1077-G1-1114   **Jeffrey W. Heath*** (`jeffrey.heath@centre.edu`), 600 W. Walnut, Danville, KY 40422, and **Ian M. Powell** (`ian.powell@centre.edu`), 600 W. Walnut St., Danville, KY 40422. *What is the True Probability of Getting a Hit?*

How accurately does batting average represent the probability of getting a hit in any given at-bat? Other situational variables contribute to this probability, and we examine two of those variables: hitting streaks and pitcher matchups. We analyze MLB data over the past 20 seasons, incorporating hitting streaks and pitcher matchups to help find the true probability of getting a hit. This information would allow teams to improve strategic decision-making in baseball such as in lineup optimization and/or substitution patterns. (Received September 16, 2011)