
Sunil Deshpande,1 Daniel E. Rivera,1 Jarred W. Younger,2 Naresh N. Nandola1,3


The purpose of this note is to correct typographical errors in Deshpande et al. [2014] that were introduced during the final publishing process. Each of these errors is noted in reference to page numbers from the printed version of the paper (Volume 4, Issue 3, pp. 275–289 of Translational Behavioral Medicine).

1. Equation (2) on page 279 shows a linear difference equation. It should be read as follows:

\[ y(k) + a_1 y(k-1) + \cdots + a_n y(k-n_a) = b_{11} u_1(k-n_b) + \cdots + b_{a1} u_a(k-n_{ab} + 1) + \cdots + b_{1n} u_1(k-n_{bn} + 1) + \cdots + b_{an} u_a(k-n_{an} + 1) + e(k) \]

2. Equation (6) on page 284 shows the finite-horizon optimization problem. It should be read as follows:

\[
\min_{\{u(k+i)|i=1,\ldots,p\}} J = \sum_{i=1}^{p} (y(k+i) - y_r)^T Q_y (y(k+i) - y_r) \\
y_{min} \leq y(k+i) \leq y_{max}, \quad 1 \leq i \leq p \\
u_{min} \leq u(k+i) \leq u_{max}, \quad 0 \leq i \leq m-1 \\
\Delta u_{min} \leq \Delta u(k+i) \leq \Delta u_{max}, \quad 0 \leq i \leq m-1
\]

3. The text on the first sub-column of page 286 has incorrect in-line equations corresponding to the performance metrics. The updated text should read as follows:

The performance of these interventions is measured by the tracking error \( J_e = \sum_{k=0}^{N-1} (y(k) - y_r)^2 \), total change in drug dosage \( J_{\Delta u} = \sum_{k=1}^{N-1} \Delta u(k)^2 \) and total amount of drug dosage consumed in the intervention \( J_u = \sum_{k=0}^{N-1} u(k) \).

4. Finally, on page 286, the variable \( f_a \) mentioned in the text has been misspecified as \( f^a \).

References