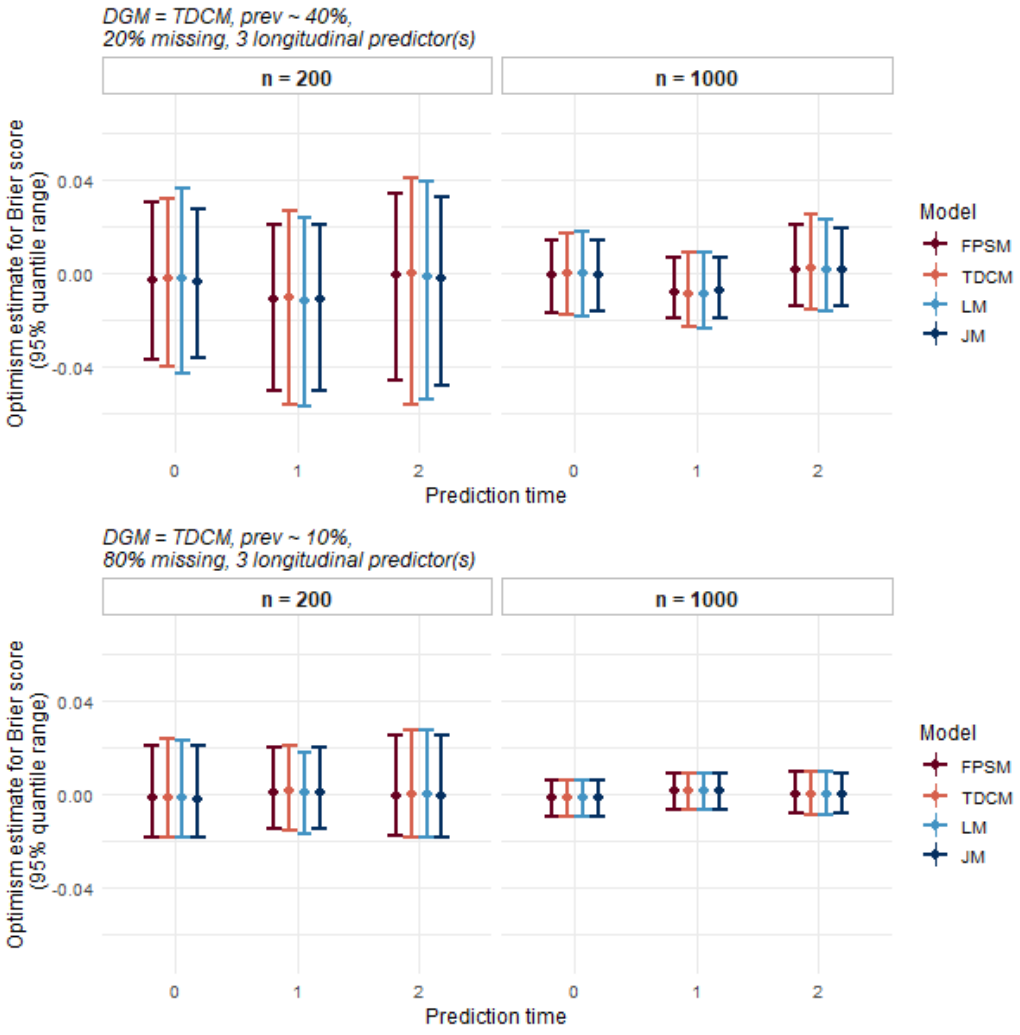

Figure 62: Exploring how the optimism estimated for the Survival Brier Score (Overall performance) was influenced by **sample size**.

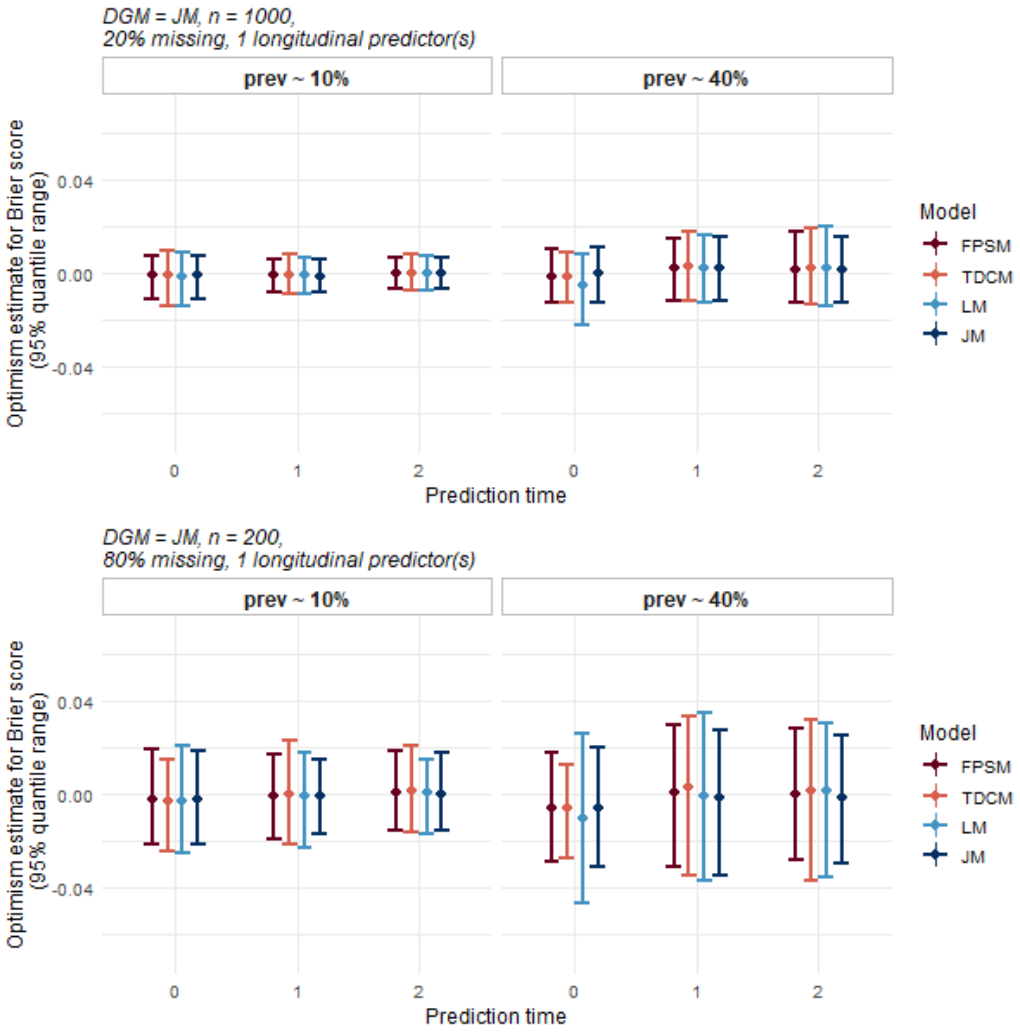

Figure 63: Exploring how the optimism estimated for the Survival Brier Score (Overall performance) was influenced by **sample size**.

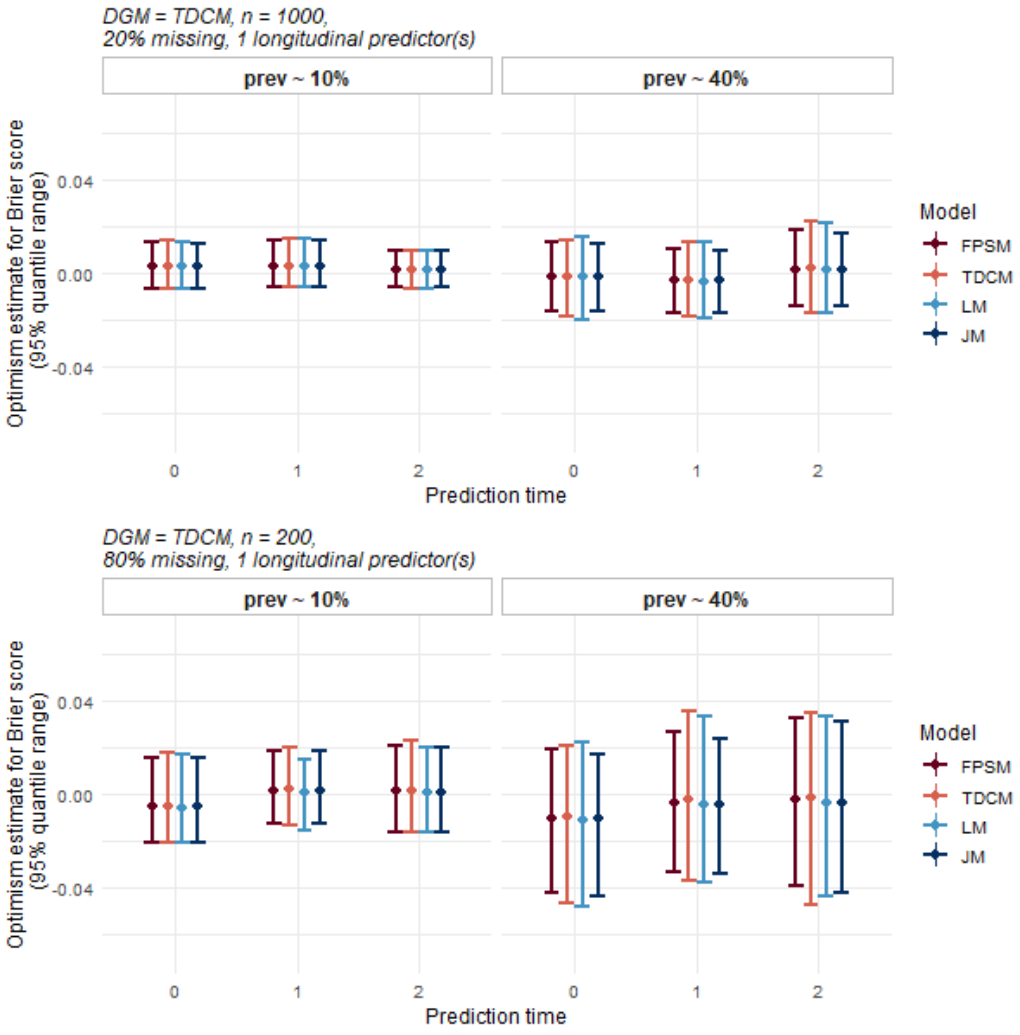

Figure 64: Exploring how the optimism estimated for the Survival Brier Score (Overall performance) was influenced by **event prevalence**.

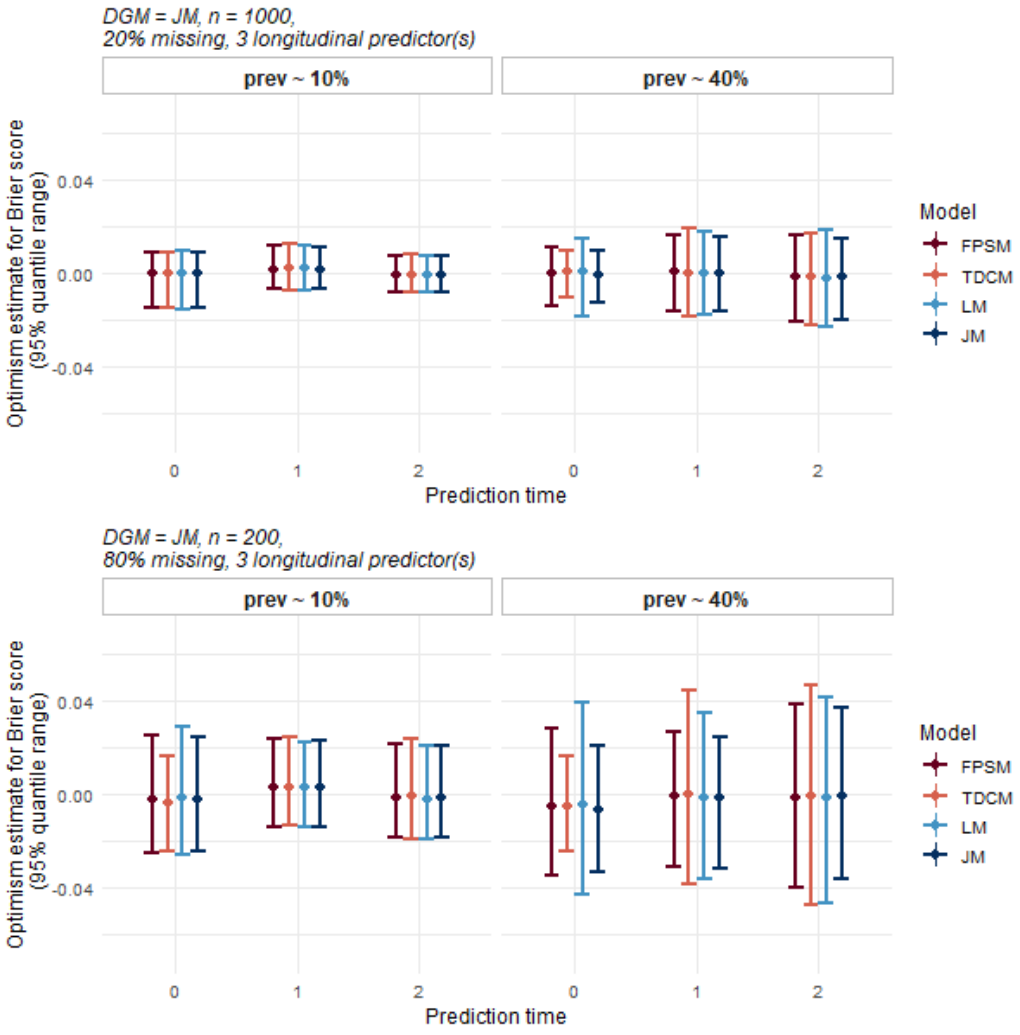

Figure 65: Exploring how the optimism estimated for the Survival Brier Score (Overall performance) was influenced by **event prevalence**.

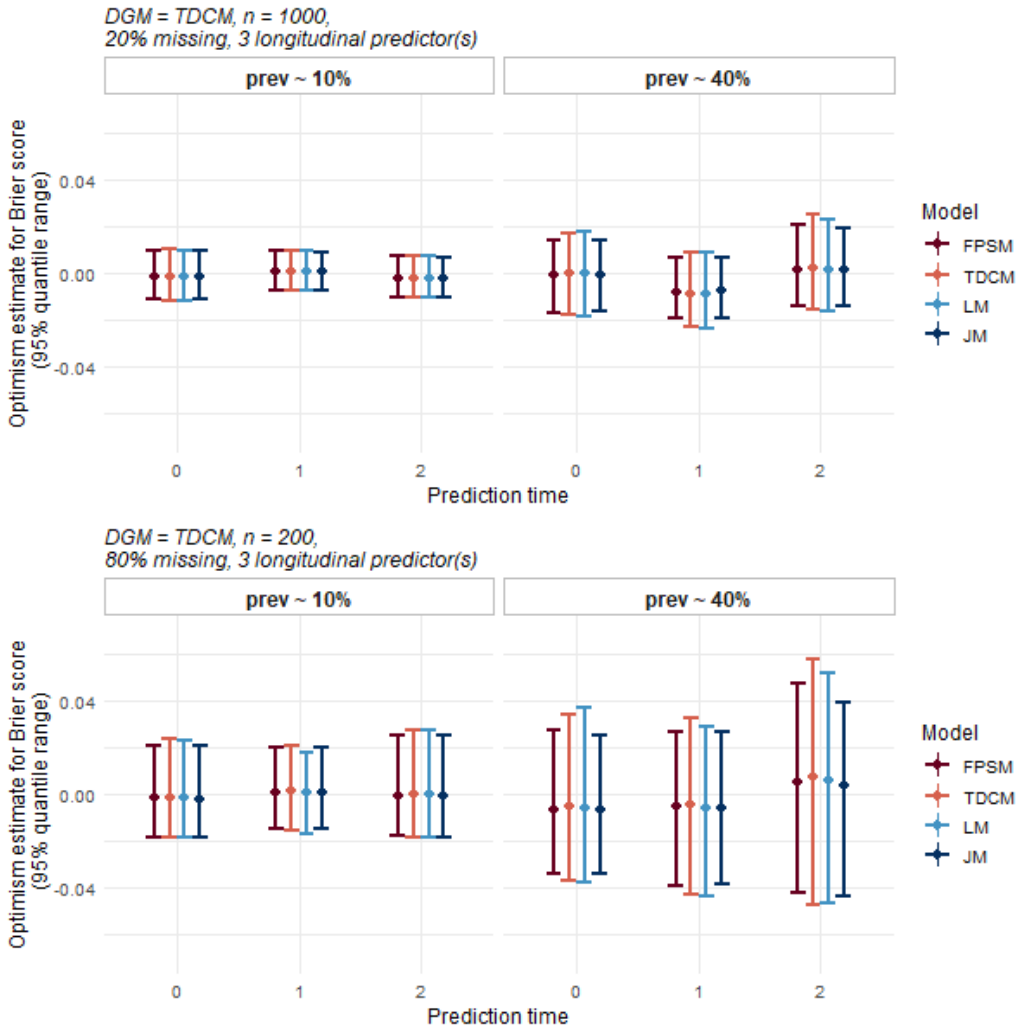

Figure 66: Exploring how the optimism estimated for the Survival Brier Score (Overall performance) was influenced by **event prevalence**.

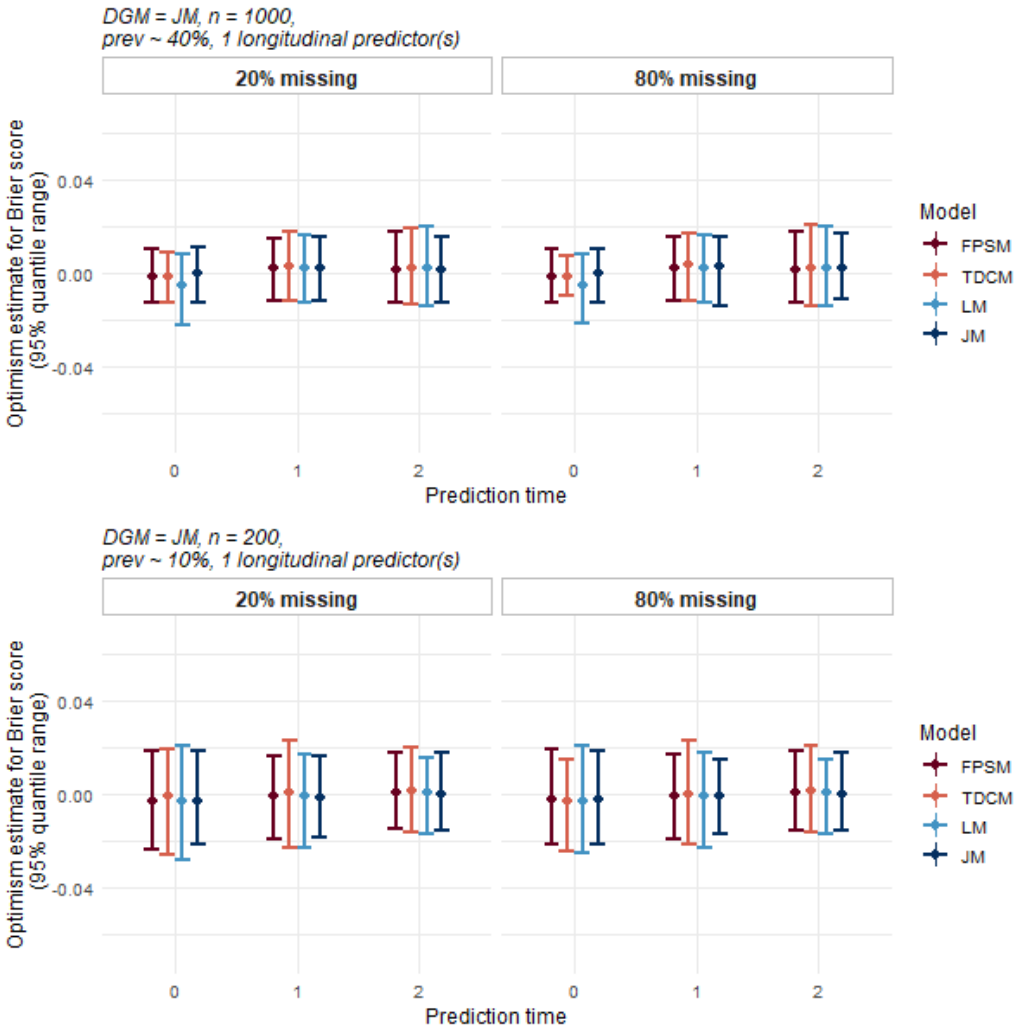

Figure 67: Exploring how the optimism estimated for the Survival Brier Score (Overall performance) was influenced by **follow-up missingness**.

