Speakers interacting with interlocutors who are having difficulty understanding them due to a hearing impairment or adverse listening conditions need to make adaptations to their speech to maintain effective communication despite the adverse environment. At the same time, according to Lindblom’s Hyper-Hypo model of Speech Production (Lindblom, 1990), talkers will tend to keep articulatory effort to the minimum level needed for effective communication. In our recent study, we investigated the adaptations that speakers make in such situations. The LUCID corpus (Baker and Hazan, 2011) includes dialogs produced by 40 speakers of SSBE while resolving a set of ‘spot the difference’ picture tasks in different communicative conditions. In some, the two talkers carrying out the task could hear each other normally while in others, one talker heard the other via (a) a three-channel noise-excited vocoder (i.e. a simulation of a cochlear implant), (b) multibabble noise or (3) a language barrier (L2 speaker). Crucially, we analysed the speech of the talker in the pair who was hearing normally, but who had to adapt his or her speech in response to the listening difficulties of their interlocutor. Analyses were made of global and segmental acoustic-phonetic measures as well as measures of lexical variety and communication efficiency. The communication barriers elicited perceptually-clearer speech in the talker not directly experiencing the interference, and the adaptations made varied with the type of communication barrier that the interlocutor was experiencing. Correlations in clarity ratings for samples of spontaneous speech produced in the different conditions suggest that talkers’ ranking in terms of their inherent clarity persists across speaking styles. However, weak correlations between acoustic-phonetic measures and measures of communication efficiency in adverse conditions suggest that talkers used a range of strategies to clarify their speech. These data provide further evidence that speech production is finely attuned to the needs of the interlocutor and that much is to be gained by analysing speech produced with communicative intent.