Glide-vowel sequences occur in many Romance languages. In some of these languages they can vary in production, ranging from diphthongal pronunciation \([ja,je]\) to hiatus \([ia,ie]\). According to native speakers’ intuitions, Spanish and Romanian both exhibit this variation, but to different degrees [Chitoran, I. and J.I. Hualde (2002) Variability in hiatus resolution: A phonetic study of \([CIV]\) sequences in two Romance languages. Poster presented at LabPhon 8, Yale University and Haskins Laboratories, June 2002.]. Spanish favors glide-vowel sequences, while Romanian favors hiatus, occasionally resulting in different pronunciations of the same items: Spanish (b\([j]\)ela, ind\([j]\)ana), Romanian (b\([i]\)ela, ind\([i]\)ana). A third language, French, has glide-vowel sequences consistently (b\([j]\)elle). This study tests the effect of position in the word on the acoustic duration of the sequences. Shorter acoustic duration indicates diphthong production \([jV]\), while longer duration indicates a sequence in hiatus \([iV]\). Eleven native speakers (4 Spanish, 4 Romanian, 3 French) were recorded, and duration measurements were taken. Digital recordings were made in a soundproof booth, at 44kHz. The analysis was done in Praat, based on waveforms and wideband spectrograms. Spanish and Romanian showed a word position effect. Word-initial sequences were significantly longer than word-medial ones \((p<.001)\), a result consistent with native speakers’ more frequent description of hiatus word-initially than medially. The effect was not found in French \((p>.05)\). In the Spanish and Romanian sentences, the non-high vowel \((V)\) in the sequence bears pitch accent, but not in French [Jun, S-A. and C. Fougeron (2002). Realizations of accentual phrase in French intonation. Probus 14, 147-172]. It is therefore possible that duration is sensitive not to the presence/absence of the word boundary, but to its position relative to pitch accent. The word position effect may therefore crucially be enhanced by the presence of pitch accent on \(V\) (in keeping with [White, L. (2003) English Speech Timing: A Domain and Locus Approach. PhD dissertation, University of Edinburgh]).