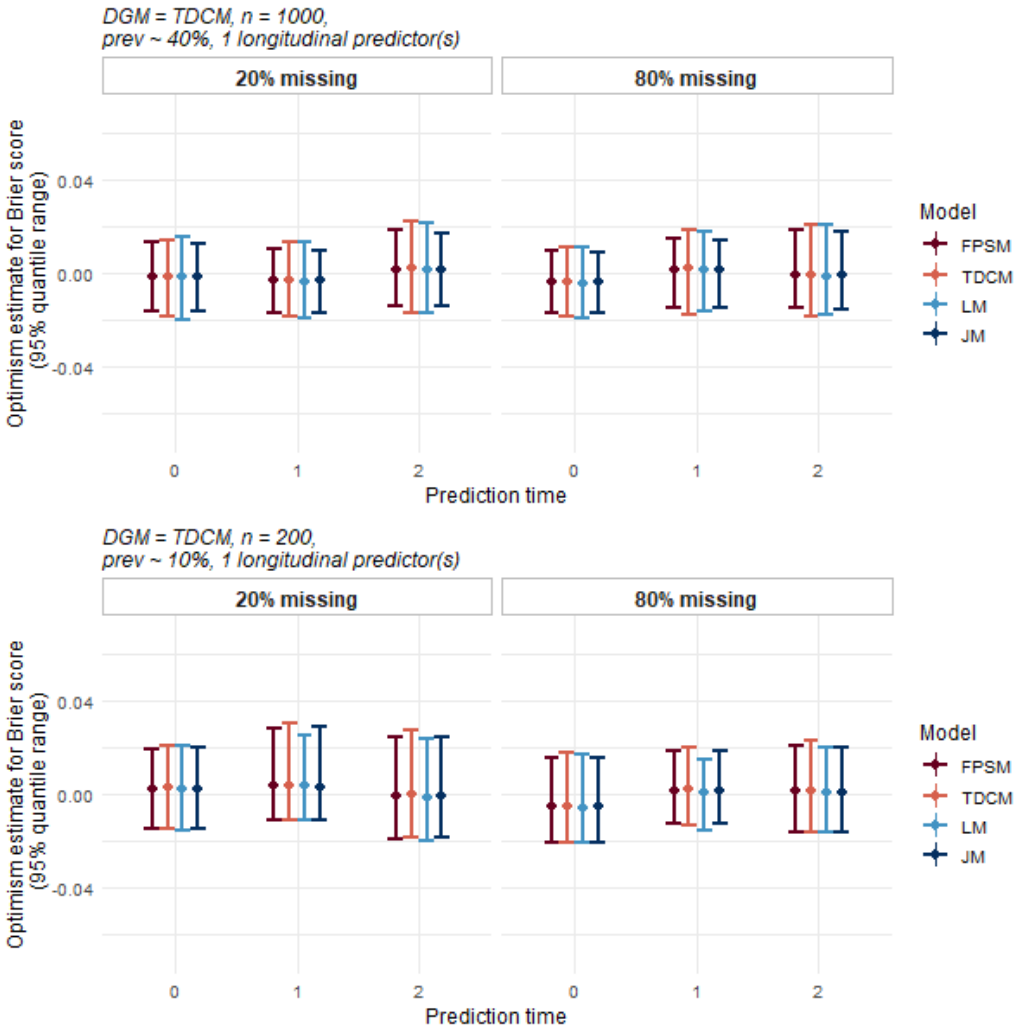

Figure 68: Exploring how the optimism estimated for the Survival Brier Score (Overall performance) was influenced by **follow-up missingness**.

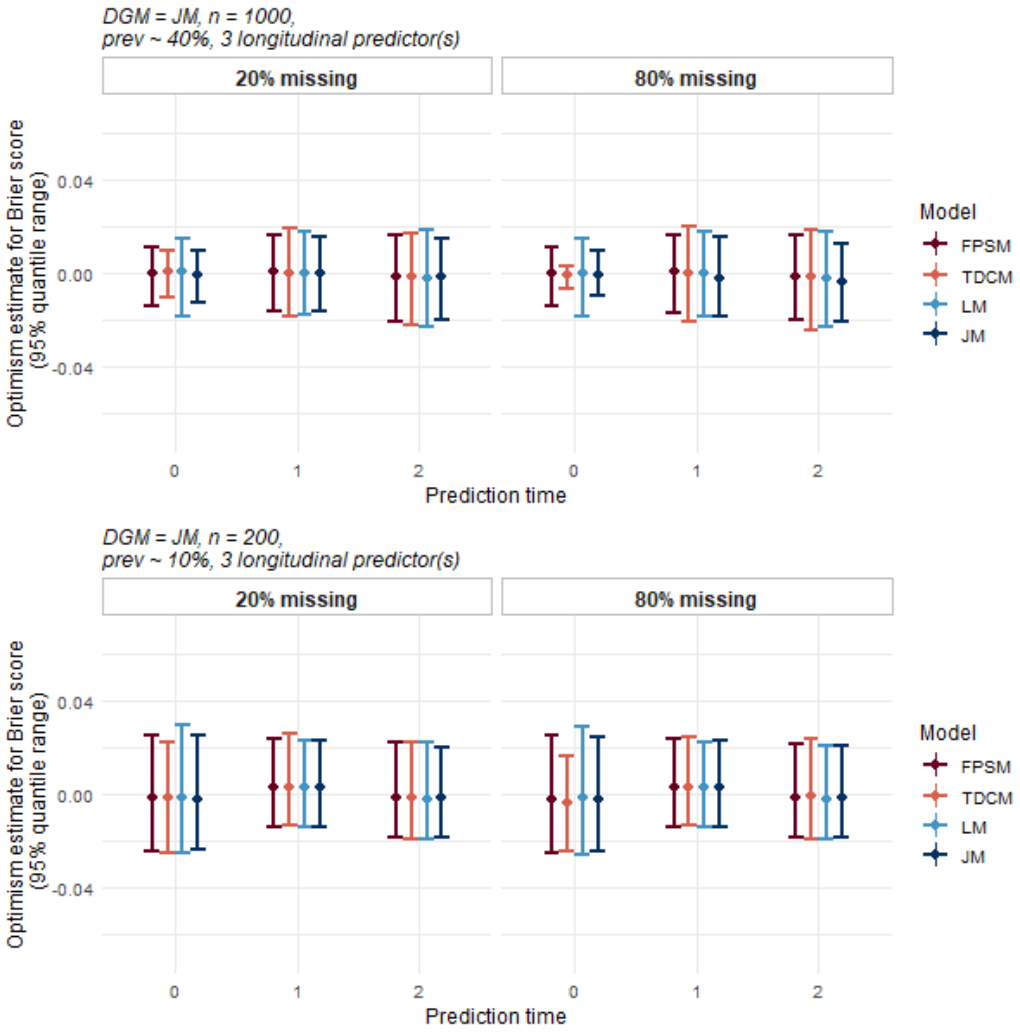

Figure 69: Exploring how the optimism estimated for the Survival Brier Score (Overall performance) was influenced by **follow-up missingness**.

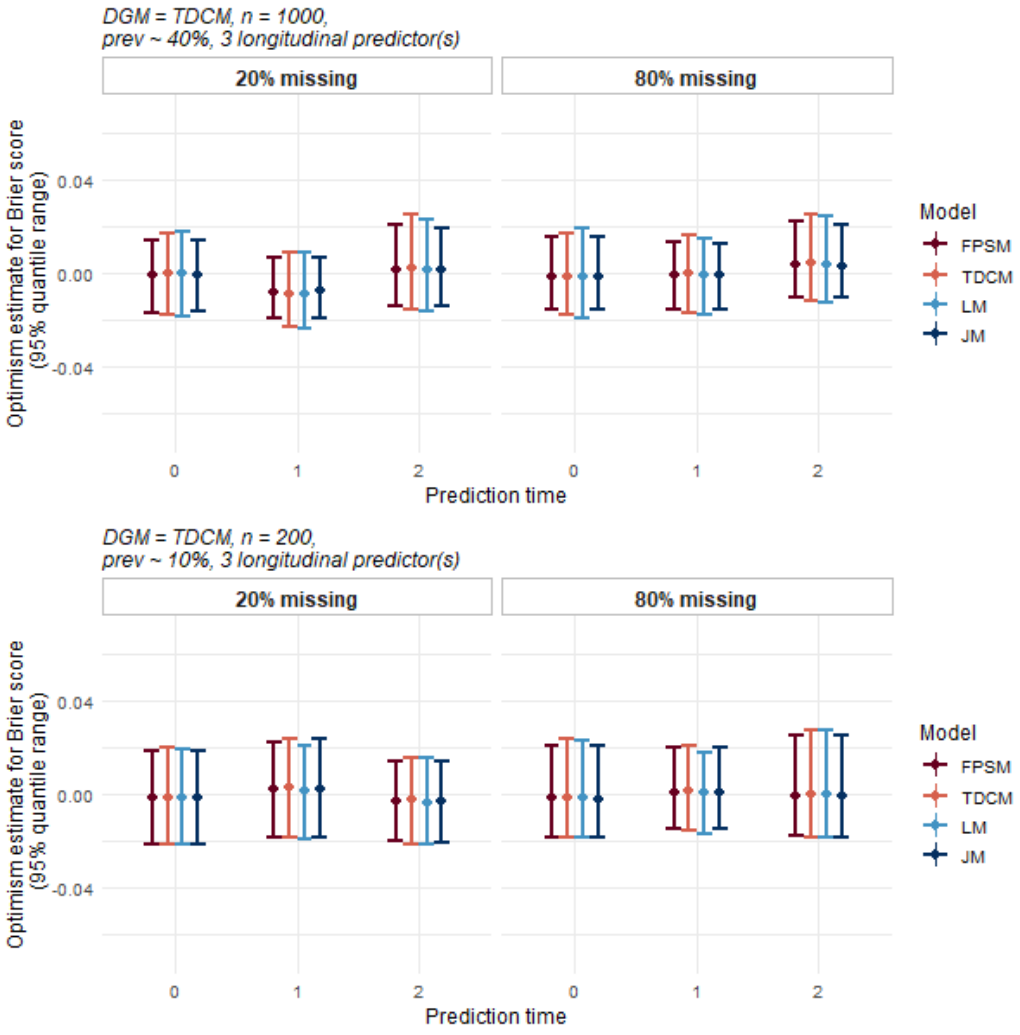

Figure 70: Exploring how the optimism estimated for the Survival Brier Score (Overall performance) was influenced by **follow-up missingness**.

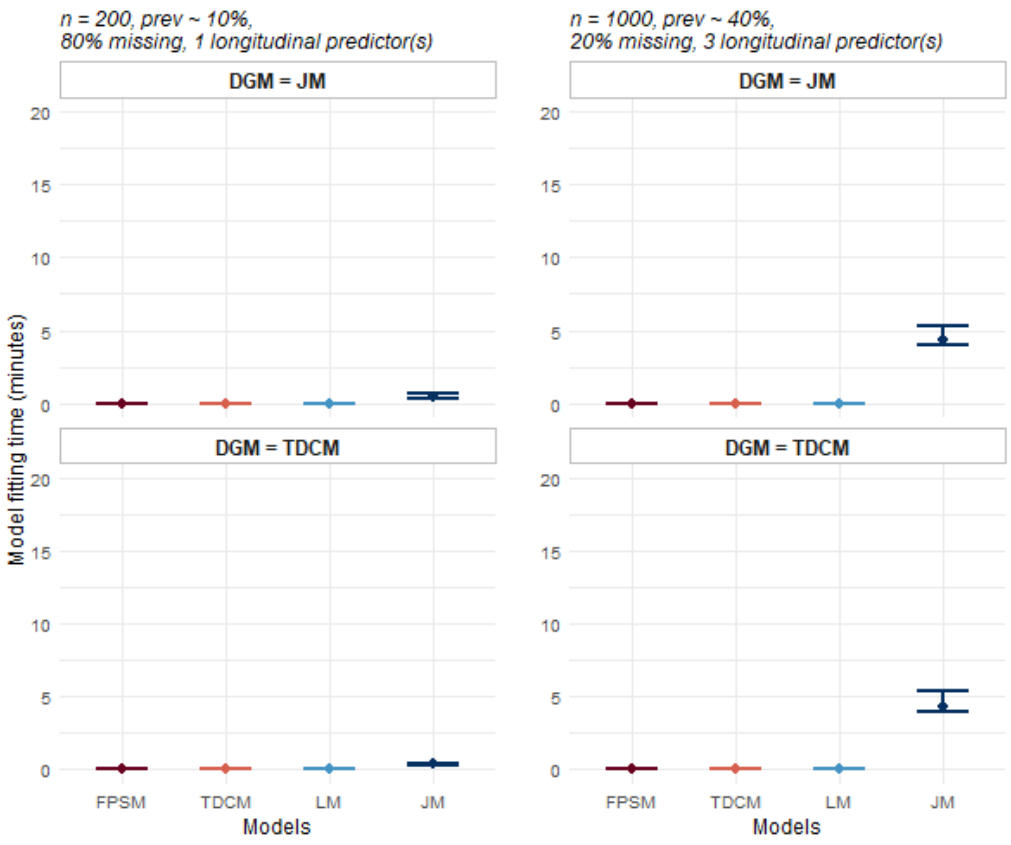

Figure 71: Model fitting time under contrasting data generation scenarios.

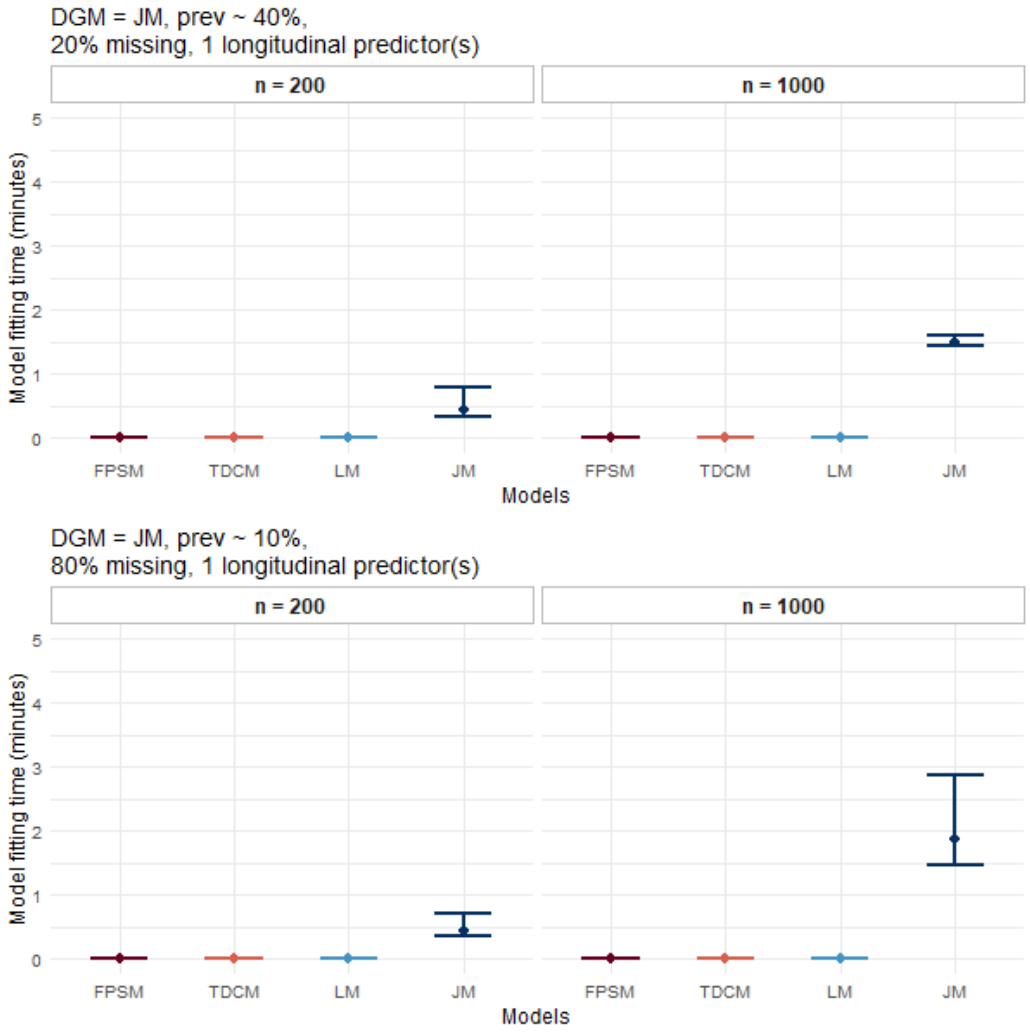

Figure 72: Exploring how the model fitting time was influenced by **sample size**.

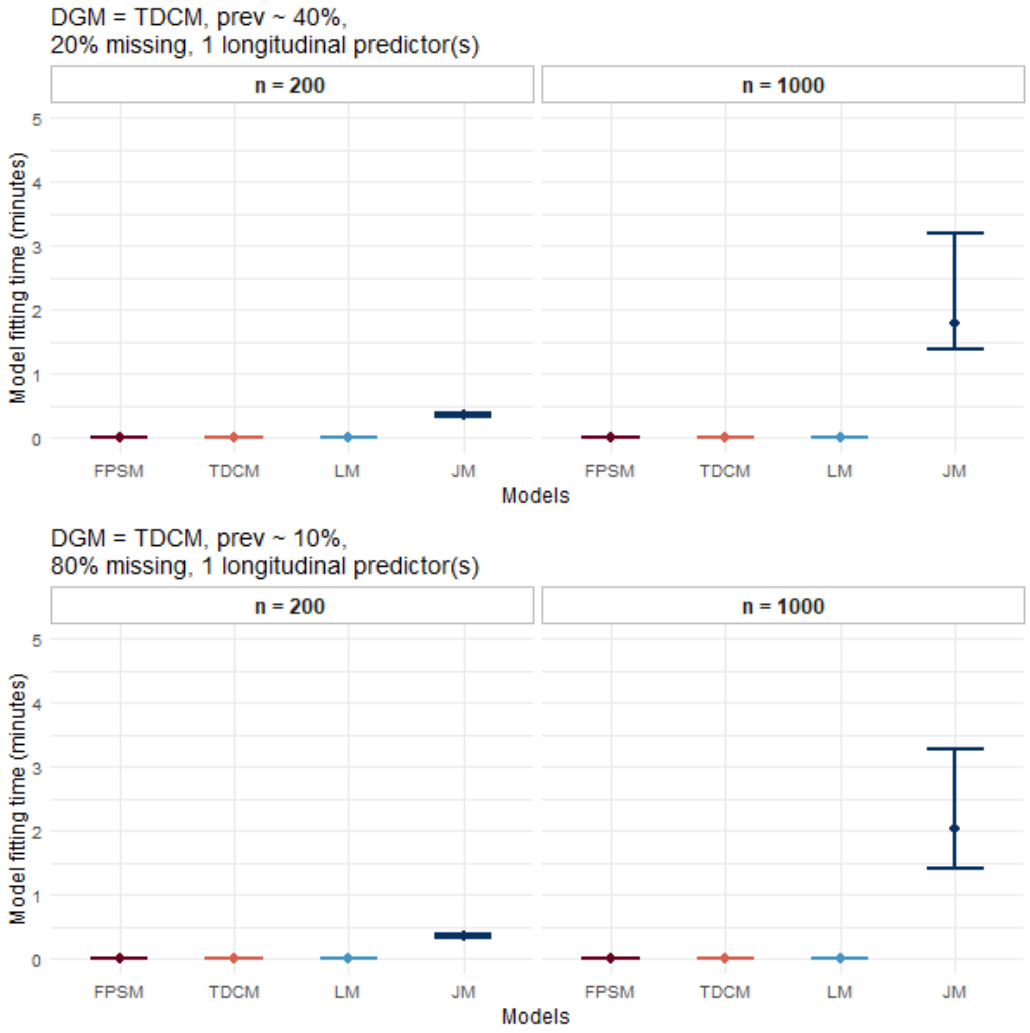

Figure 73: Exploring how the model fitting time was influenced by **sample size**.

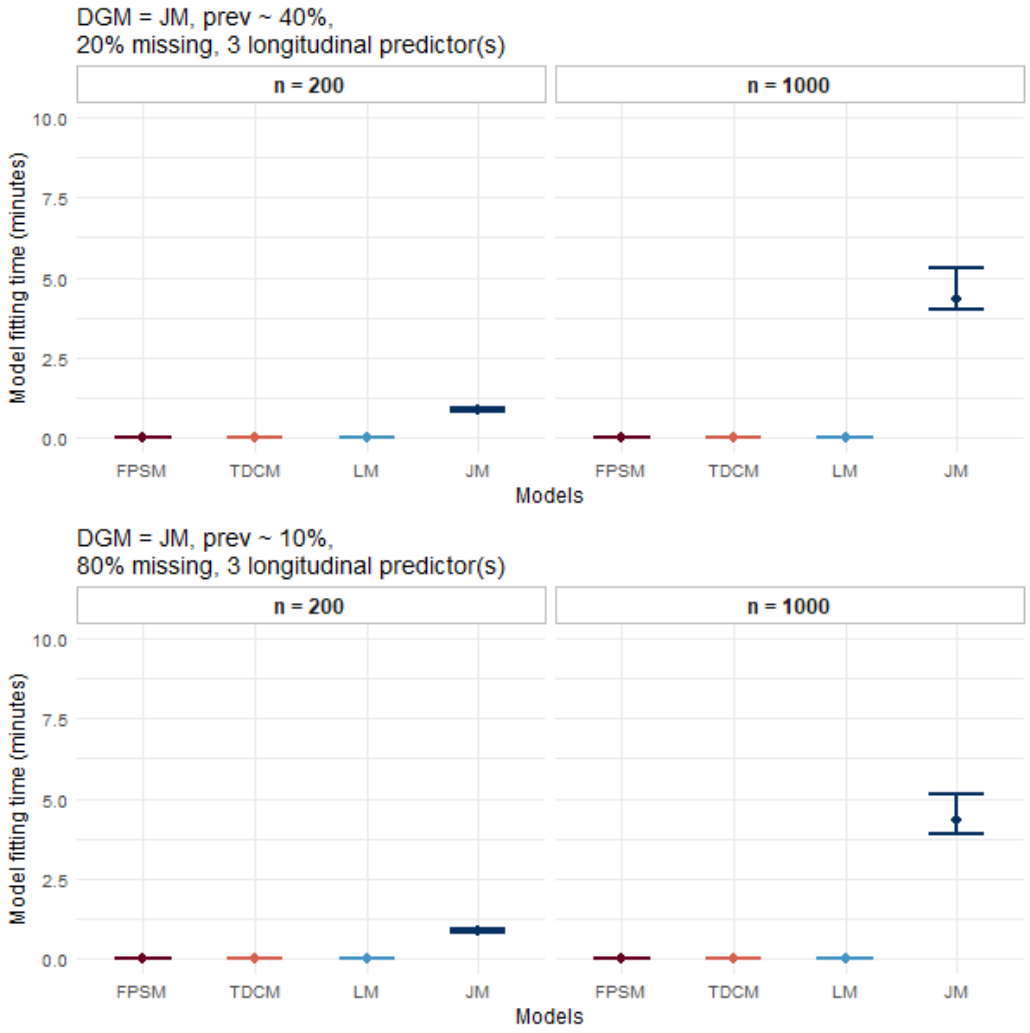

Figure 74: Exploring how the model fitting time was influenced by **sample size**.

