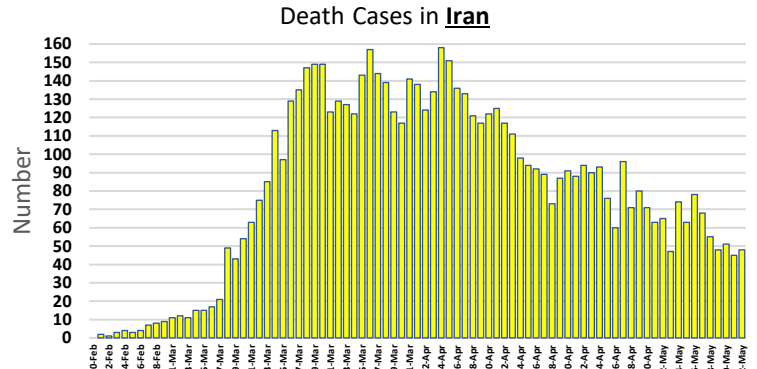
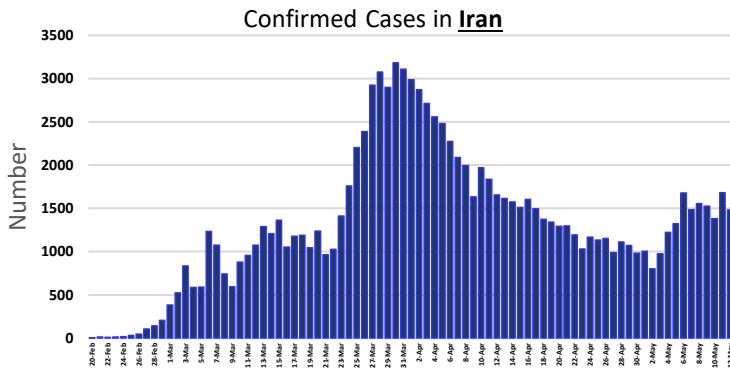


Total confirmed cases: **110,767** Total associated deaths: **6,733** Total recovered cases: **88,357** New cases: **1481**

Indicators of screened, infected and death cases

New lab-confirmed cases (in last 72 h)	Value
Age mean (standard deviation)	53.3 (21.2)
Age median (inter-quartile range)	54 (36-70)
Sex distribution (%)	
Male	51.8
Female	48.3
Cases with at least one co-morbidity (%)	30.2
Cases admitted in ICU* (%)	12.4
Cases with more severe forms of the disease **	17.8
COVID-19 deaths (in last week)[§]	
Age mean (standard deviation)	66.1 (18.6)
Age median (inter-quartile range)	68 (56-79)
Cases over 60 years (%)	70.7
Sex distribution (%)	
Male	56.9
Female	43.1
Cases with at least one co-morbidity (%)	37.9
Cases over 60 years/ with at least one co-morbidity (%)	77.6

* To the total number of hospitalized COVID-19 patients. ** Based on available data, we considered patients with death outcome, as well as those admitted to ICU or under mechanical ventilation as more severe cases. The information in this chart is based on hospitalized cases, and outpatients are not included in this calculation. Inclusion of outpatients and asymptomatic cases would decrease the proportion of severe cases. [§] To increase the sample size, analysis of death cases is done on the data in the last week

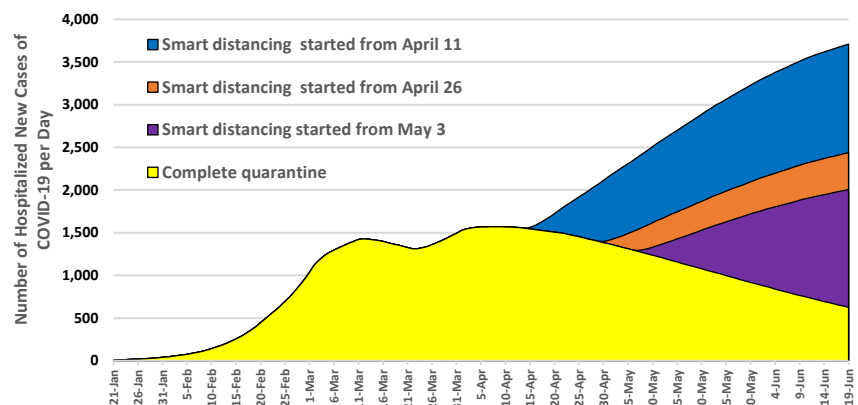
Estimation of the Number of Hospitalized New Cases of COVID-19 per Day by Different Starting Time of Smart Distancing in Iran: A Dynamic Modelling

