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Optimal Predictions in Illness Cognition

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Abstract: People make accurate predictions for many real world events e.g. human life spans (Griffiths & Tenenbaum, 2006). Accurate predictions are particularly important in the domain of health, where illness knowledge directly influences patient outcomes. To understand how well peoples' illness expectations were aligned, we asked participants to estimate durations for 9 illnesses, and compared their responses to the real-world distributions. We found that for common acute illnesses (e.g., the cold) people make accurate predictions, whereas for rare chronic illnesses (e.g., COPD) people make comparatively poor predictions. Further, we found that participants overestimate the prevalence of every illness, especially for those that are more common (e.g., the cold). Taken together, these results suggest that people more accurately estimate the duration of common acute illnesses, but this may cause them to overestimate the prevalence of these illnesses. Results will be discussed in terms of implications for both cognition and behavioral health theory.