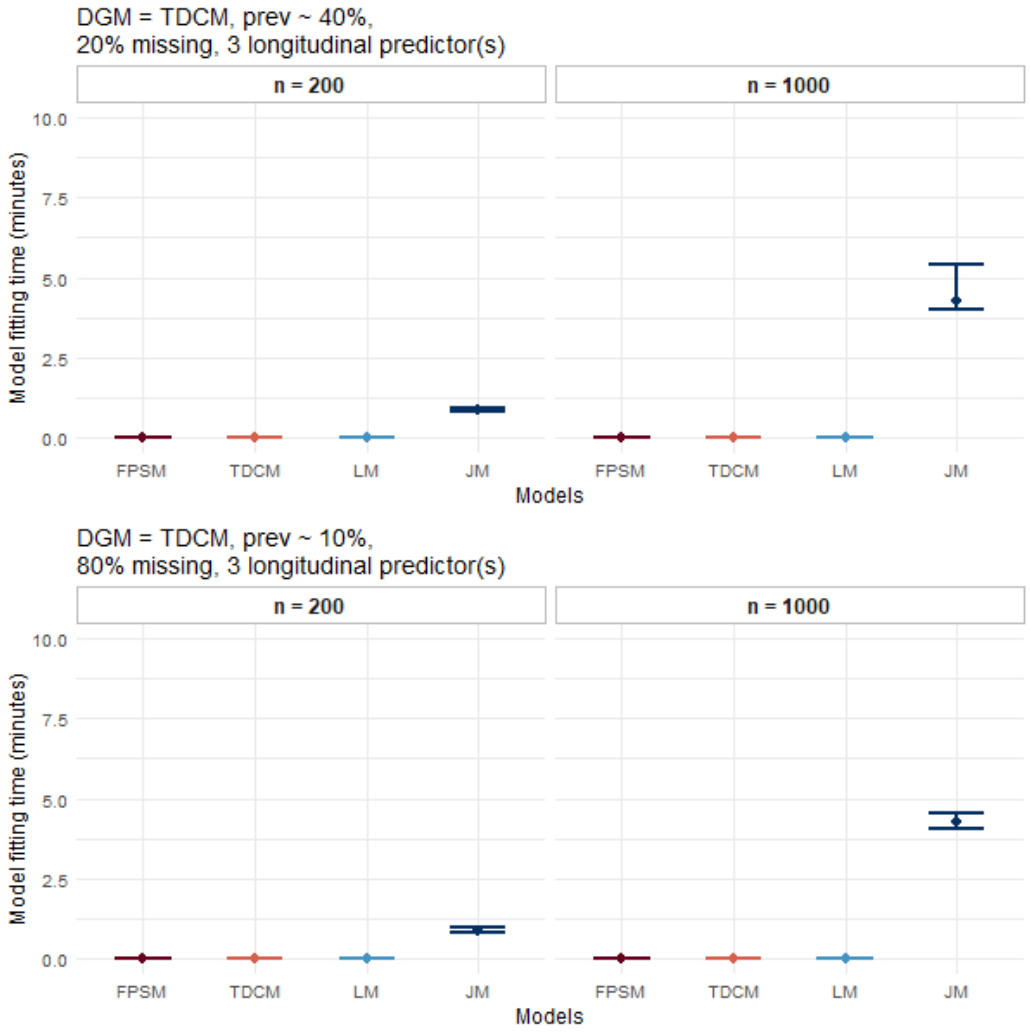

Figure 75: Exploring how the model fitting time was influenced by **sample size**.

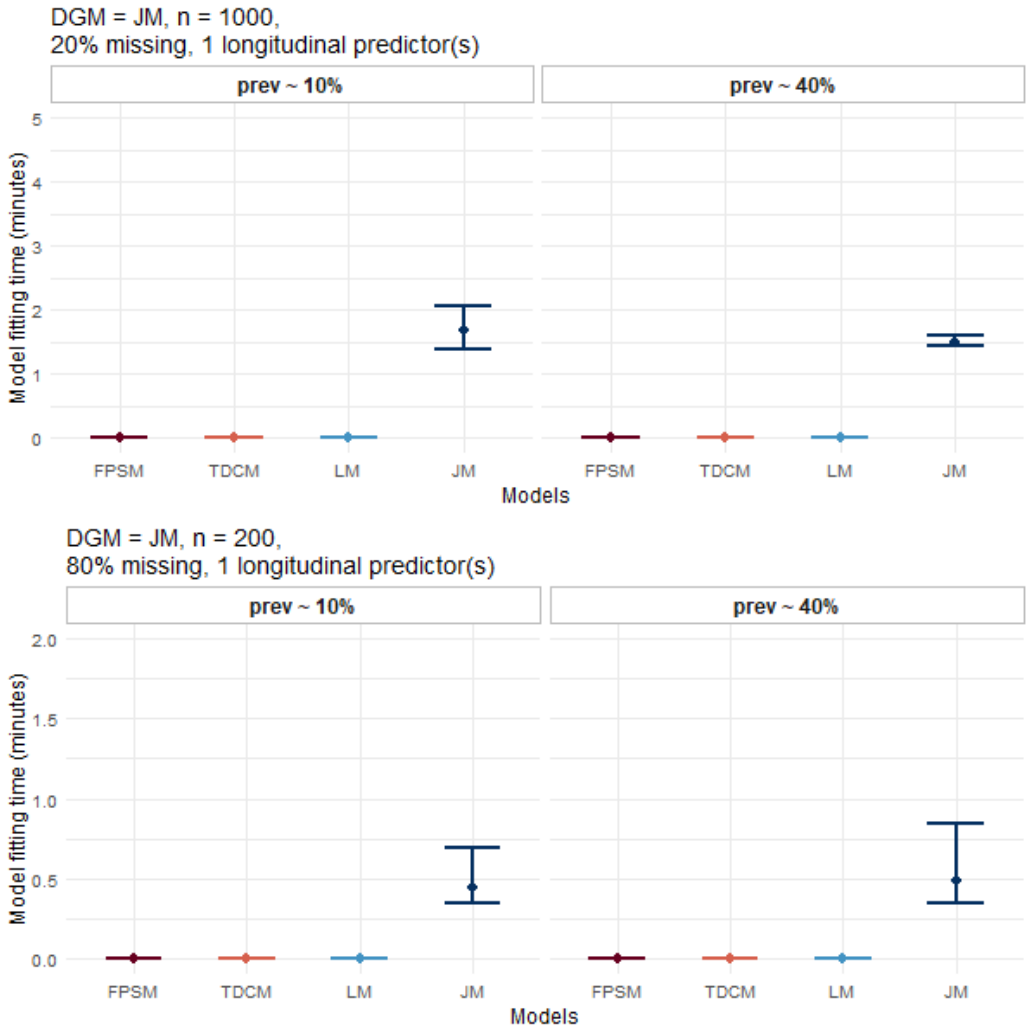

Figure 76: Exploring how the model fitting time was influenced by **sample size**.

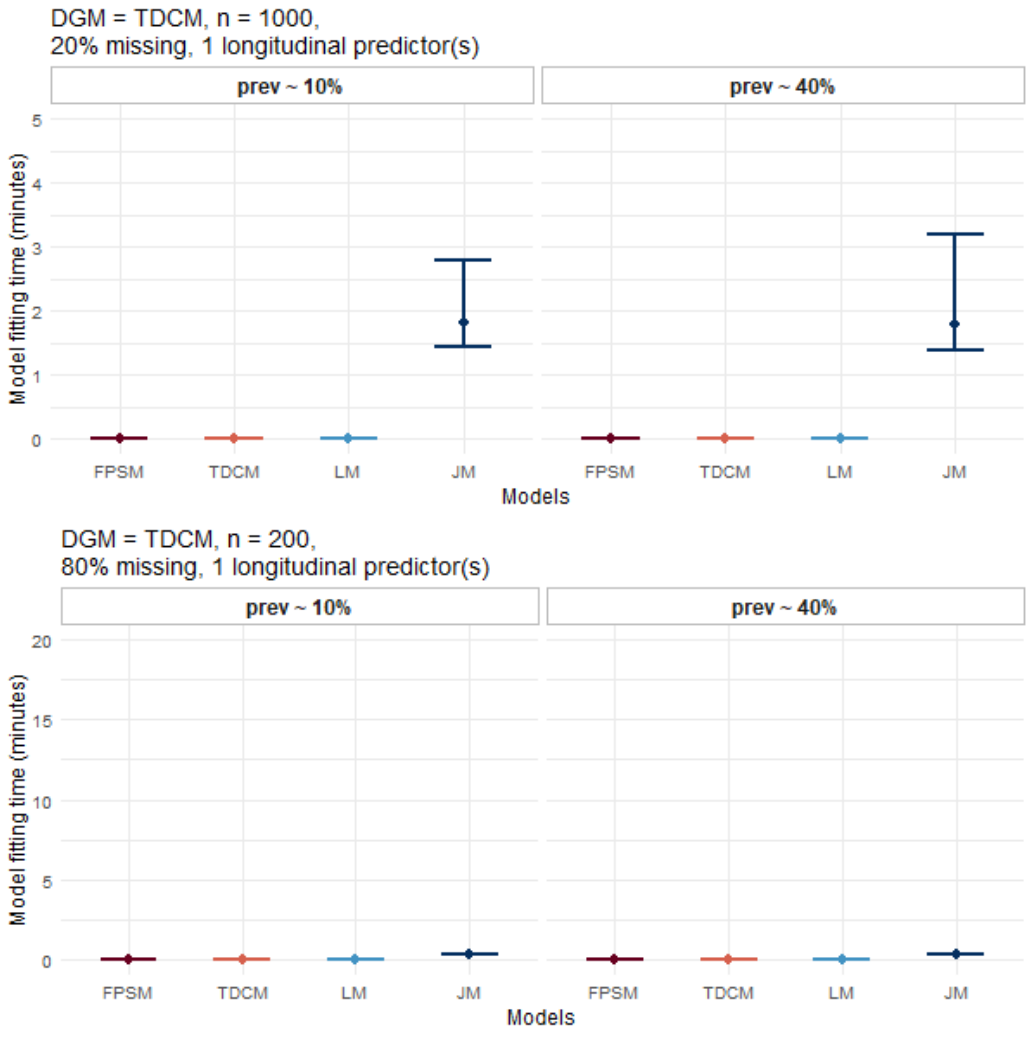

Figure 77: Exploring how the model fitting time was influenced by **event prevalence**.

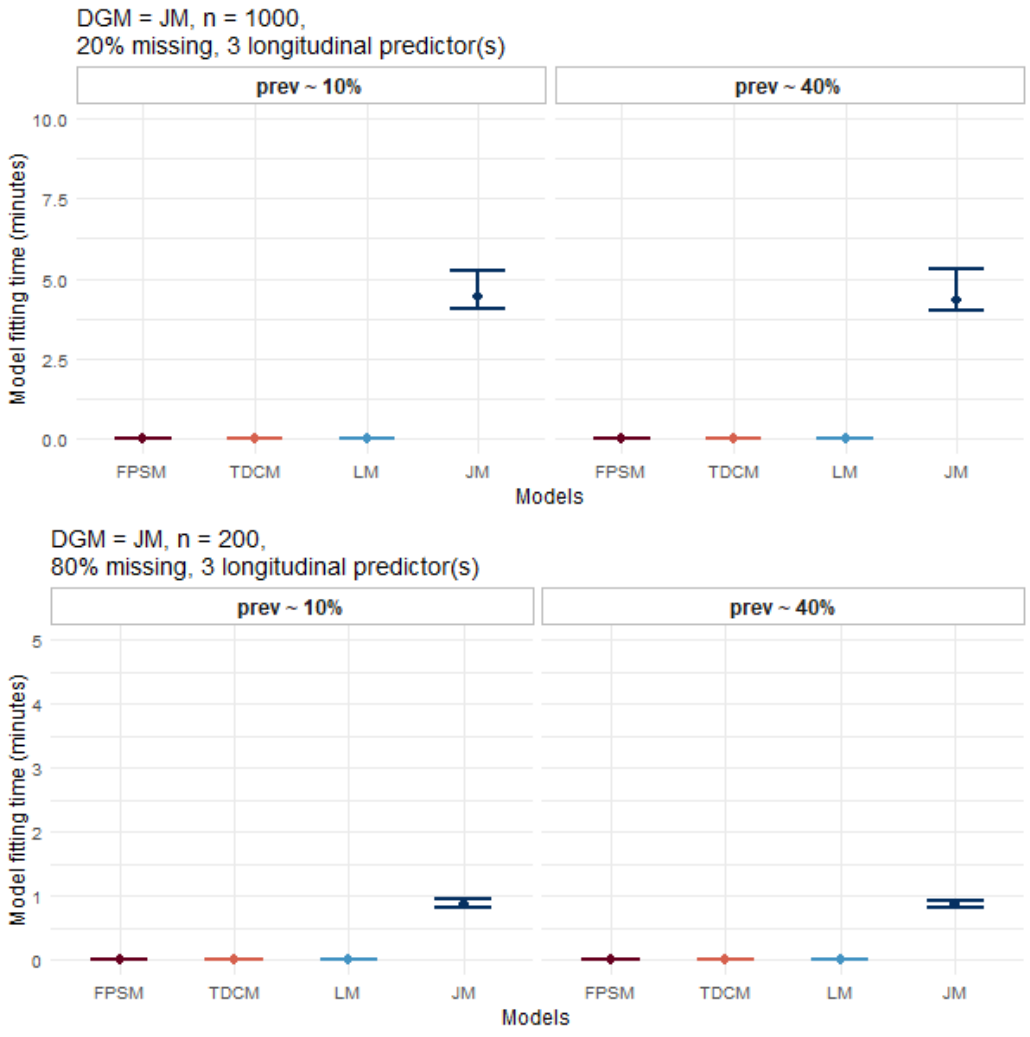

Figure 78: Exploring how the model fitting time was influenced by **event prevalence**.

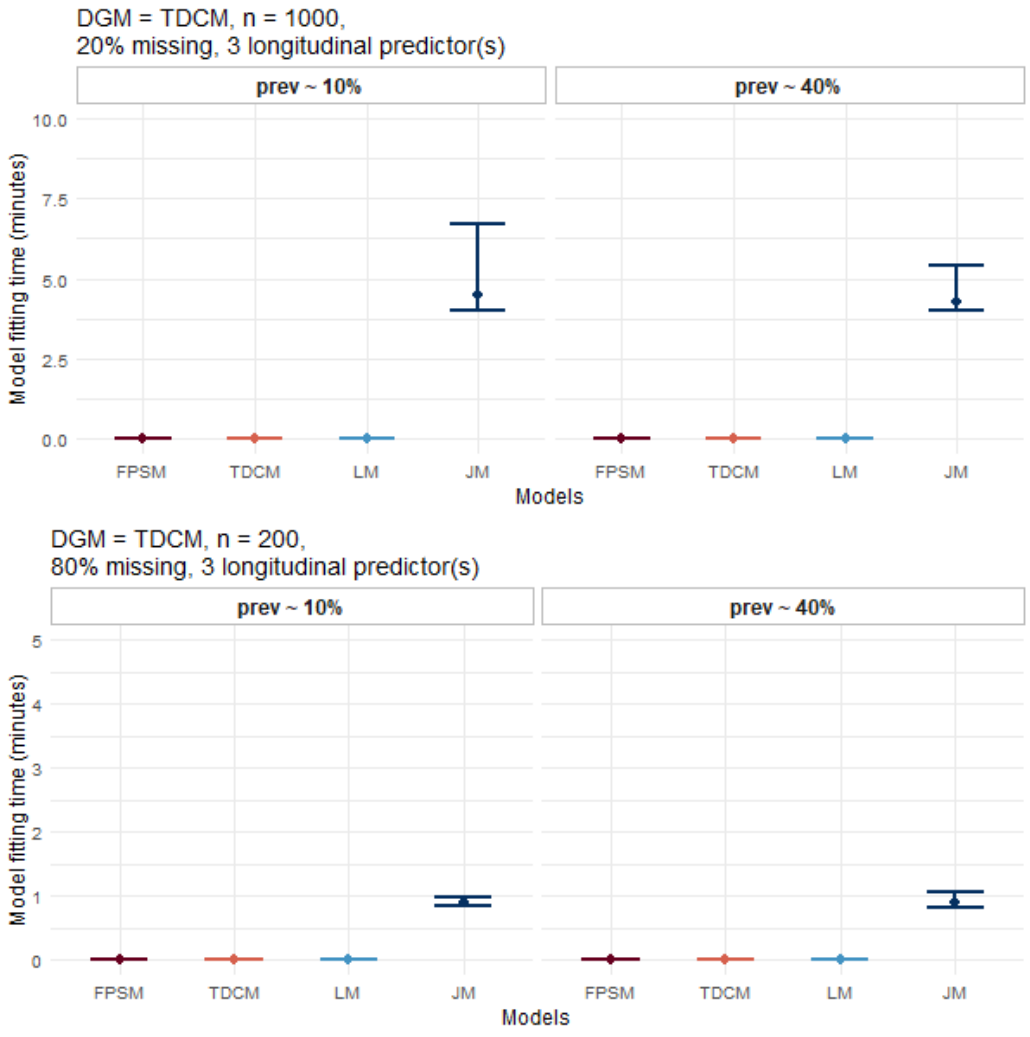

Figure 79: Exploring how the model fitting time was influenced by **event prevalence**.

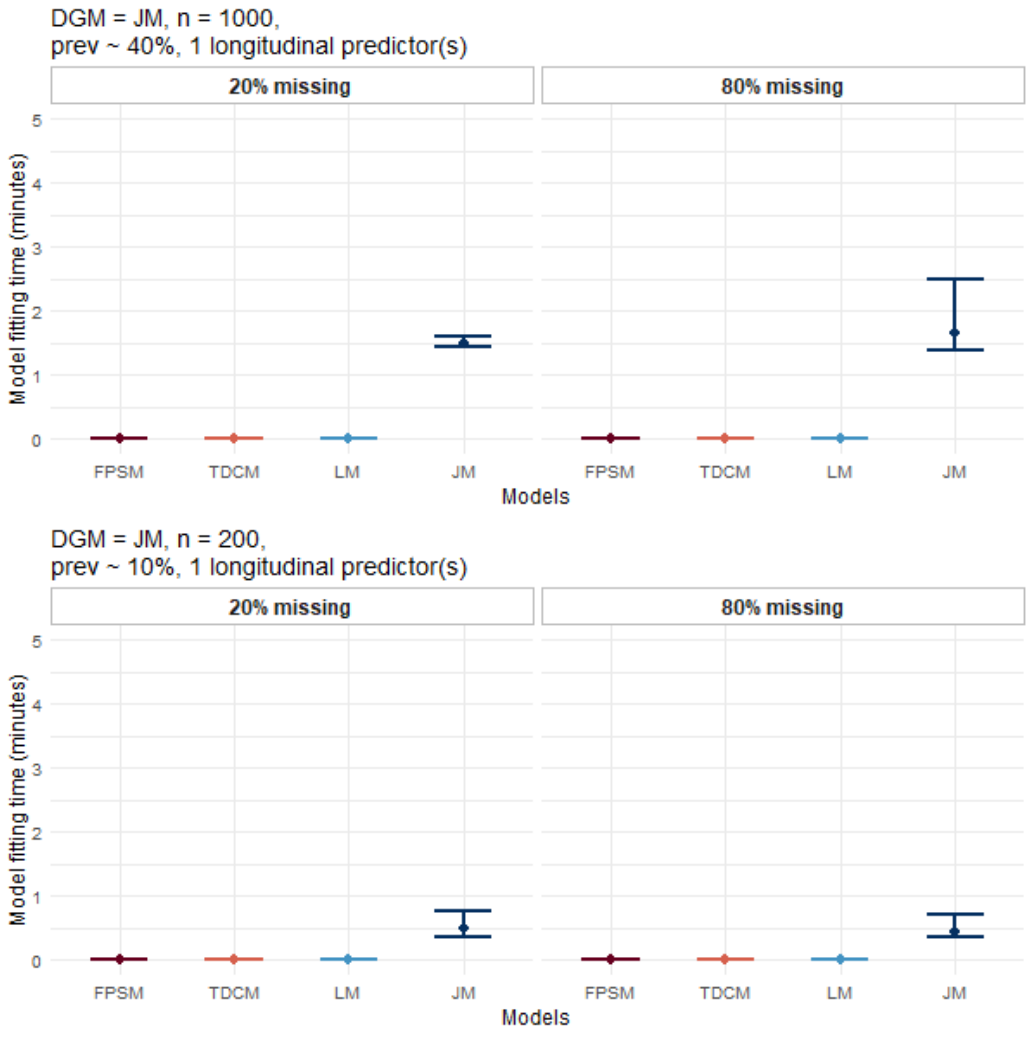

Figure 80: Exploring how the model fitting time was influenced by **follow-up missingness**.

