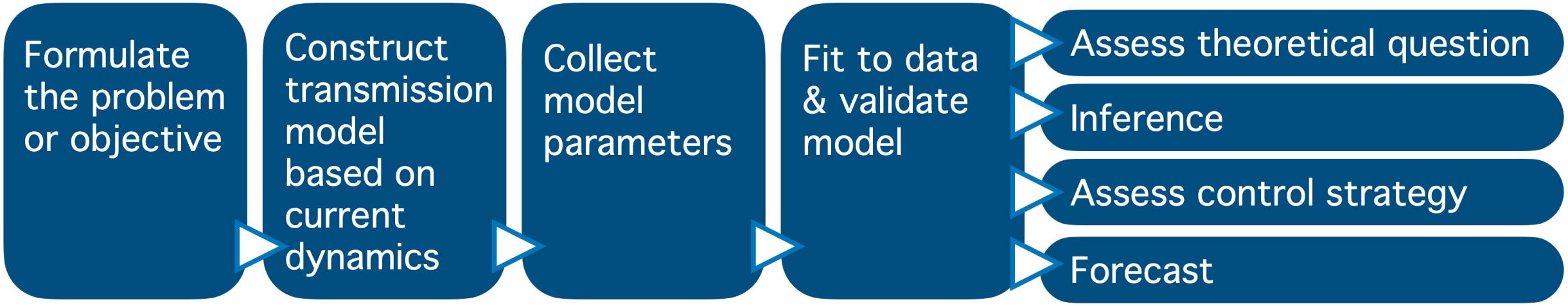
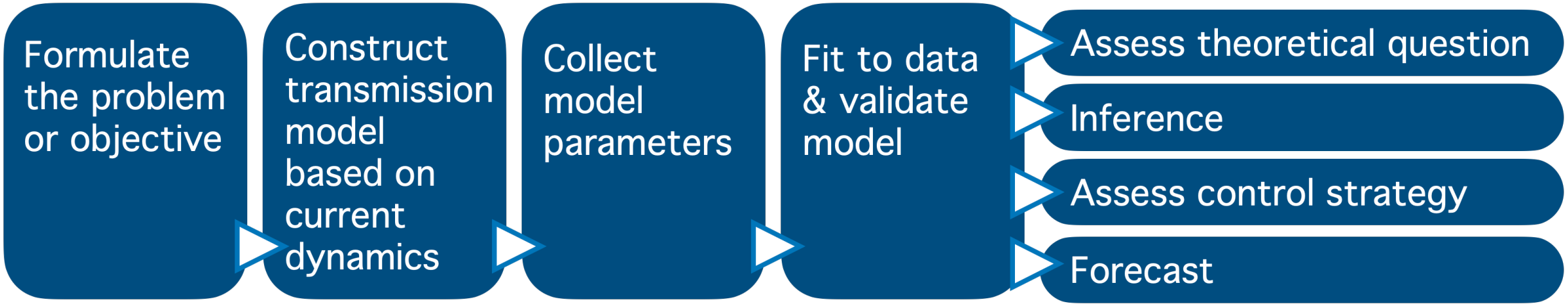
Recap

Steps in Developing a Model



Steps in Developing a Model

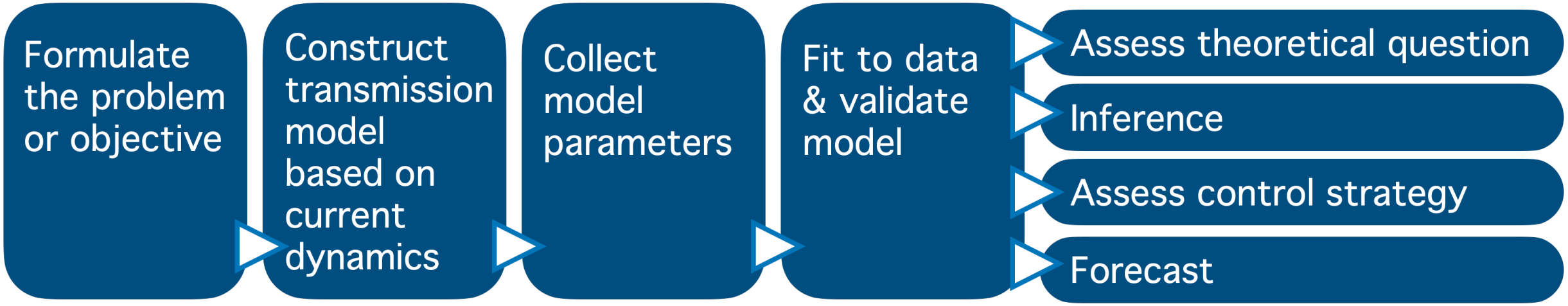


Context from measles and rubella control and elimination program in India

Vaccination activities

Goals and objectives for modelling questions: Is elimination feasible? By when? What strategies are most effective

