Title: Modelling Covid-19 in the Basque Country: From Introduction to control measure response.

Abstract: In March 2020, a multidisciplinary task force (so-called Basque Modelling Task Force, BMTF) was created to assist the Basque health managers and Government during the COVID-19 responses. BMTF is a modelling team, working on different approaches, to describe the dynamics observed for the tested positive cases, including the modelling development steps. Our models differentiate mild and asymptomatic from severe infections prone to be hospitalized and were able to predict the course of the epidemic, providing important projections on the national health system's necessities during the increased population demand on hospital admissions. Short and longer-term predictions were tested with good results adjusted to the available epidemiological data. We have shown that the partial lockdown measures were effective and enough to slow down disease transmission in the Basque Country. The analysis of the growth rates from the data led to improved model versions describing after the exponential phase also the new information obtained during the phase of response to the control measures. This framework is continuously being used to monitor disease transmission while control measures are tightened and relaxed over time.