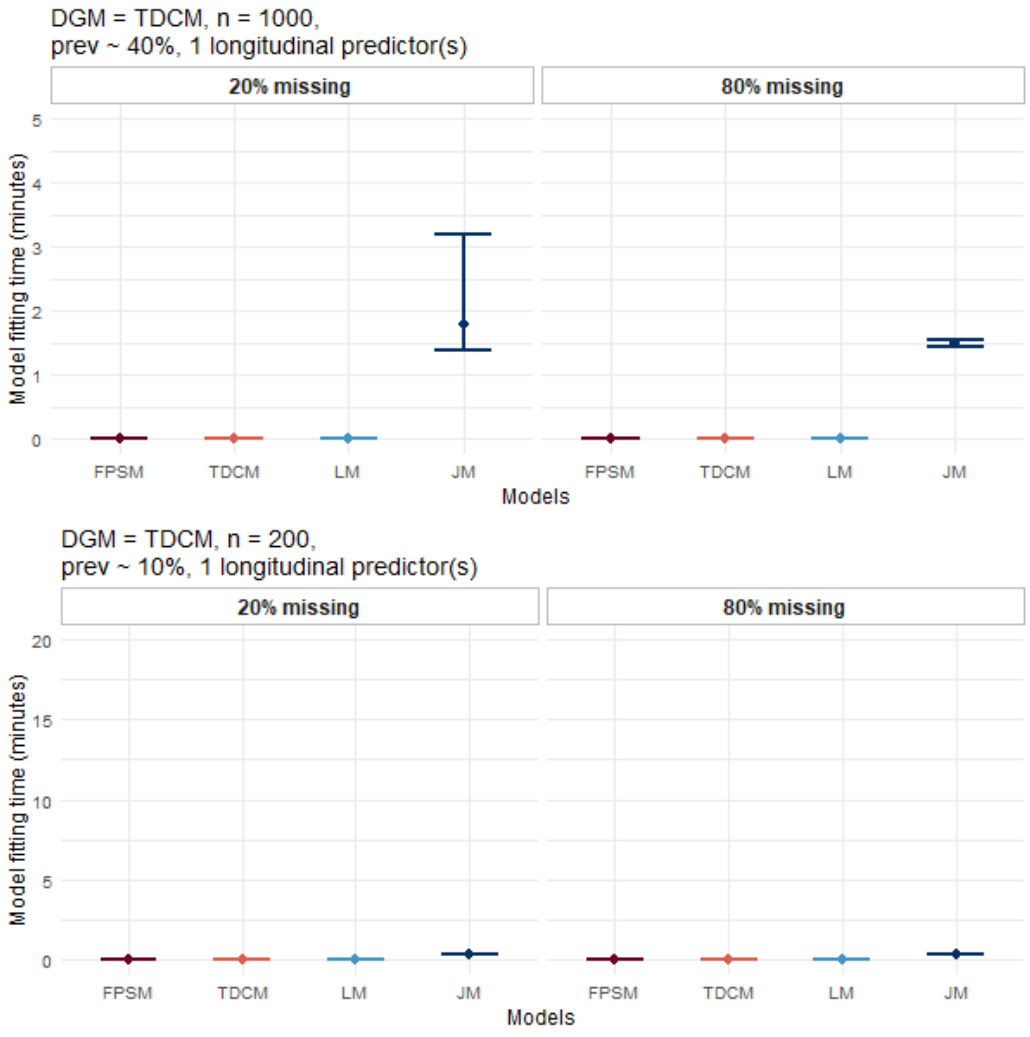

Figure 81: Exploring how the model fitting time was influenced by **follow-up missingness**.

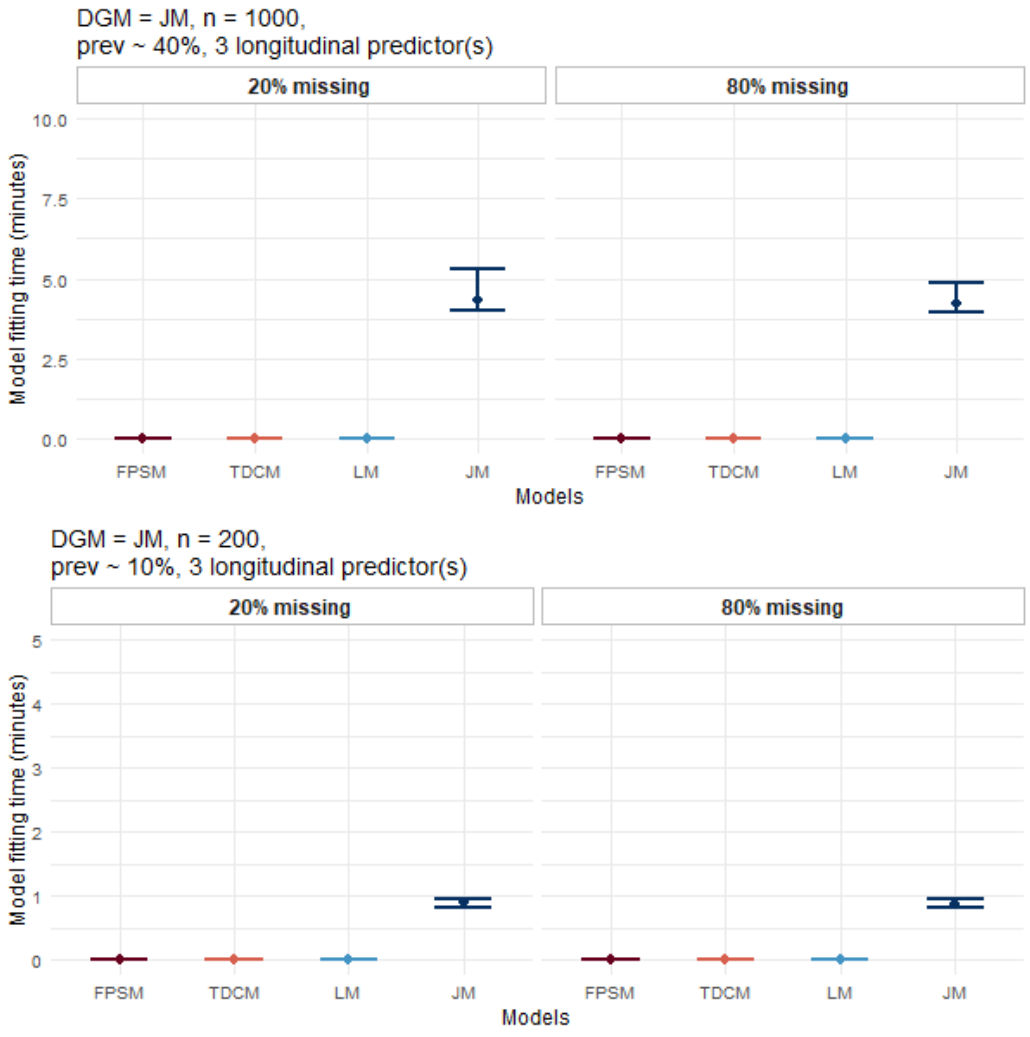

Figure 82: Exploring how the model fitting time was influenced by **follow-up missingness**.

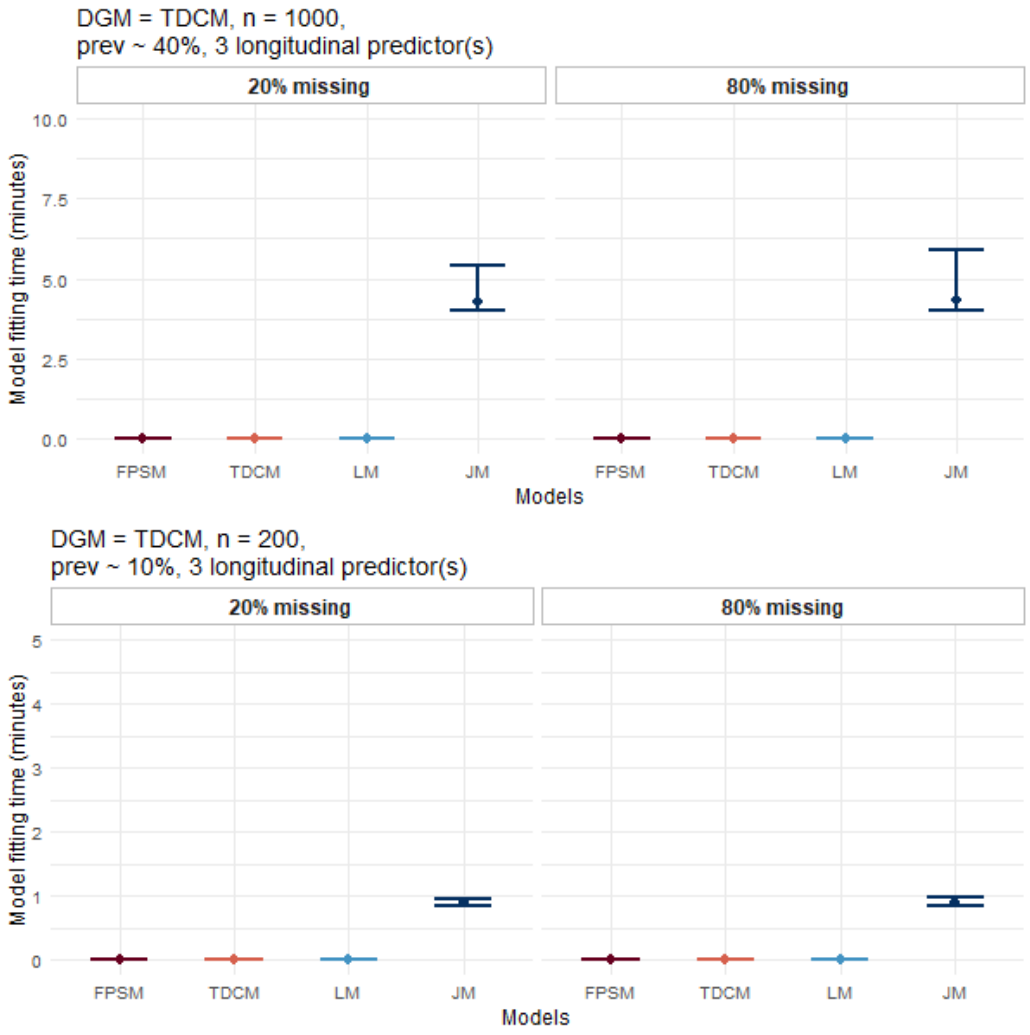

Figure 83: Exploring how model fitting time was influenced by **follow-up missingness**.

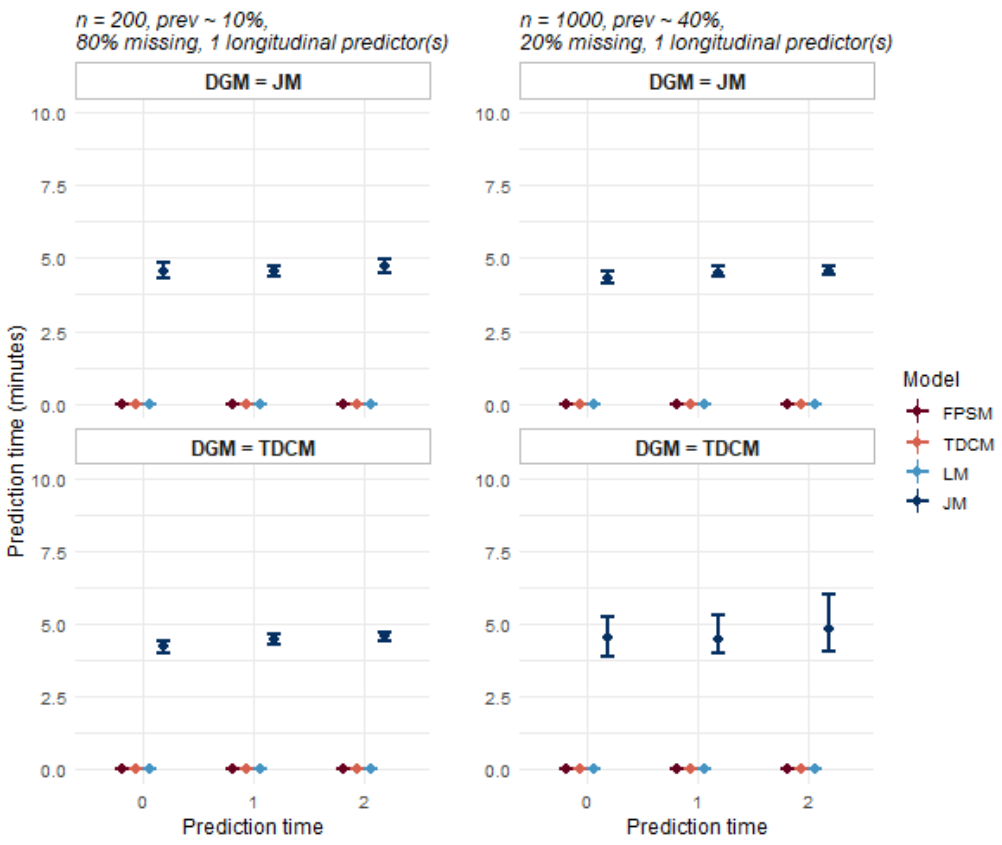

Figure 84: Prediction estimation time under contrasting data generation scenarios.

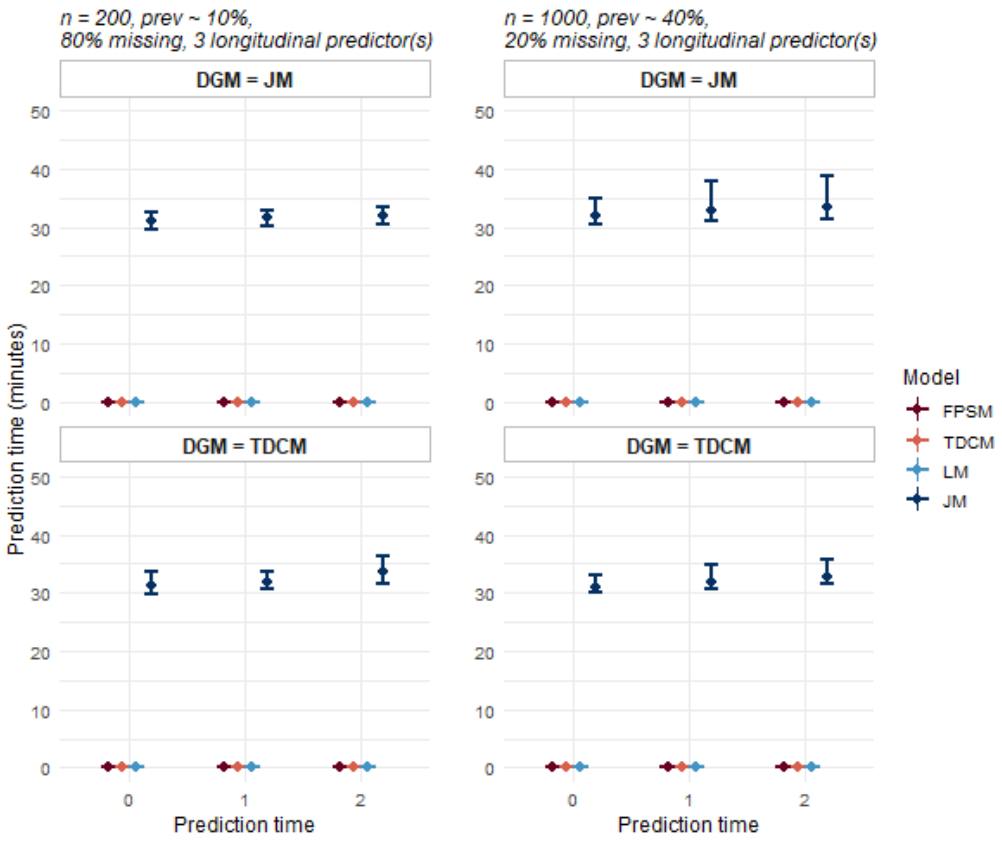

Figure 85: Prediction estimation time under contrasting data generation scenarios.

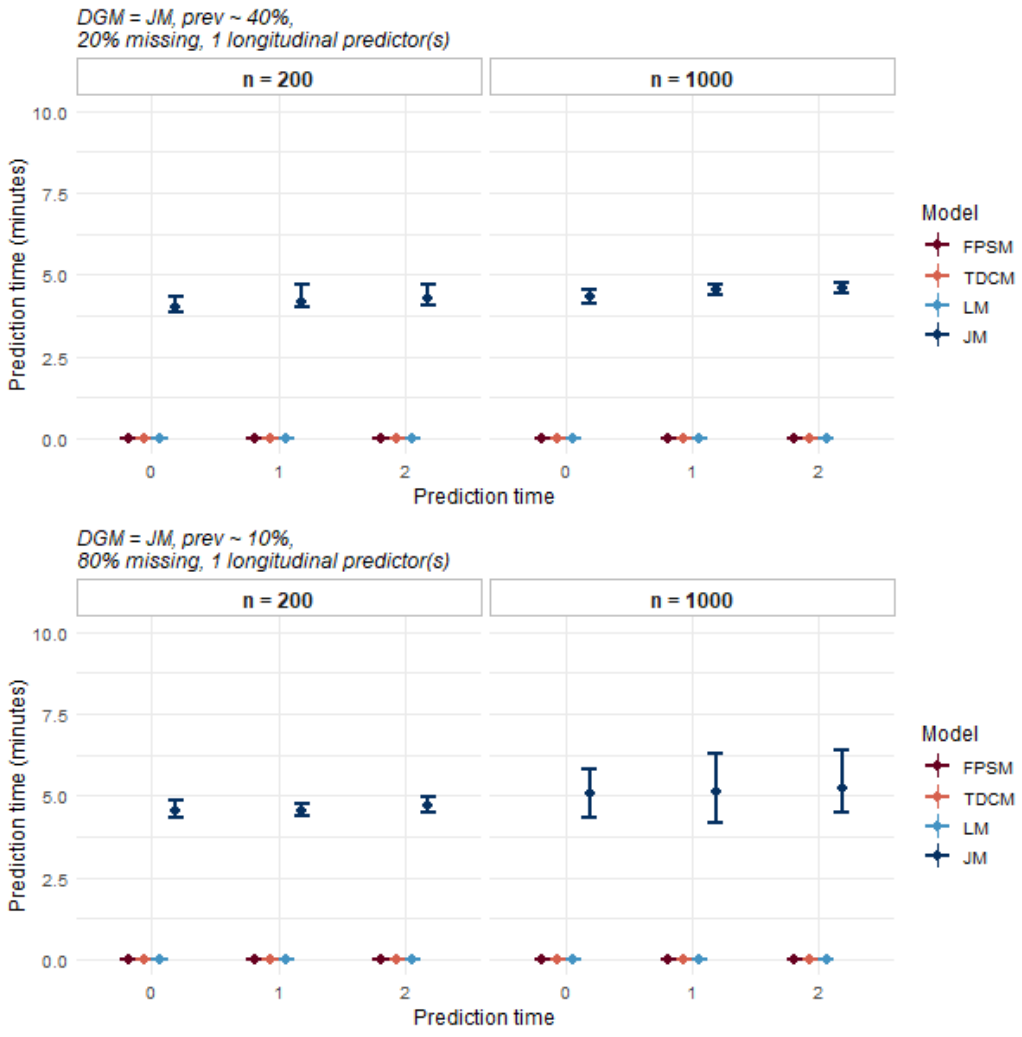

Figure 86: Exploring how prediction estimation time was influenced by **sample size**.

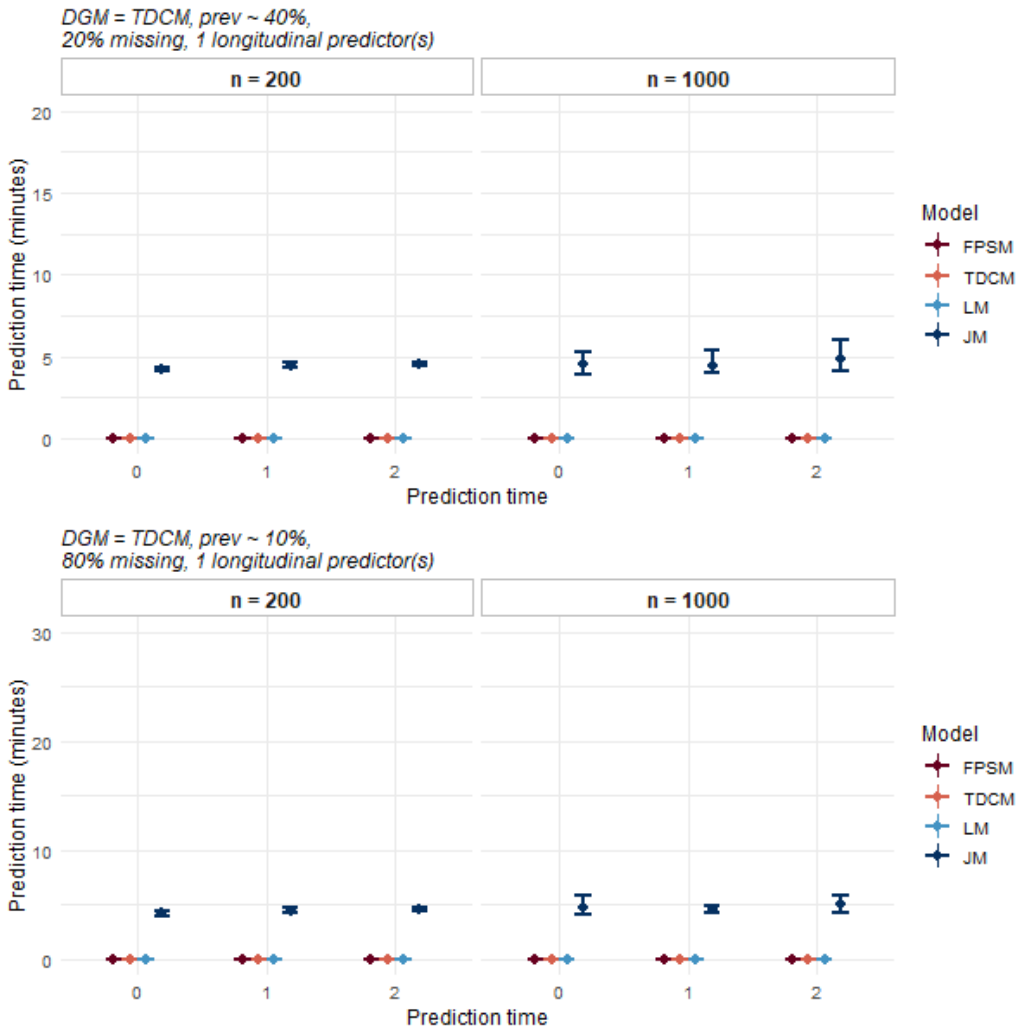

Figure 87: Exploring how prediction estimation time was influenced by **sample size**.

