Table S1 Patient attributes and settings

Attributes	Settings
Ordinary patients or quarantined people	Ordinary patients-1, quarantined people-2
Adult or child	70.3% adults, 29.7% children, discrete distribution (0.703, 1, 1.0, 2)
Inspection Sequence	74.7% of patients were prioritised for nucleic acid testing, and 25.3% of patients were prioritised for CT examination, discrete distribution (0.747, 1, 1, 2)

Table S2 Resources and process duration settings.

Area	Key information	Settings	Resource
Entrance	Limit number of people	≤10	
	Preparation time before the arrival of the quarantined people	TRIA (30, 45, 60)	
	Ordinary patient pre-screening	TRIA (0.5, 1, 1.5)	1 nurse
	Registration window	TRIA (0.5, 1, 1.5)	1 registrar
	Payment window	TRIA (0.5, 1, 1.5)	1 clerk
	Medicine window	TRIA (0.5, 1, 1.5)	1 pharmacy assistant
General consultation room	First visit time	TRIA (2, 2.5, 3)	2 doctors for adults and 1 doctor for children. Three people were responsible for consultation of quarantined people at the same time, and they need to leave the general consulting room to go to the observation room during work.
	Follow-up time	TRIA (6, 10, 16)	
Nucleic acid testing	Time to obtain sample	TRIA (0.5, 1, 1.5)	1 nurse
	Sample inspection strategy	4 samples per batch, 1 PCR nucleic acid detection equipment	
	Detection time	LOGN (4.983, 0.410)	6 PCR nucleic acid detection equipments
CT examination	CT scan	TRIA (6, 10, 13)	1 CT machine
	CT result analysis and review	LOGN (3.803, 0.760)	
CT room disinfection	Ultraviolet disinfection	three times a day at 8 am, 4 pm, and 10 pm	Following use by ordinary patients, the CT room was disinfected for 2 min. Following use by quarantined people, the CT room was disinfected with ultraviolet light for 1 h
	Surface disinfection	Every 2 h 10 min interval	
Observing room	Pre-check	TRIA (0.5, 1, 1.5)	1 nurse
	Nucleic acid sampling	TRIA (0.5, 1, 1.5)	

TRIA, triangular distribution; PCR, polymerase chain reaction; CT, computed tomography; LOGN, lognormal distribution.

Table S3 Statistical variables in the simulation model

Variable	Definition
λ	Average daily visits
λ_c	Average daily visits for ordinary patients
λ_o	Average daily visits of quarantined people
T	Average total process time for patients
T_c	Total process time for ordinary patients
T_o	Total process time of quarantined people
T_{CT}	CT scan and waiting time
$T_{CT\text{-}c}$	CT scan and waiting time of ordinary patients
$T_{CT\text{-}o}$	CT scan and waiting time of quarantined people
T_w	Patient weighted process time
t_a	Time from CT test to getting both reports
T_n	Waiting time for nucleic acid testing report after sampling
u_c	CT utilisation
u_n	PCR utilisation
a	Average number of cross-uses of CT
A	Upper limit of cross-use times of CT room
N_t	Average number of waiting patients
S	Area of the fever clinic system
w	Crowd density
k	Maximum total process time the patient can tolerate
T_p	CT room preparation time for quarantined people before their arrival
U_c	Urgency of ordinary patient
U_o	Urgency of quarantined people
W_c	Ordinary patient weight
W_o	Quarantined person weight
T_w	Patient weighted total process time
P_0	Proportion of preferential nucleic acid testing

PCR, polymerase chain reaction; CT, computed tomography.