By raising concerns about starting businesses and social activities and increasing the contact rate of people in the community, the government has adopted an intervention called smart distancing. This intervention reduces the number of contacts in the community, but at a lower level as compared with complete quarantine (closure of all jobs and businesses, which is ideal for reducing infection rate). In this modeling, the number of hospitalized new cases of COVID-19 is estimated based on the starting time of smart distancing. Four scenarios were developed that are different in terms of no smart distancing (complete quarantine with the lowest contact rate) and smart distancing time depending on when it starts. The trend of the number of hospitalized new cases of COVID-19 is modeled between January 21 and February 19, 2020. It was assumed that in all scenarios, 20% of asymptomatic patients and patients with mild symptoms isolate themselves at home. Isolation means that infected people cannot transmit the disease to healthy people and it is assumed that isolation level reaches from 10% to 20% gradually.

Scenario No.	Intervention level	Intervention description	January 21-February 10	February 20-March 10	March 11-June 19	Number of hospitalized new cases of COVID-19 in June 19 (Uncertainty level)	Date and maximum number of hospitalized new cases during time period (Uncertainty level)	Cumulative number of hospitalized cases of COVID-19 until June 19 (Uncertainty level)
1	Basic state (minimum contact rate; complete quarantine)	- From early February, the number of contacts per person is 13. Then from the mid of March to the late of June, it will reach 5 contacts per person. - Appropriate government interventions are in the form of training and advising patients, and people and patients have a mild change in their behavior.	10%	15%	20%	650 cases (100-1,800)	April 7-10; 1,600 cases (600-3,000)	147,000 cases (56,000-292,500)
2	Smart distancing started from April 11	- From early February, the number of contacts per person is 13, and then from the mid of March to April 11, it will reach 5 contacts per person. By assuming that the smart distancing has been started from April 11 the contacts rate increased to 7 contacts per person. - Government interventions similar to scenario 1	10%	15%	20%	3,700 cases (550-10,500)	June 19; 3,700 cases (550-10,500)	254,500 cases (79,500-562,000)
3	Smart distancing started from April 26	- From early February, the number of contacts per person is 13, and from the mid of March to April 26, it will reach 5 contacts per person. By assuming that the smart distancing has been started from April 26, the contacts rate increased to 7 contacts per person. - Government interventions similar to scenario 1	10%	15%	20%	2,400 cases (400-7,000)	June 19; 2,400 cases (400-7,000)	196,000 cases (66,000-418,500)
4	Smart distancing started from May 3	- From the early of February, the number of contacts per person is 13 and then from the mid of March to May 3, it will reach 5 contacts per person. By assuming that the smart distancing has been started from May 3, the contact rate increased to 7 contacts per person. - Government interventions similar to scenario 1	10%	15%	20%	2,000 cases (300-6,000)	June 19; 2,000 cases (300-6,000)	179,000 cases (62,000-376,000)

Conclusions

- ❖ The reopening of various jobs and businesses will increase the contact rate in the community and consequently will increase the number of hospitalized new cases of COVID-19 in Iran.
- ❖ In situations where complete quarantine is not feasible to do, smart distancing will prevent the contact rate from being very high.
- ❖ Delay in the start of smart distancing and reopening businesses could reduce the number of hospitalized new cases of COVID-19. In addition to the delay in reopening businesses, it seems that there are ways to increase detection and, as a result, to isolate asymptomatic patients and patients with mild symptoms.



Source: Research Centre for Modelling in Health, Kerman University of Medical Sciences