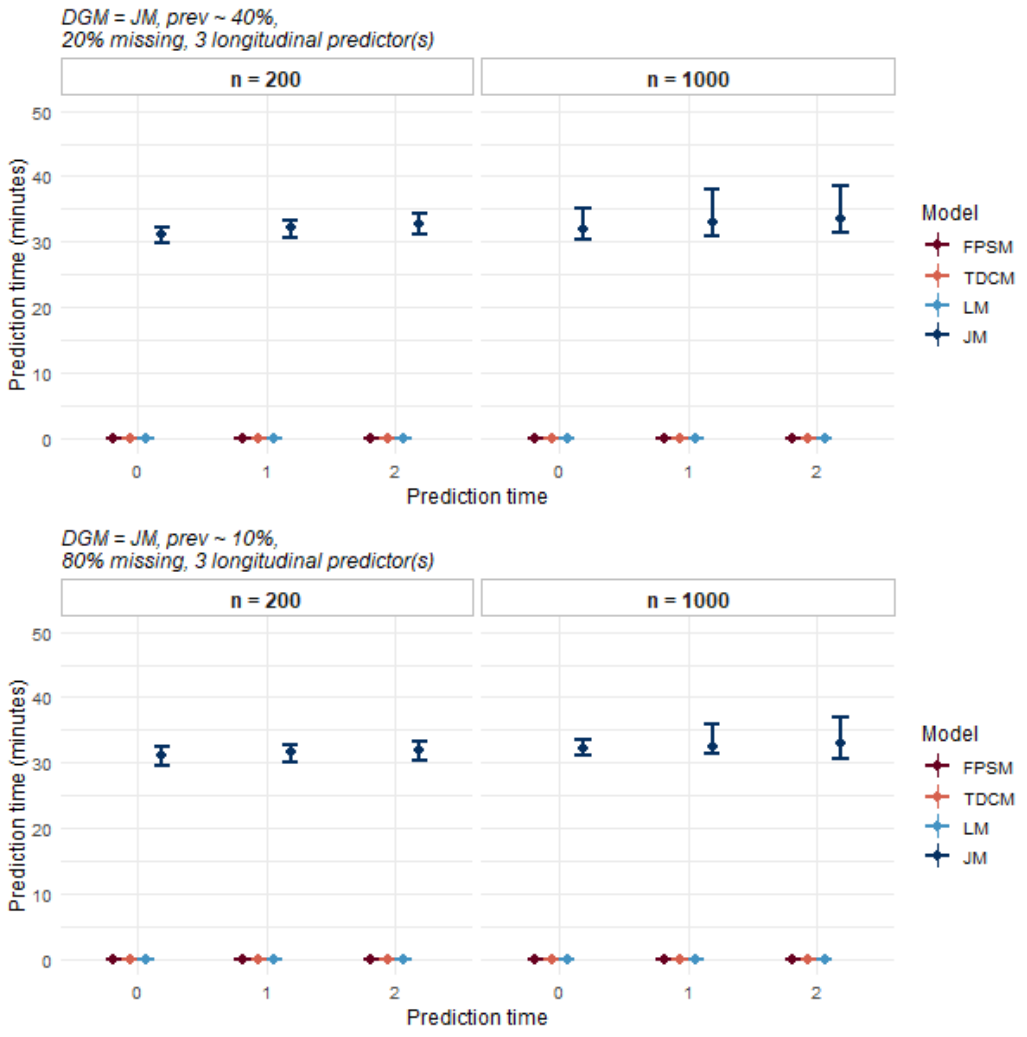

Figure 88: Exploring how prediction estimation time was influenced by **sample size**.

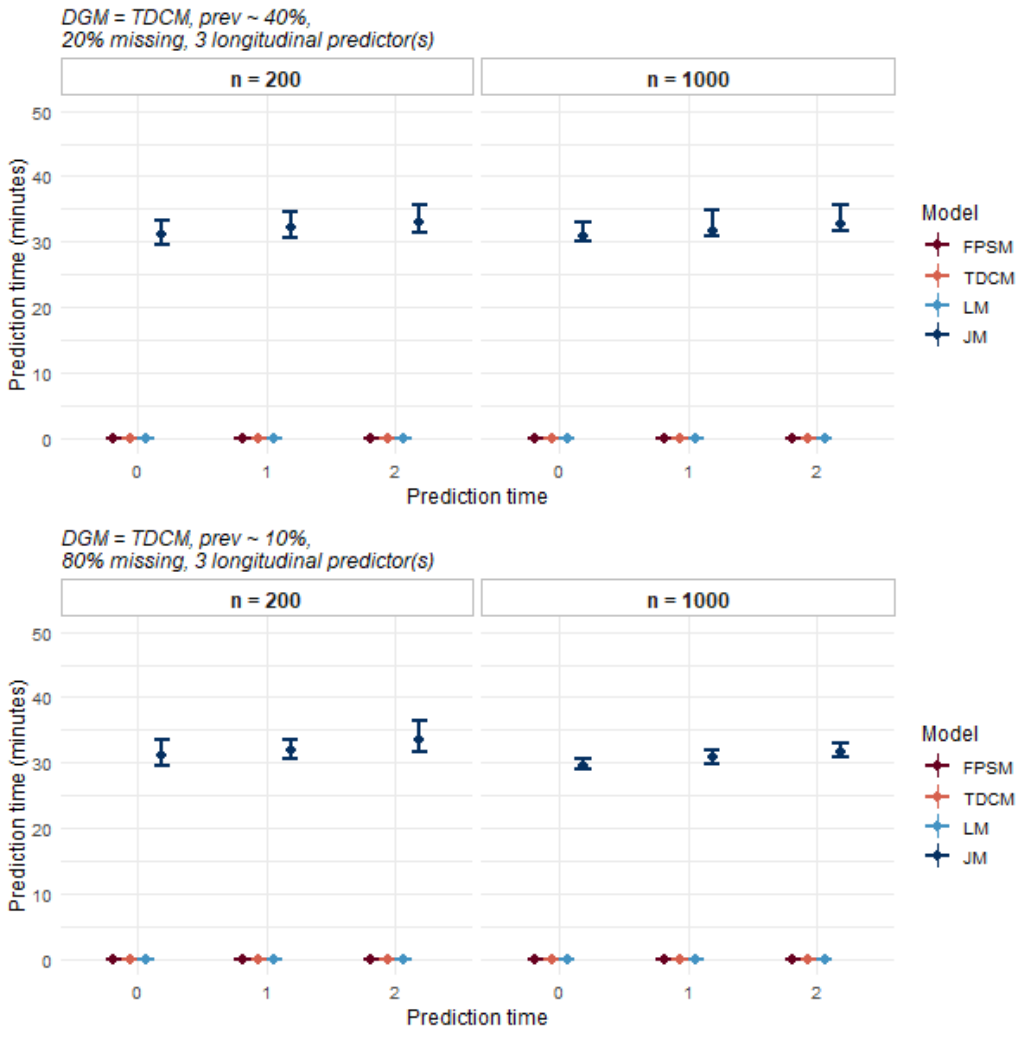

Figure 89: Exploring how prediction estimation time was influenced by **sample size**.

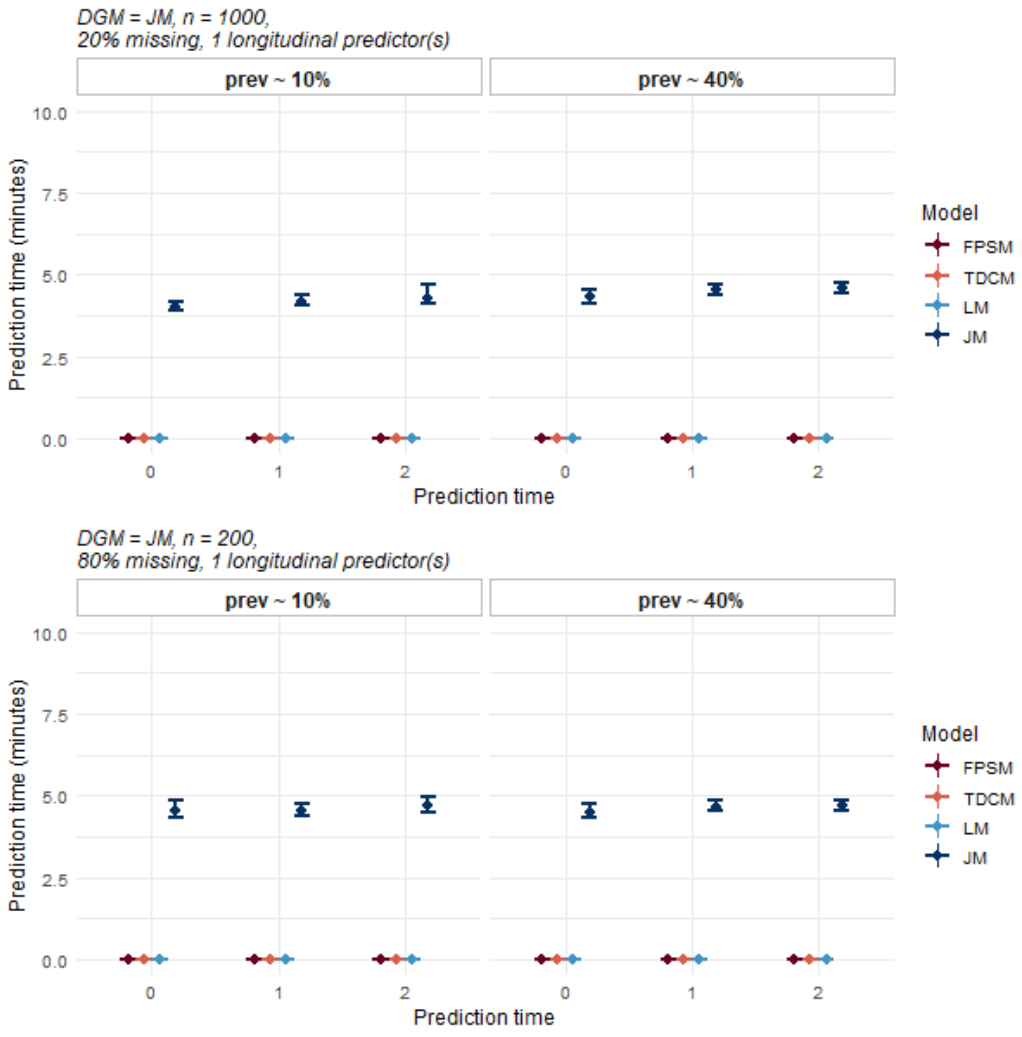

Figure 90: Exploring how prediction estimation time was influenced by **event prevalence**.

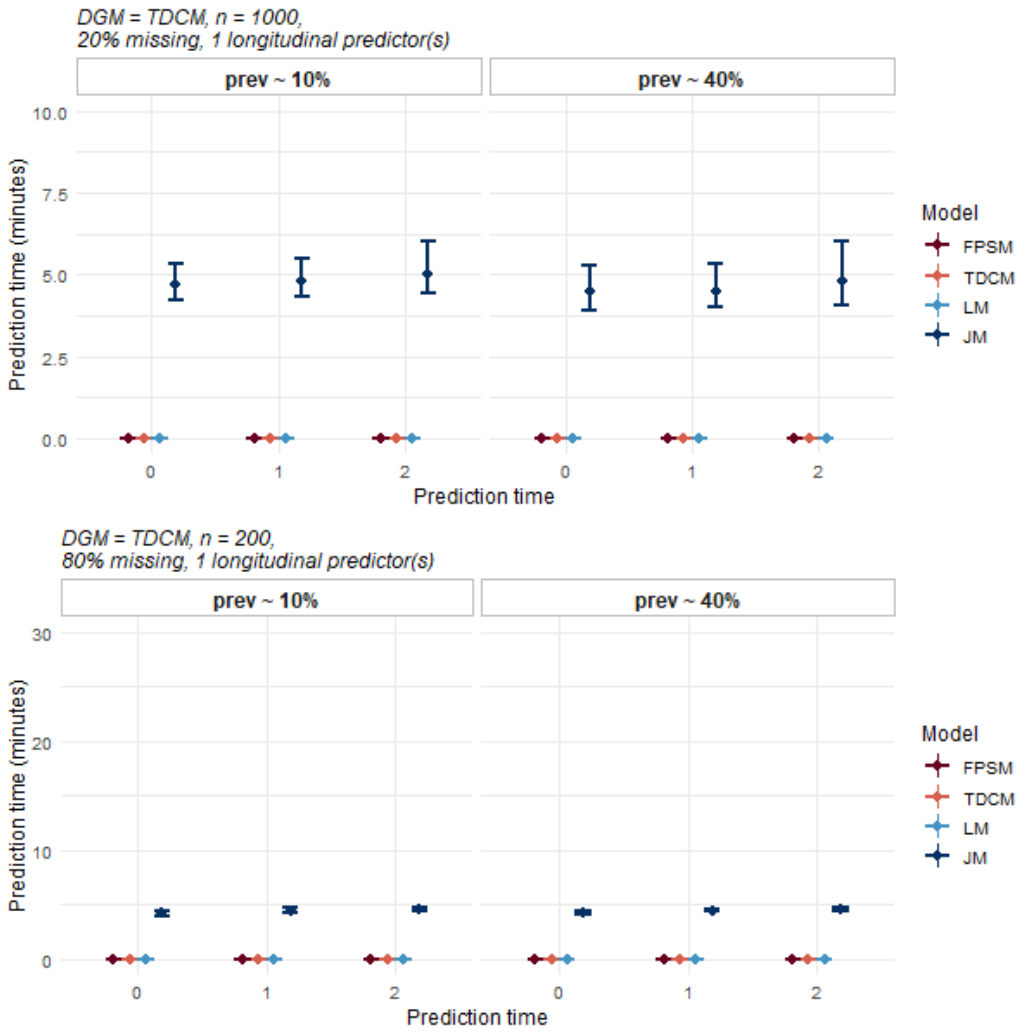

Figure 91: Exploring how prediction estimation time was influenced by **event prevalence**.

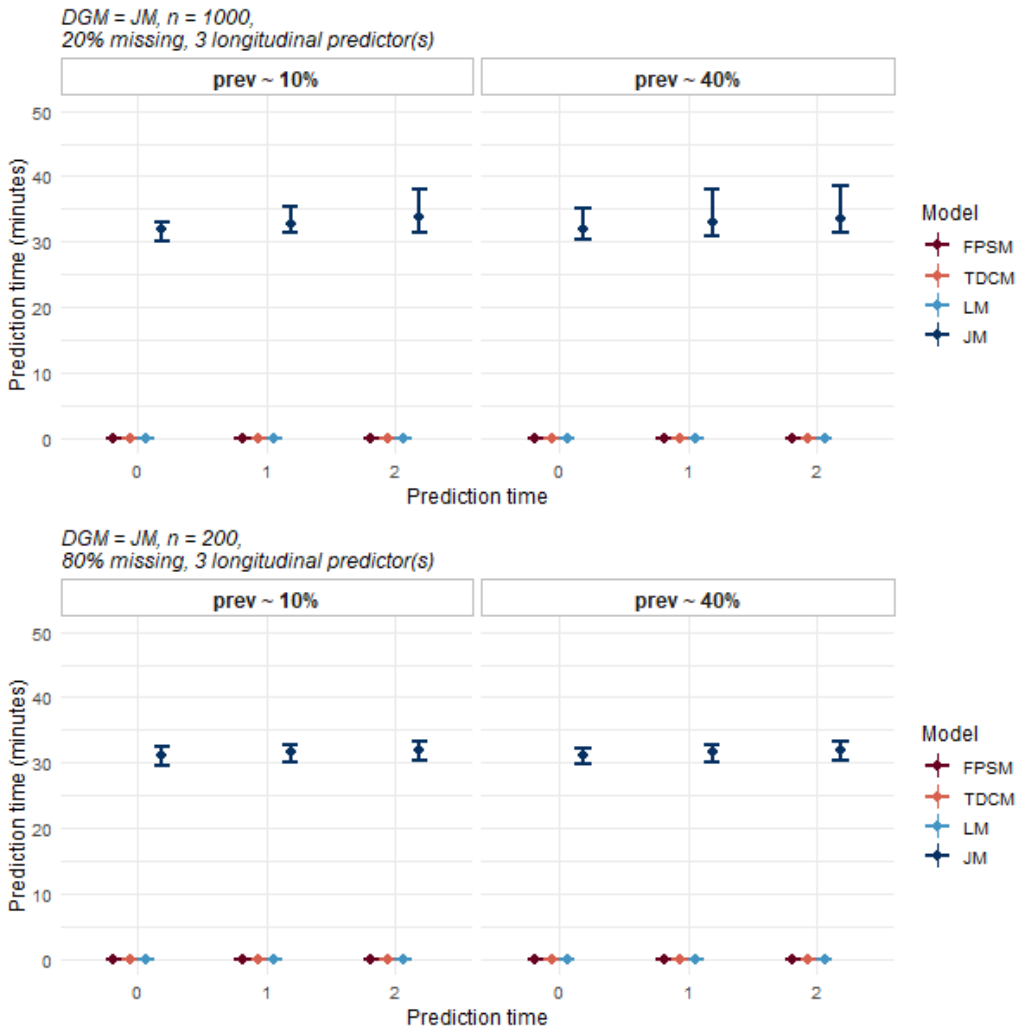

Figure 92: Exploring how prediction estimation time was influenced by **event prevalence**.

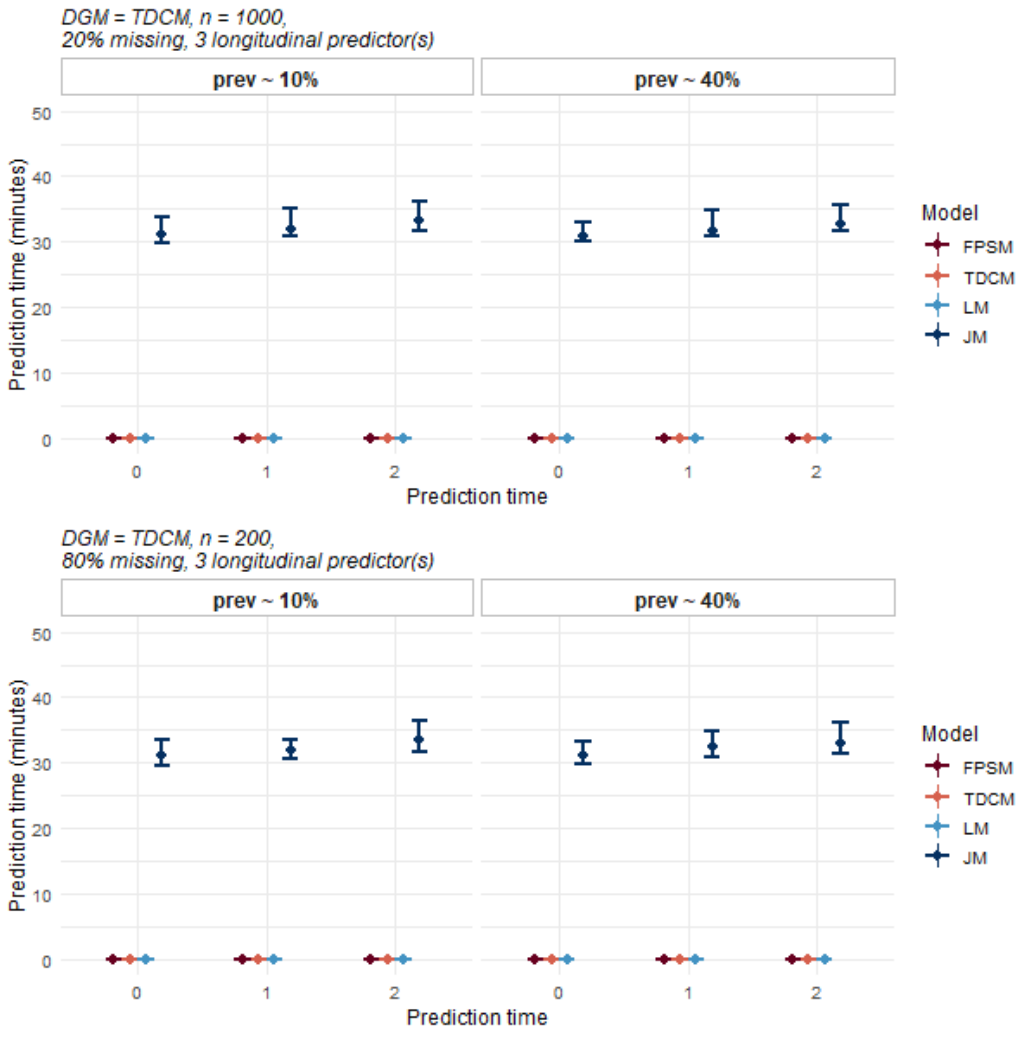

Figure 93: Exploring how prediction estimation time was influenced by **event prevalence**.

