The objective of population modeling is to study the impact of tobacco products on the population as whole. Input parameters include demographic information, tobacco use transition probability, and mortality and/or morbidity. Input parameters are typically derived from population-level sources (e.g., census data or other population-level surveys). However, depending on the objective, other sources of data may be used. When using these other sources, steps should be taken to ensure they are representative of the population.

Input parameters are an important component of model development, verification, and validation. In many population models in a tobacco research setting, input parameters are used to incorporate tobacco use behaviors and risks that occur under scenarios of interest—for example, models to evaluate the health impact associated with introducing a new tobacco or policy that may result in product switching, dual use, or polytobacco use. Input parameters may be obtained from a variety of data sources, and depending on the objectives of the model, they could include population surveys representative of the population of interest (e.g., population distribution, birth rates, migration rates, death/other morbidity rates, tobacco product use behavior prevalence). This section provides a characterization of several classes input parameters informative in developing the TIG.

In this section, the inputs to these models and how they are represented in CDISC standards for submission to a regulatory authority are discussed. Model outputs are not currently covered in this section but may be covered in a later release. However, regulatory agencies expect full information to replicate the analysis based in the outputs.