Steps in Developing a Model

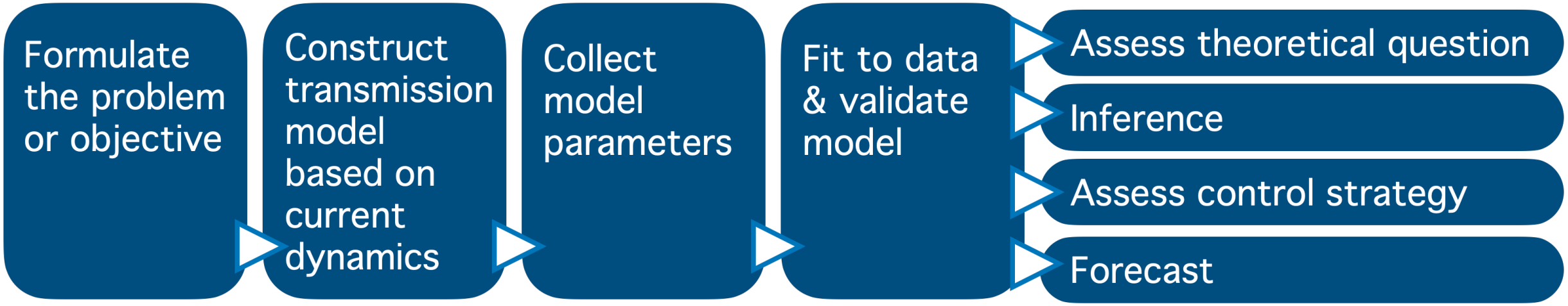


The Basic SIR model

Extensions of the basic model to include:
vaccination activities

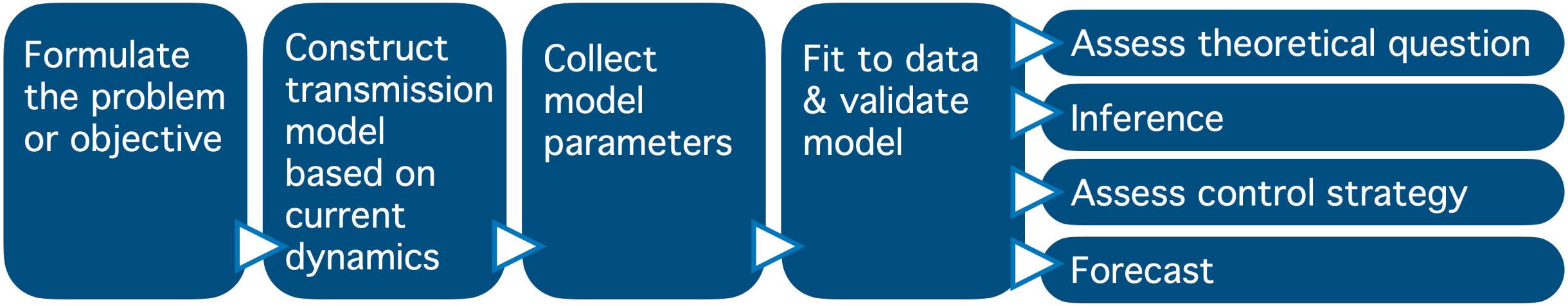
Age structure

Steps in Developing a Model



Evaluate the expected dynamics of the model and compare against observed epidemiology from historical pattern

Steps in Developing a Model

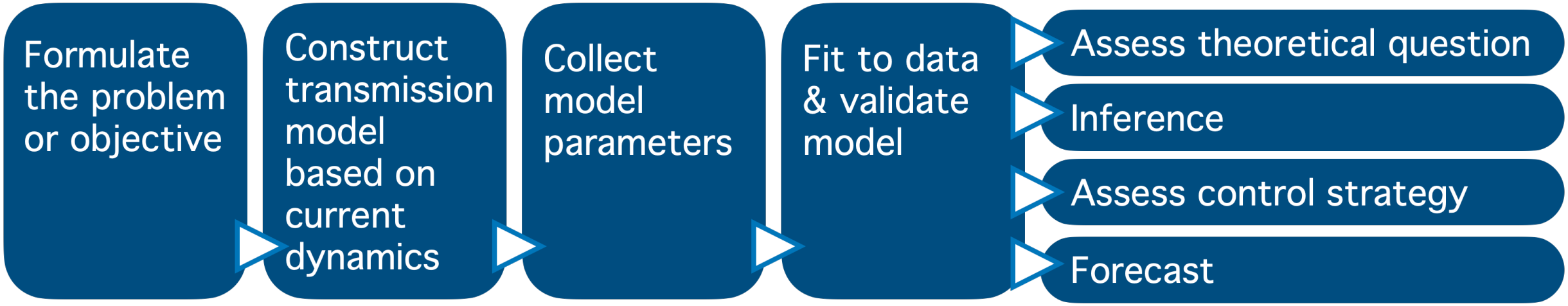


Critical model parameters

R_0 and its components β and $\boldsymbol{\gamma}$
Basic approaches to estimating R_0 from age at infection and seroprevalence

Age-mixing matrix

Steps in Developing a Model



When we don't know the parameters or the model structure directly from epidemiological intuition, then we can fit to each individual setting.

We SHOULD fit to each setting, even to evaluate whether epidemiological intuition holds for our problem