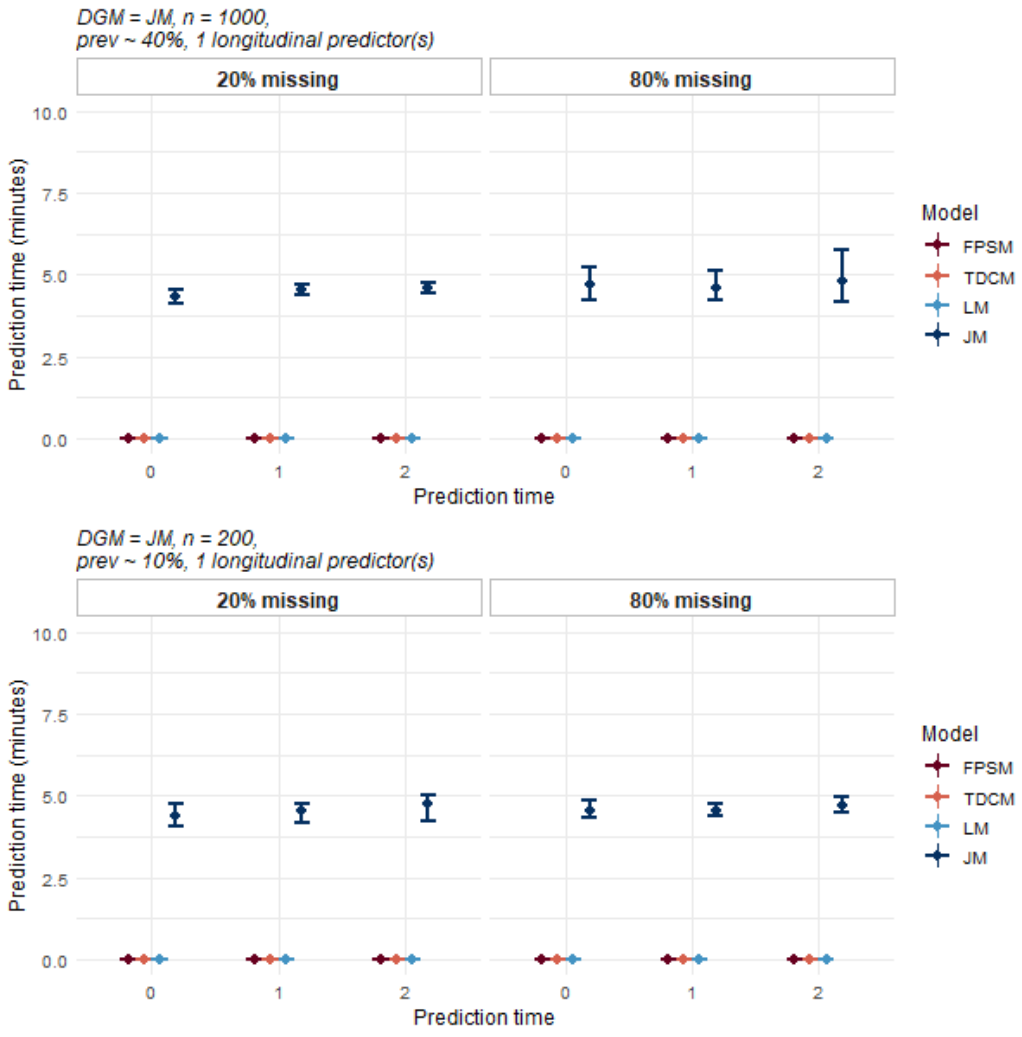

Figure 94: Exploring how prediction estimation time was influenced by **follow-up missingness**.

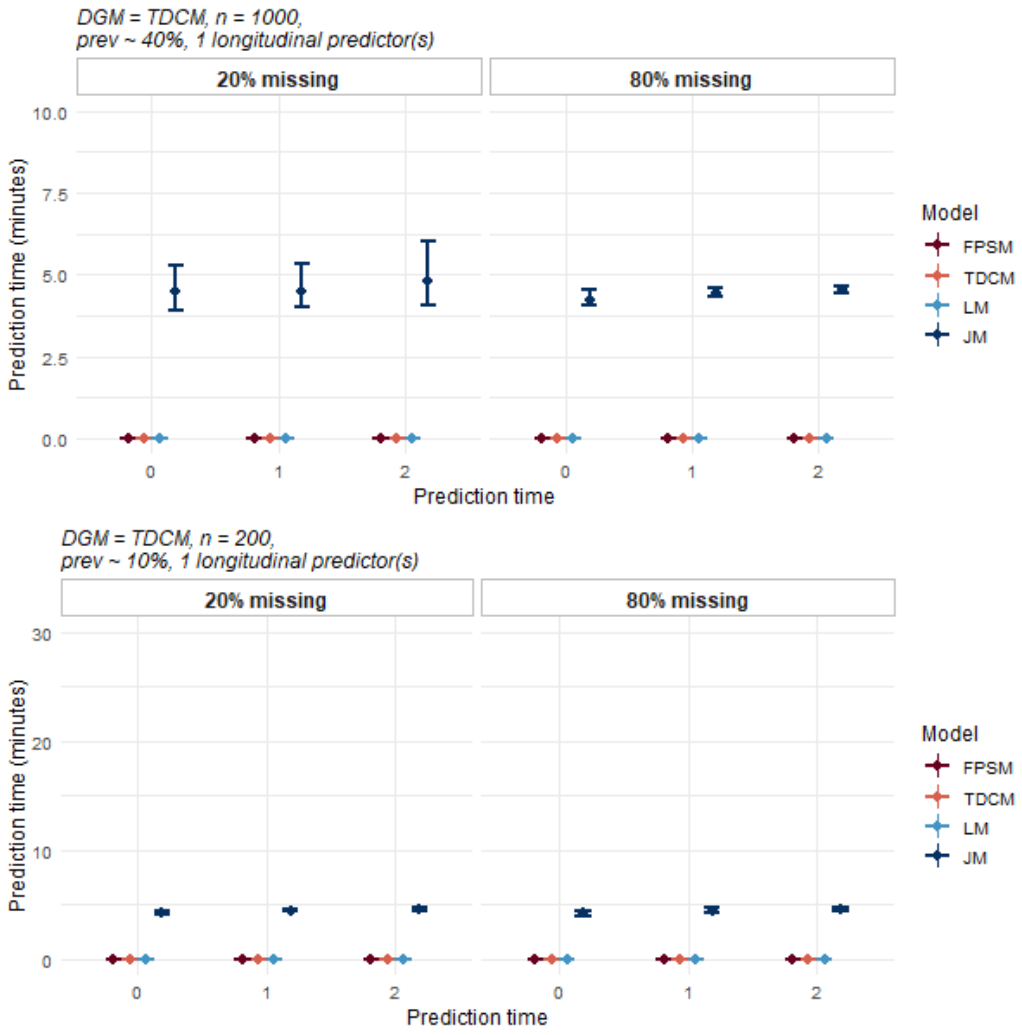

Figure 95: Exploring how prediction estimation time was influenced by **follow-up missingness**.

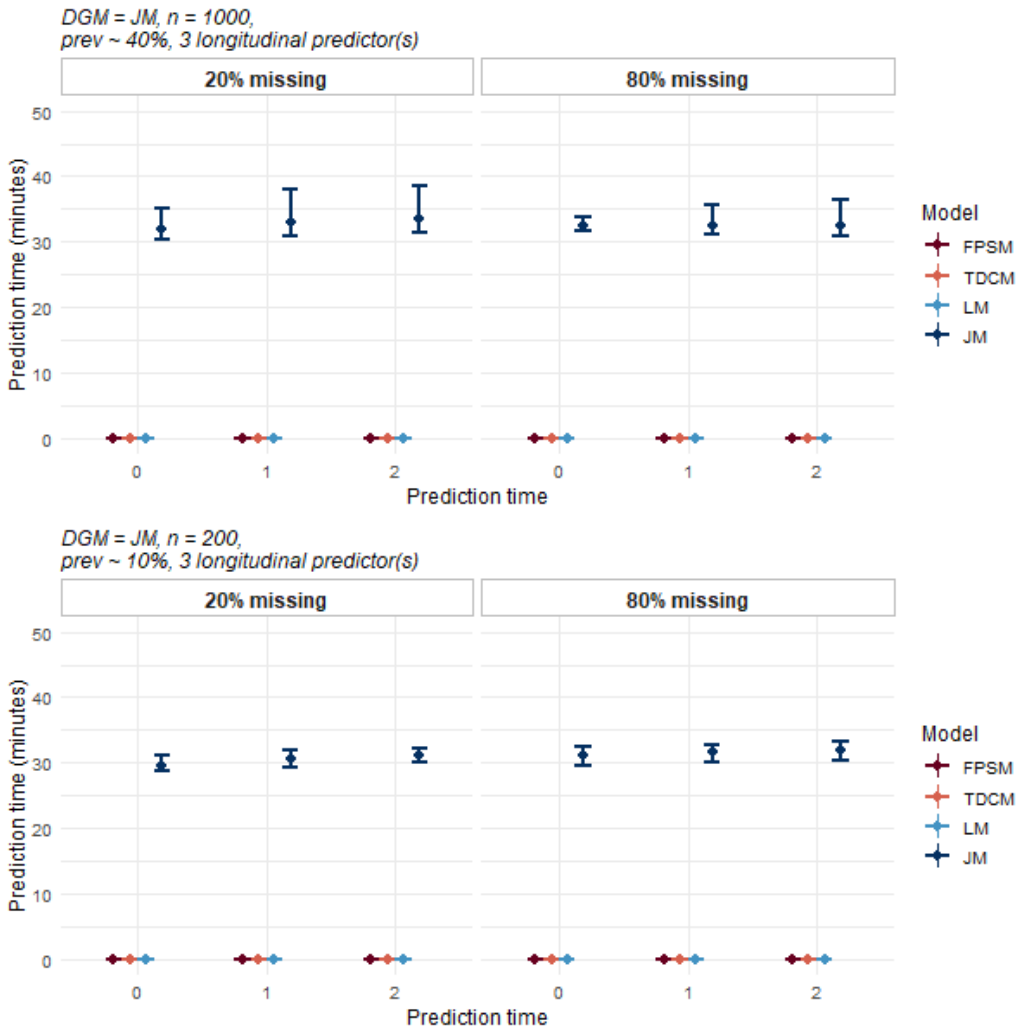

Figure 96: Exploring how prediction estimation time was influenced by **follow-up missingness**.

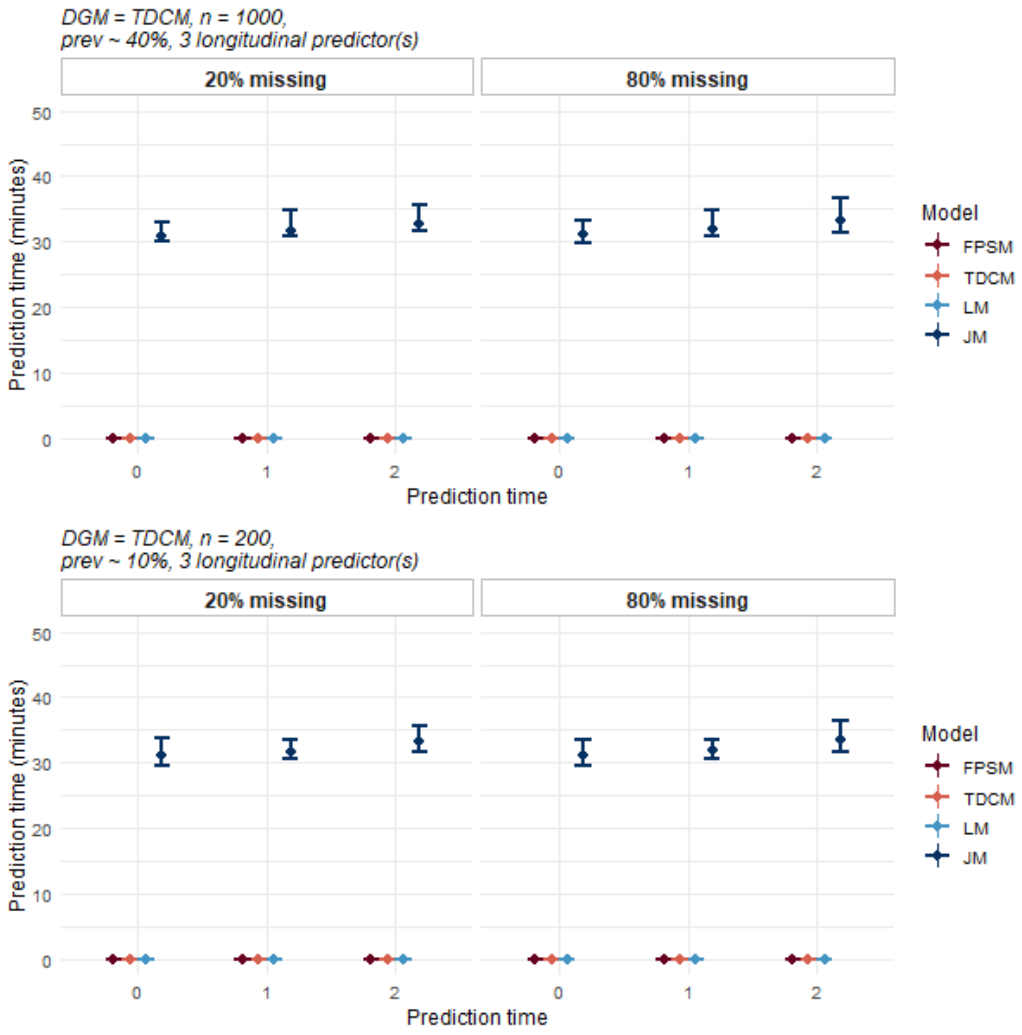

Figure 97: Exploring how prediction estimation time was influenced by **follow-up missingness**.

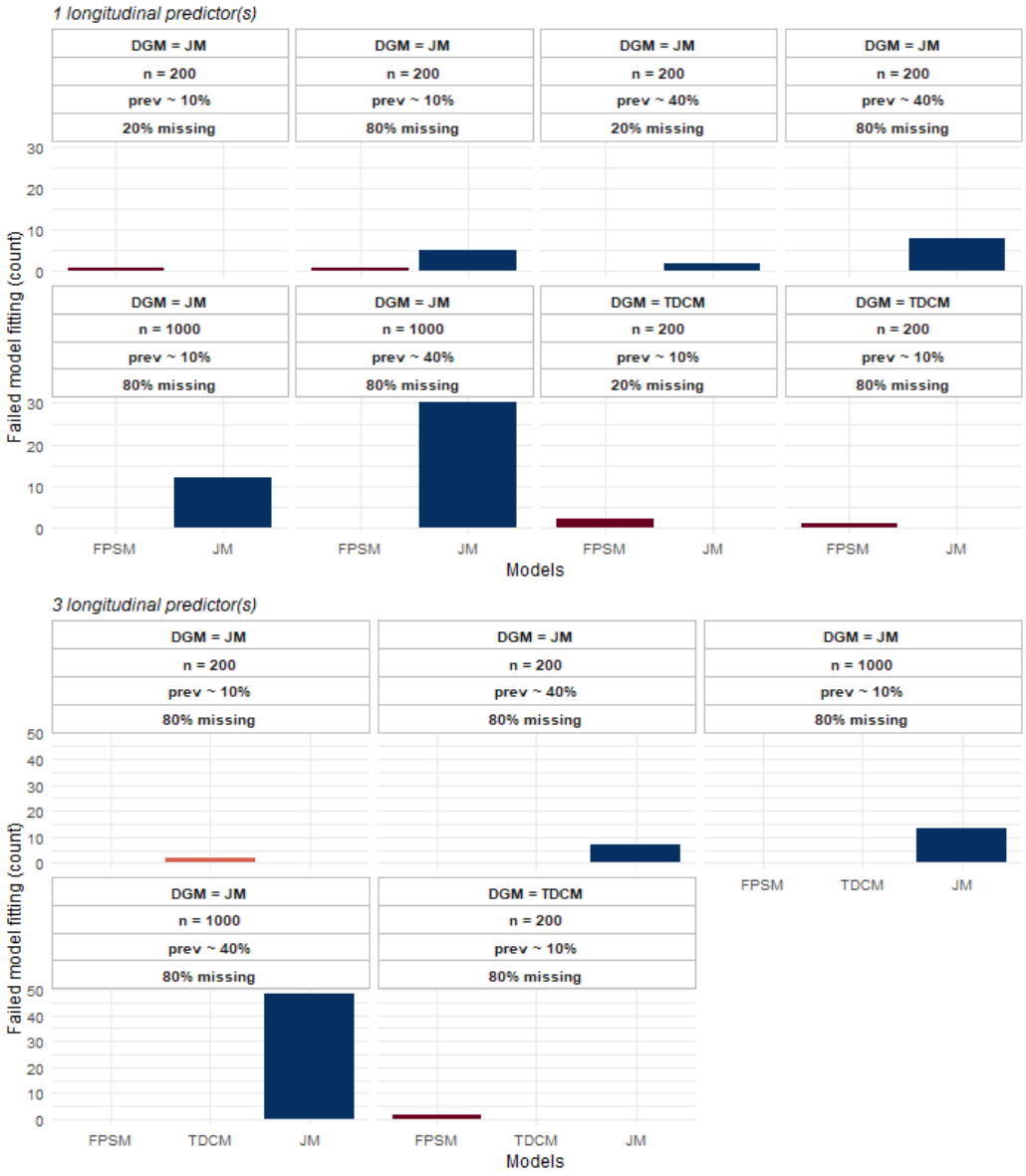

Figure 98: Model fitting failures across scenarios.

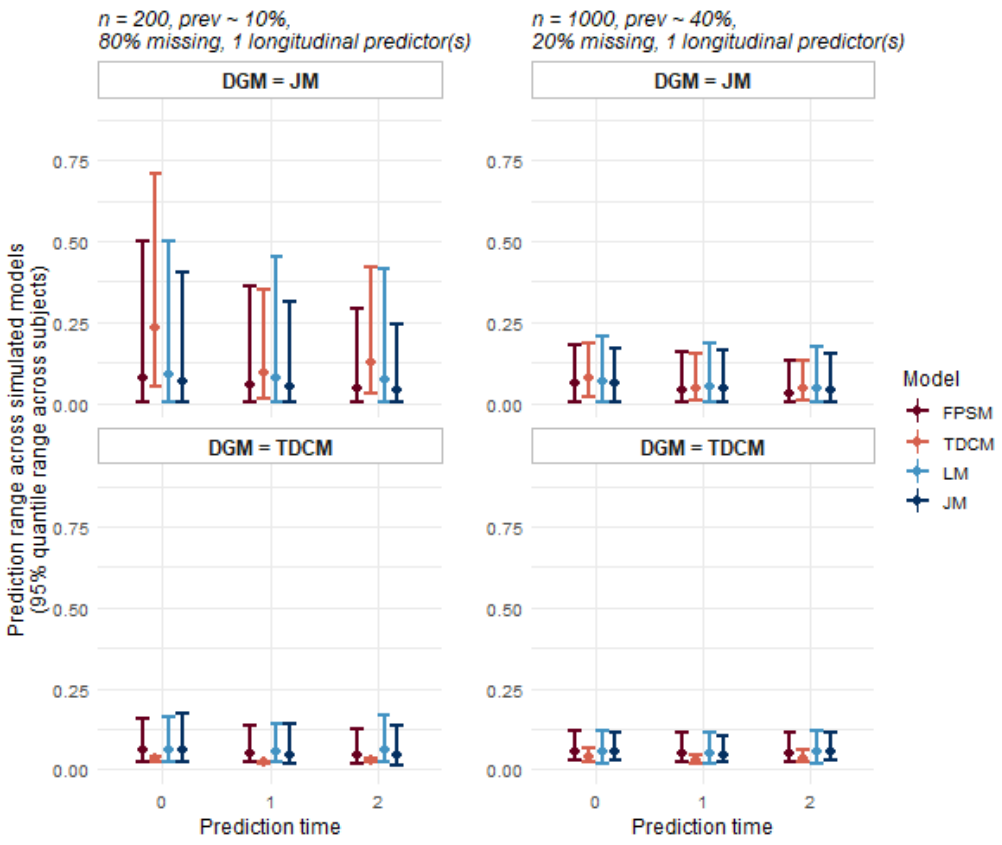

Figure 99: Prediction stability under contrasting data generation scenarios.

