OBJECTIVES: To investigate the potential impact of the standard Medicare prescription drug benefit on beneficiaries who are high utilizers and on beneficiaries who qualified for the Transitional Assistance Program (TAP). METHODS: Simulation of annual beneficiary out-of-pocket costs under the standard prescription benefit using Medicare discount card claims data for 37,425 enrolled beneficiaries (at least 6 months) who filled at least one prescription between June 2004 and November 2005. The results of this study should closely represent Medicare beneficiaries’ drug using behavior as these data are more accurate than self-reported or survey data. RESULTS: Annually, beneficiaries filled 19 prescriptions, on average, and had out-of-pocket costs of $538. Average out-of-pocket costs among the top quartile of utilizers (more than 26 fills annually) were $1155. Assuming fixed drug utilization patterns, simulated Part D costs demonstrate that all beneficiaries would spend $412 out-of-pocket (excluding premiums), on average, while high utilizers would spend $779. Among high utilizers, 22% would have greater than $2250 in total drug costs and fall into the benefit’s “doughnut hole.” TAP beneficiaries (46%) would have higher out-of-pocket costs under Part D then under the drug card ($429 versus $256; p < 0.001), on average, because Medicare subsidized their first $600 in drug card fills annually. Under the drug card, TAP beneficiaries filled more prescriptions (23 versus 15; p < 0.001) and had lower out-of-pocket costs ($256 versus $781; p < 0.001) annually than non-TAP beneficiaries. CONCLUSION: Out-of-pocket costs under Part D for TAP beneficiaries and high utilizers (more than two prescriptions monthly) would be more than $400 and $750, respectively. If TAP beneficiaries do not qualify subsidized coverage under Part D and their drug use remains fixed, their out-of-pocket costs will increase. Beneficiaries might reduce their utilization when faced with higher out-of-pocket costs, with the potential for adverse impacts on patients’ health.