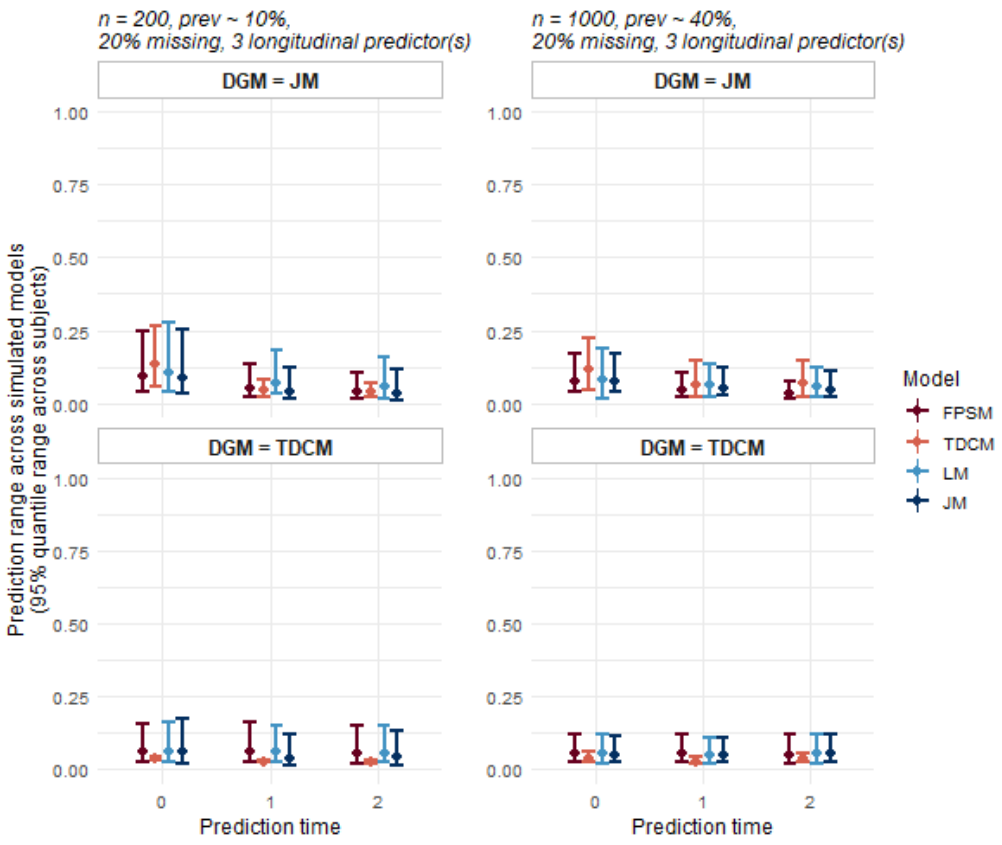

Figure 100: Prediction stability under contrasting data generation scenarios.

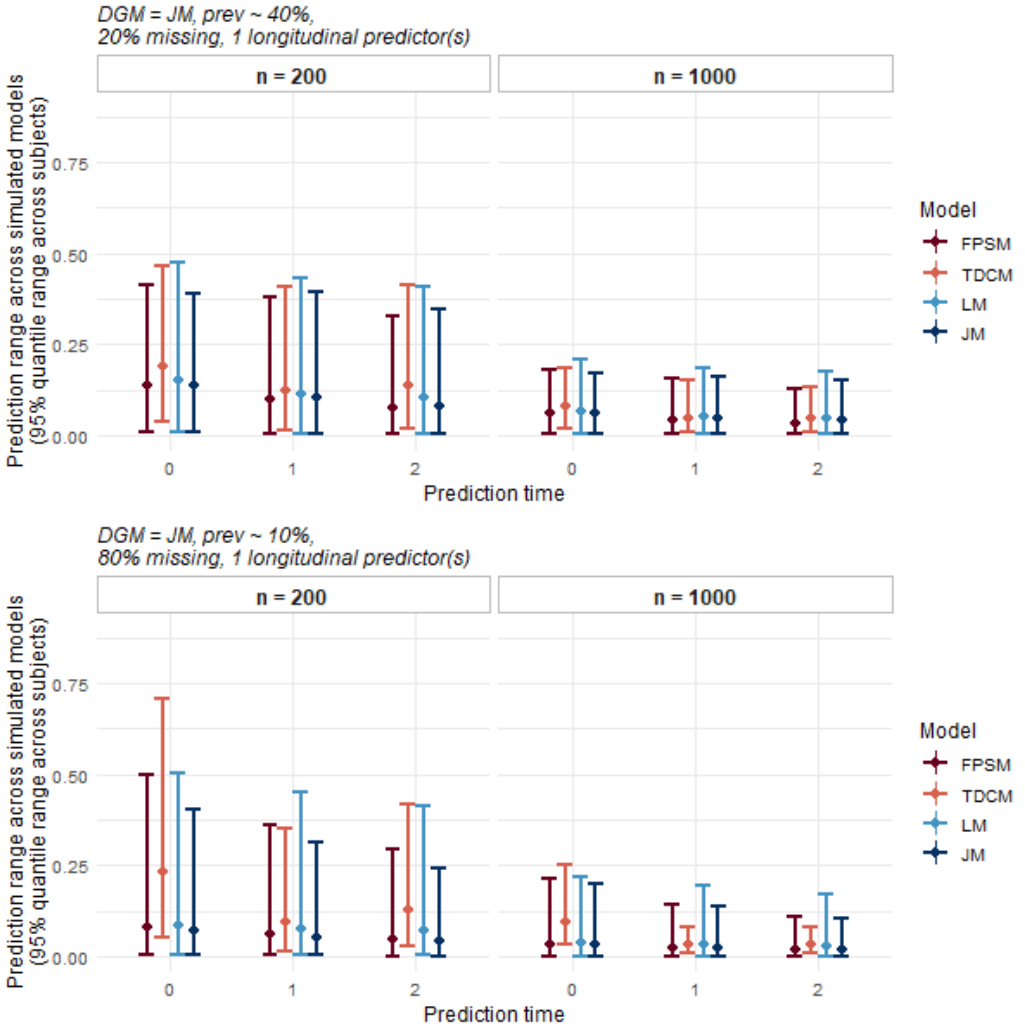

Figure 101: Exploring how prediction stability was influenced by **sample size**.

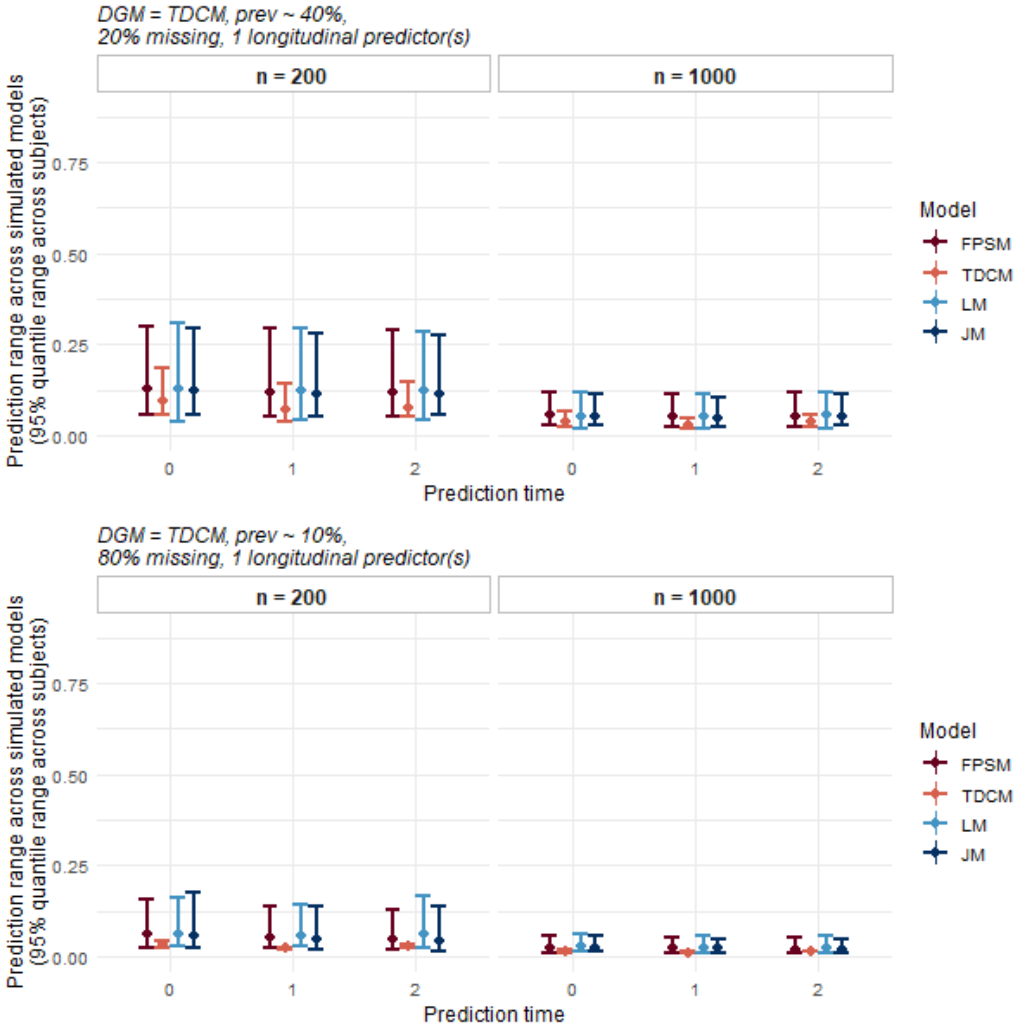

Figure 102: Exploring how prediction stability was influenced by **sample size**.

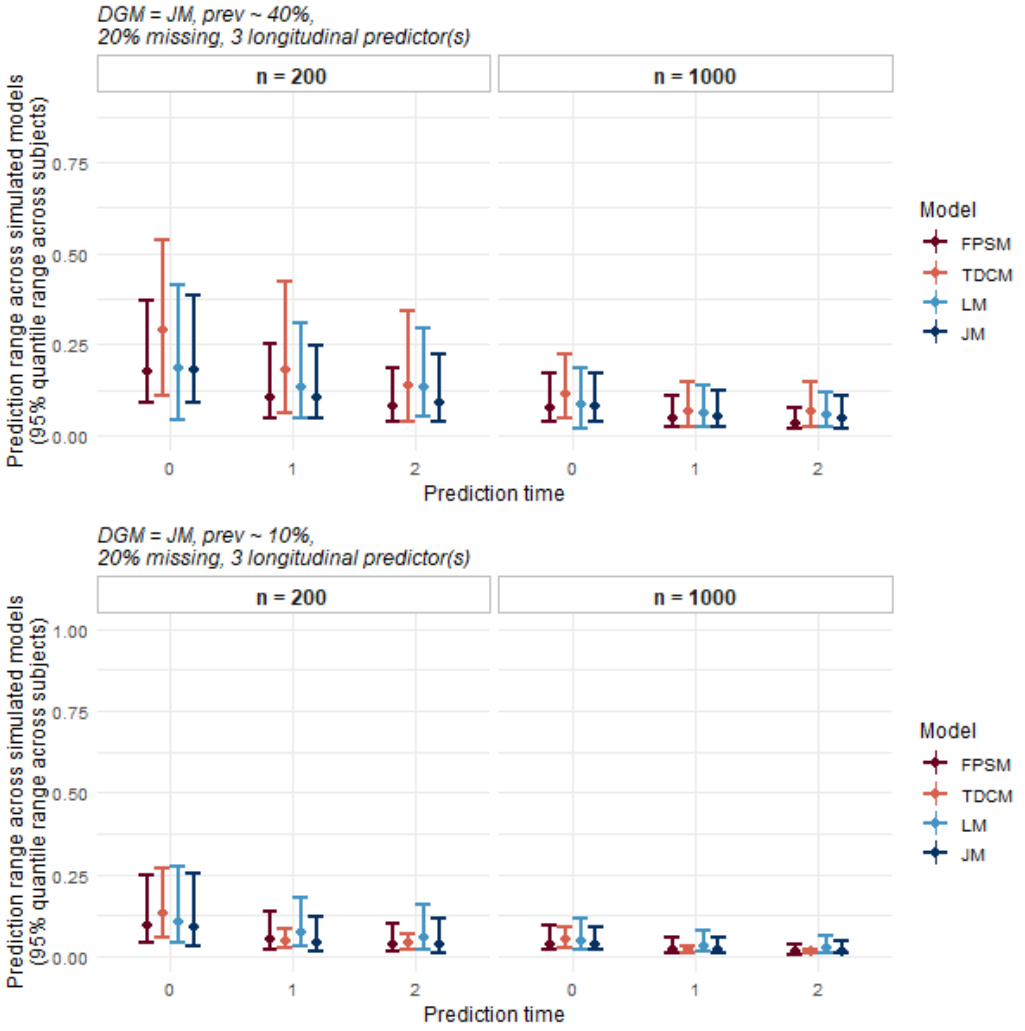

Figure 103: Exploring how prediction stability was influenced by **sample size**.

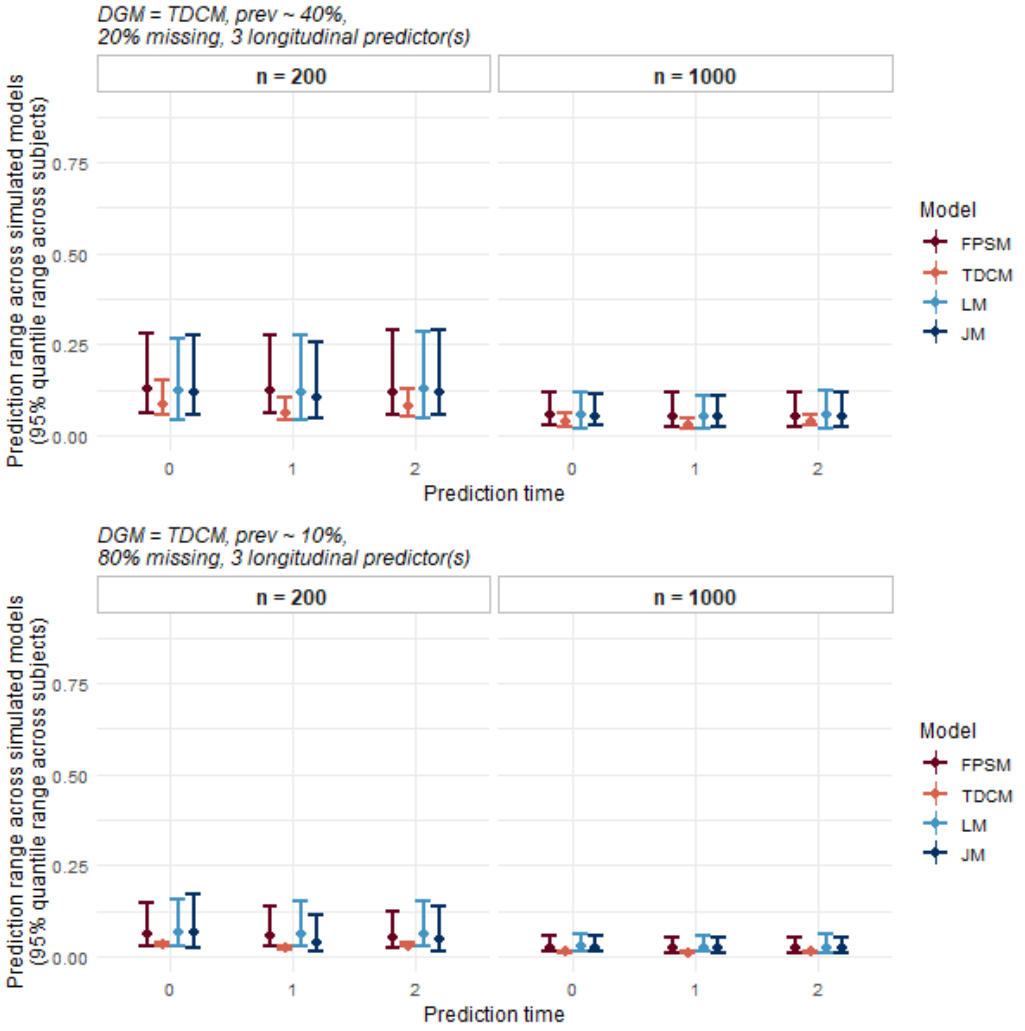

Figure 104: Exploring how prediction stability was influenced by **sample size**.

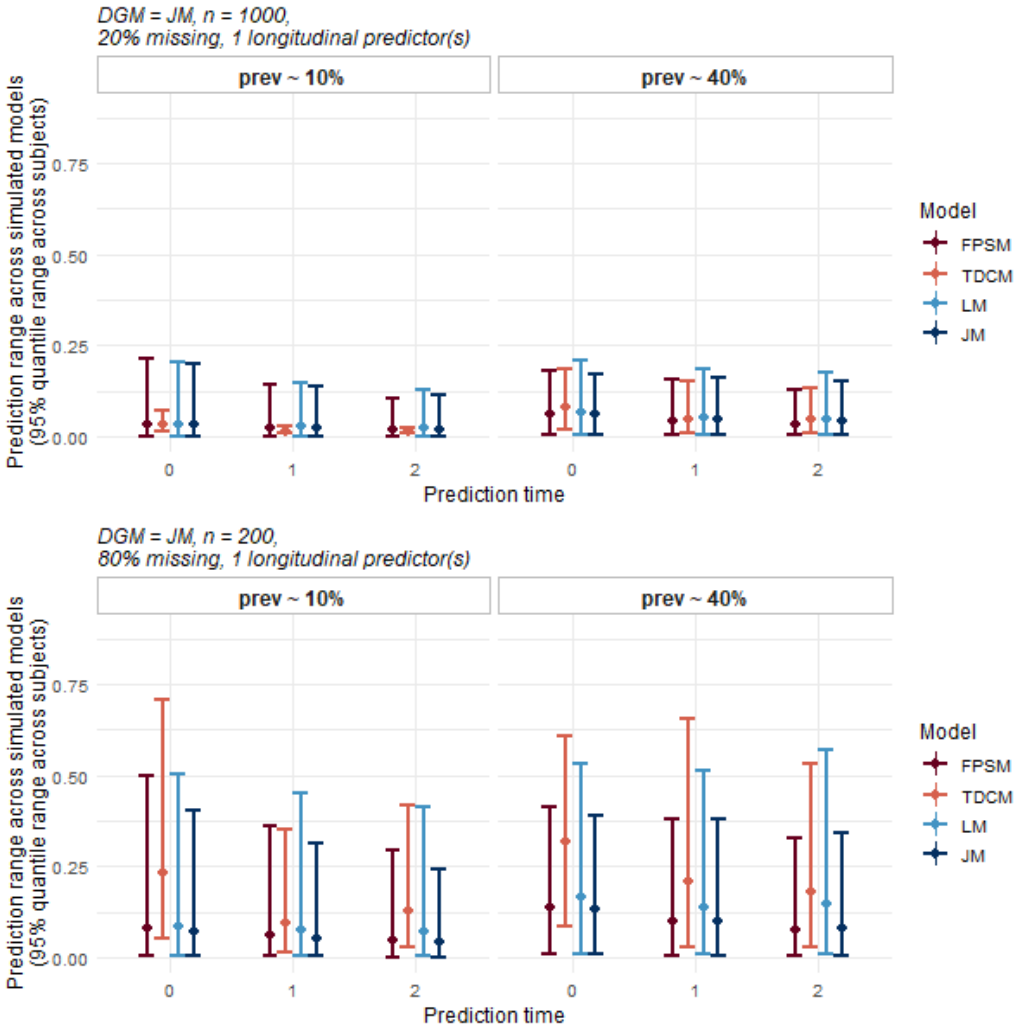

Figure 105: Exploring how prediction stability was influenced by **event prevalence**.

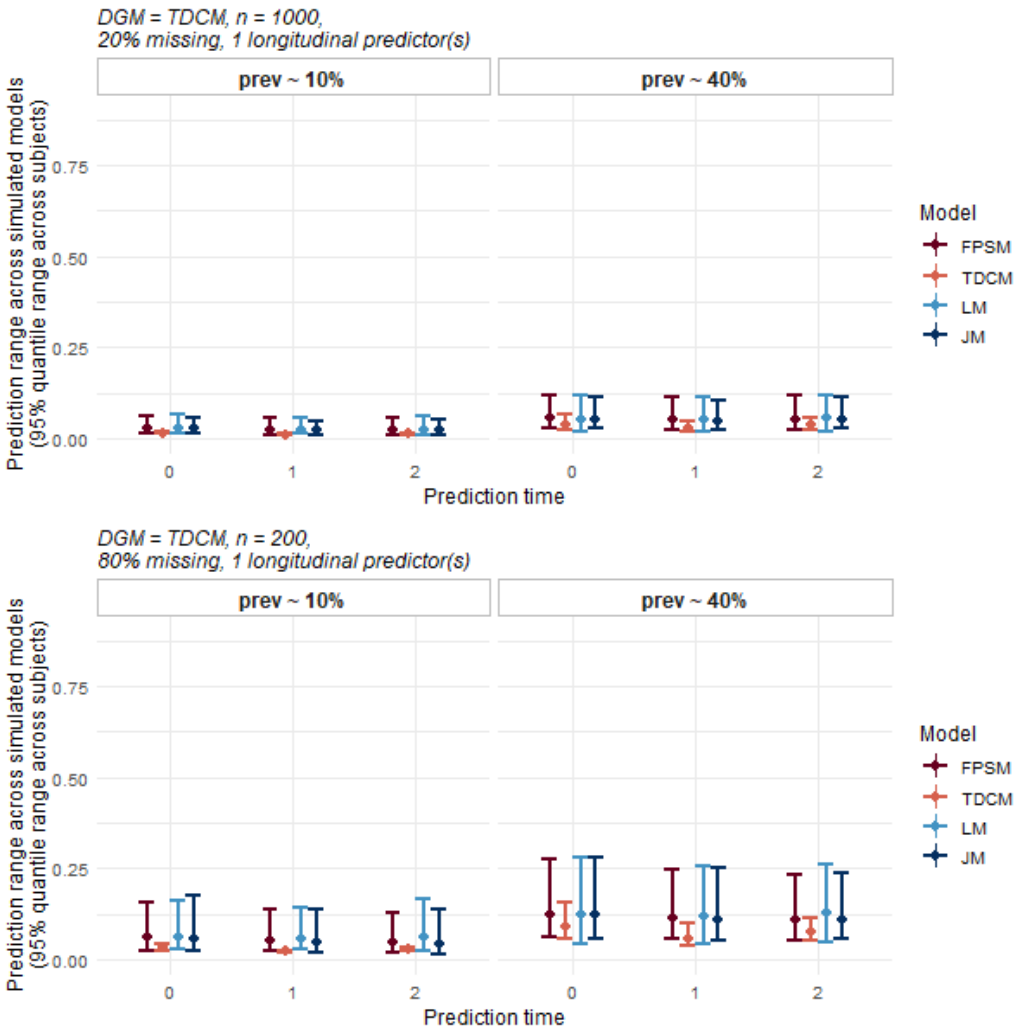

Figure 106: Exploring how prediction stability was influenced by **event prevalence**.

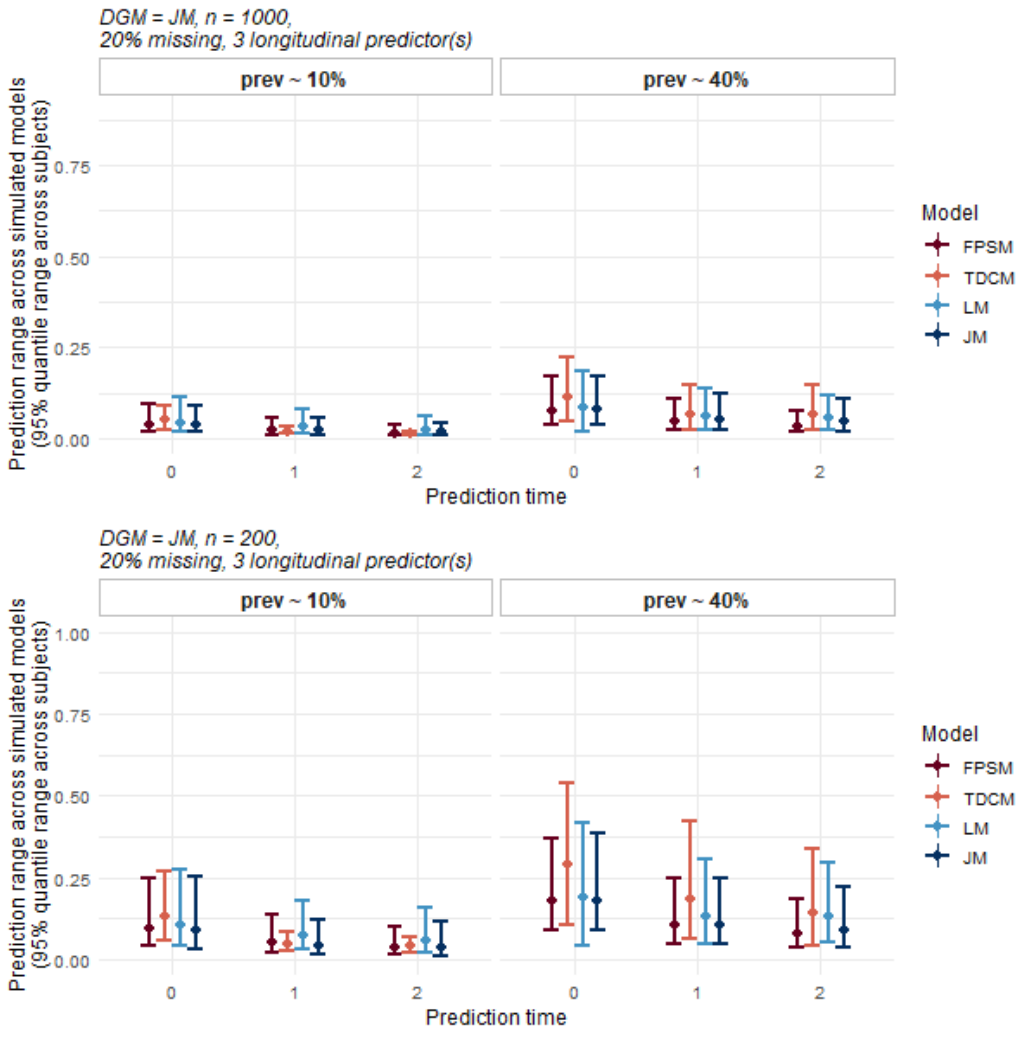

Figure 107: Exploring how prediction stability was influenced by **event prevalence**.

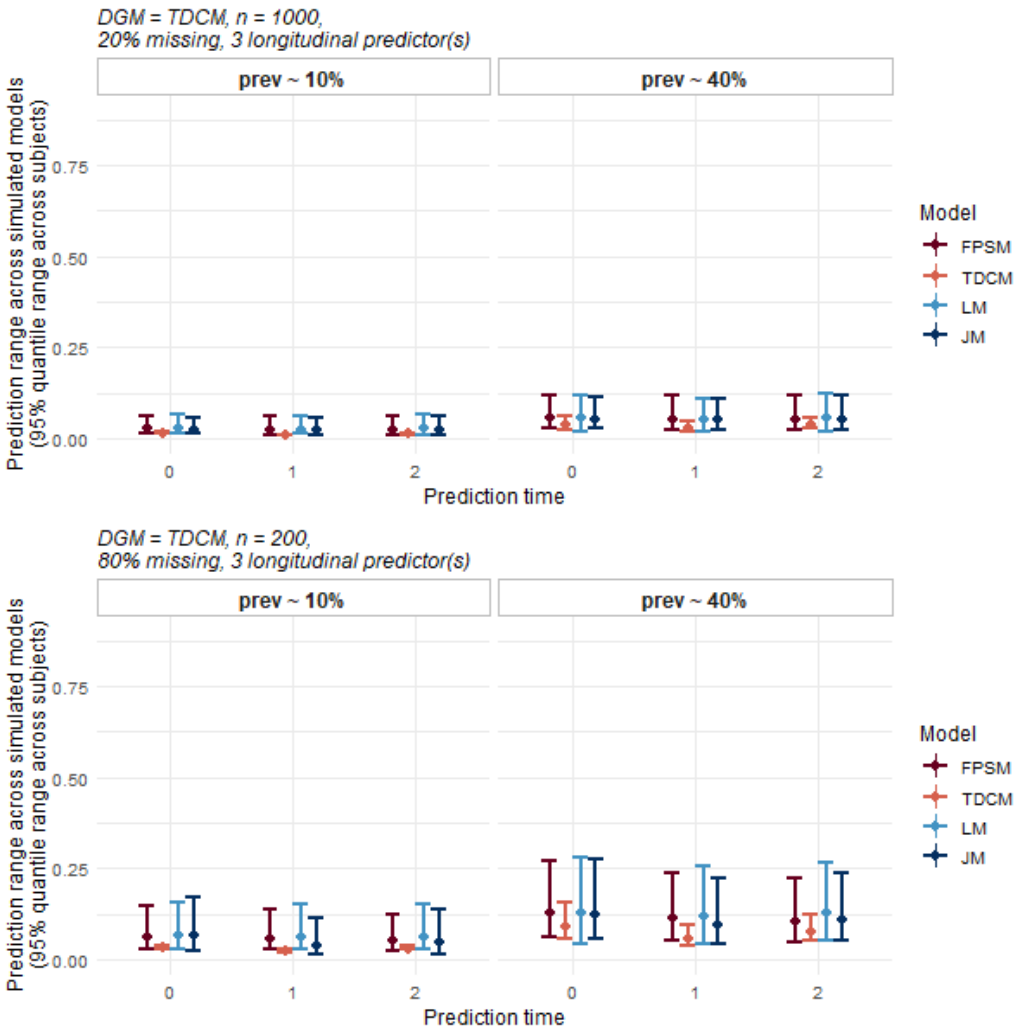

Figure 108: Exploring how prediction stability was influenced by **event prevalence**.

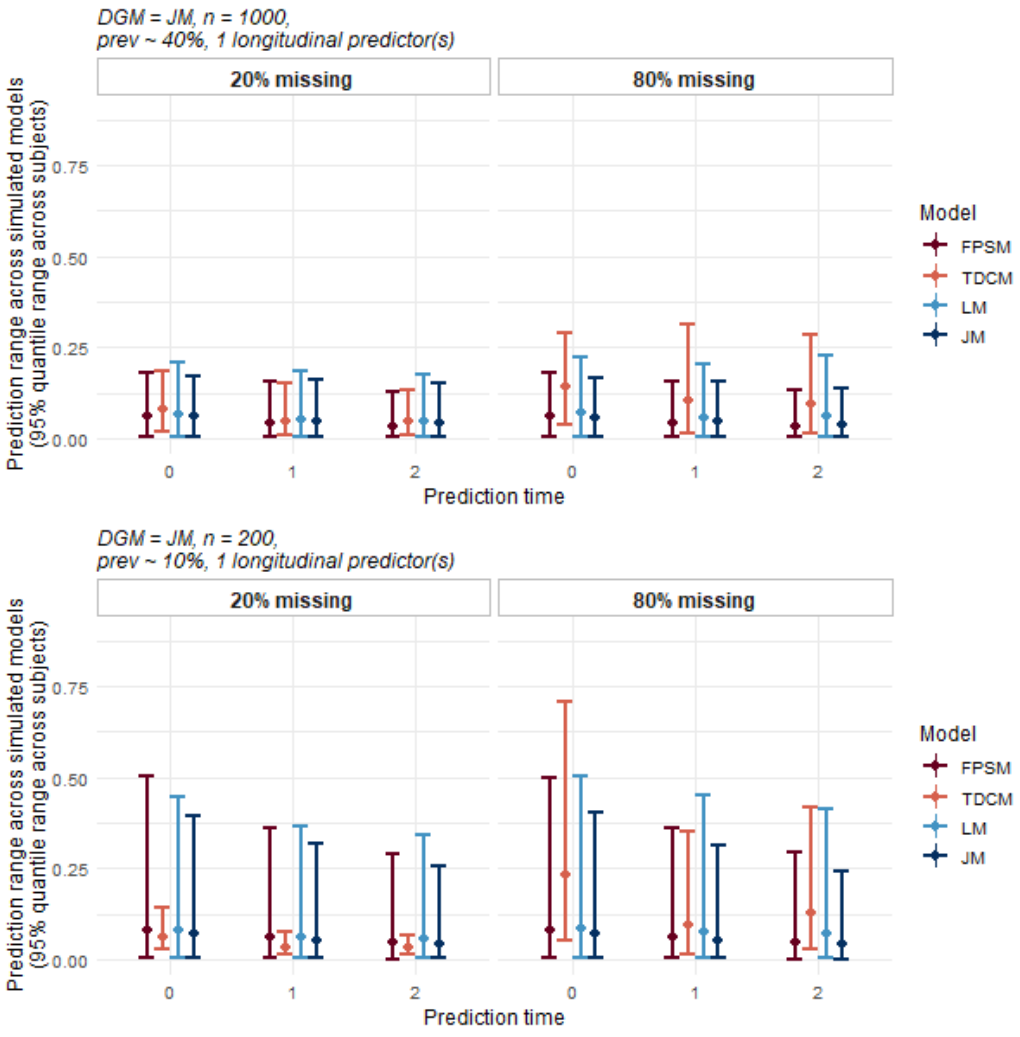

Figure 109: Exploring how prediction stability was influenced by **follow-up missingness**.

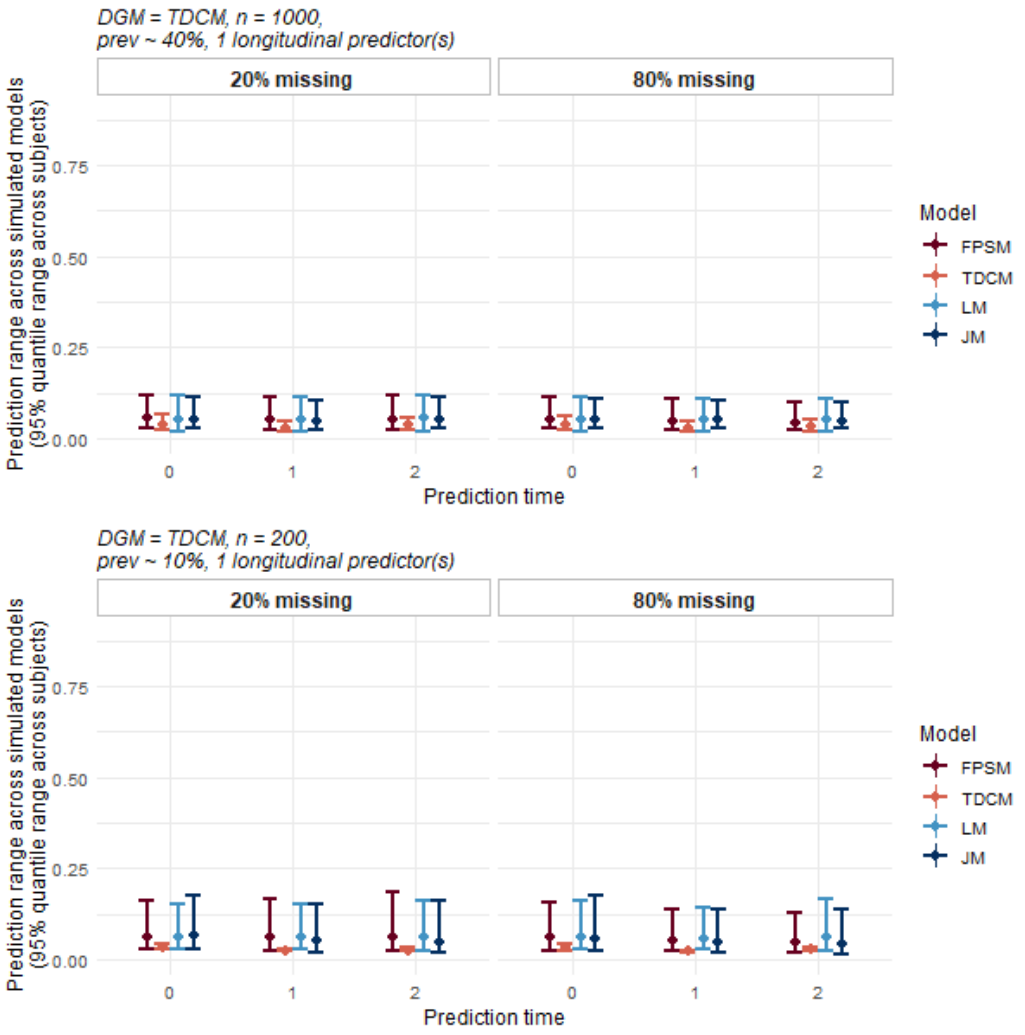

Figure 110: Exploring how prediction stability was influenced by **follow-up missingness**.

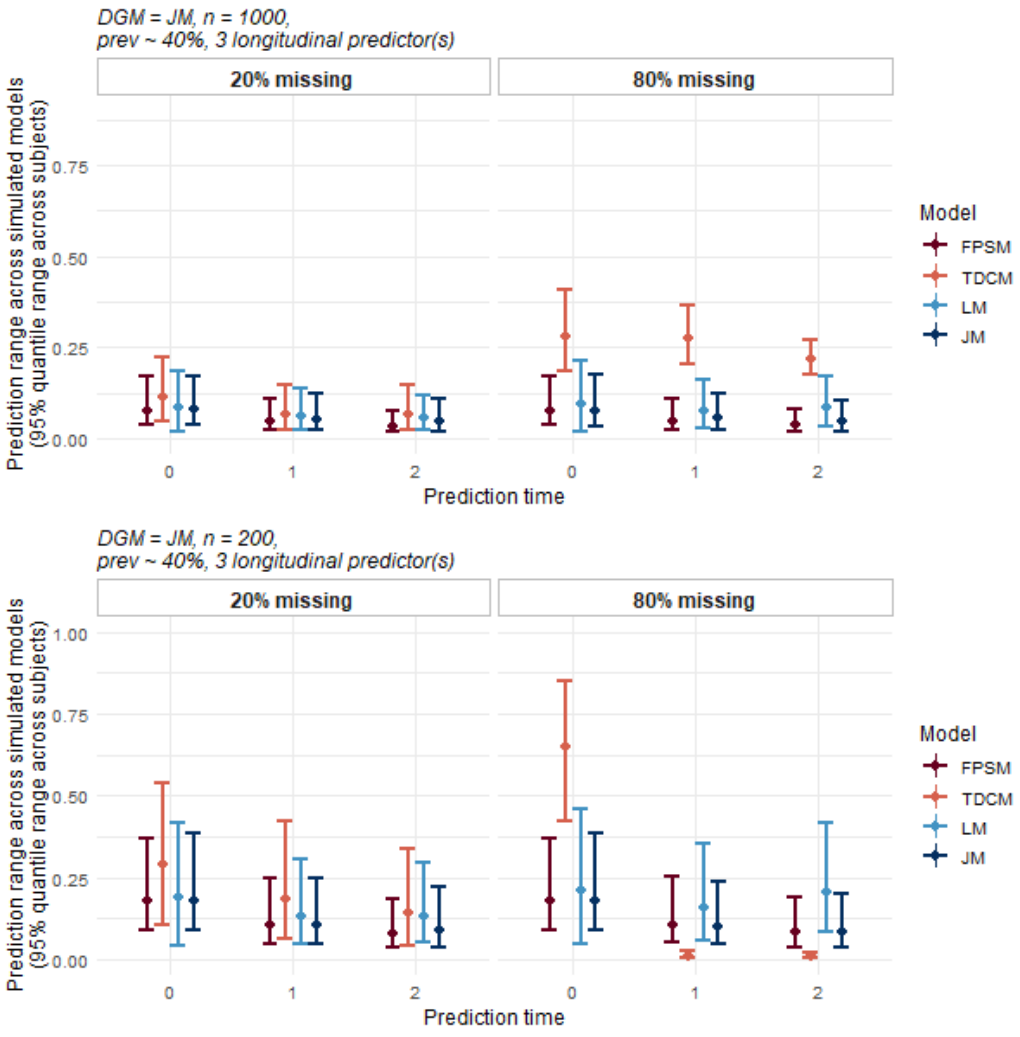

Figure 111: Exploring how prediction stability was influenced by **follow-up missingness**.

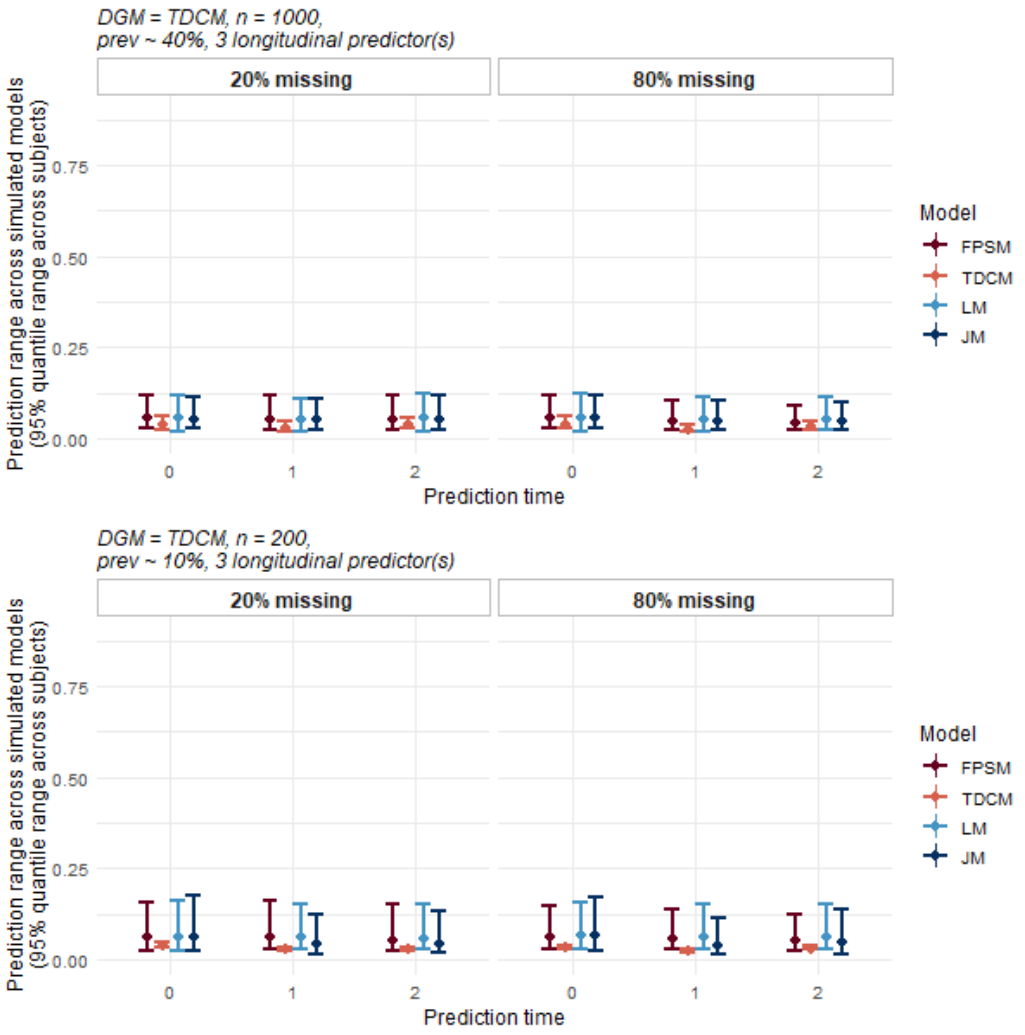

Figure 112: Exploring how prediction stability was influenced by **follow-up missingness**.