

Covid-19 in Latin America countries: Course of the pandemic and the different responses towards control

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18 **Abstract**

19

20 **Background:** The emergence of COVID-19 in Latin America occurred within a troubled
21 political, economic and social context, with growing trends of poverty and social inequality
22 challenging already overburdened and underfinanced local healthcare systems. In the absence
23 of a vaccine or of any treatment for COVID-19, public health measures such as social
24 distancing had to be adopted. The objective of this paper is to describe the course of the
25 COVID-19 pandemic in Latin American countries and to summarize the social distancing
26 measures implemented in each one of these countries, discussing the changes that took place
27 in the social mobility of the populations and their potential effects on the course of the epidemic
28 up to June 2020. **Results:** Brazil has the highest cumulative number of cases and deaths;
29 however, cumulative incidence rates are higher in Peru and Chile, while the highest cumulative
30 mortality rates are in Ecuador, Peru and Brazil. Some countries implemented social distancing
31 measures before the first case was registered, culminating in lockdown in eight countries before
32 detection of the 100th case. The measures that appear to have had the greatest impact in reducing
33 mobility include, in addition to lockdown, the closure of schools and prohibition of events. In
34 general, the countries that implemented social distancing measures earlier and where the
35 reduction in social mobility was greatest also recorded lower incidence and mortality rates.
36 Brazil and Mexico failed to adopt lockdown and the number of cases of the disease continues
37 to grow. **Conclusions:** As occurred in other continents, control of the COVID-19 pandemic
38 was better in countries that were faster in adopting more restrictive measures. Nevertheless,
39 this equation does not appear to guarantee a positive outcome in all settings, possibly due to
40 the considerable social inequalities and chronic deficiencies of the healthcare systems, with the
41 scenario being even more complex in view of the recurring political crises and the negationist
42 view of some national leaders. The COVID-19 pandemic continues to spread in Latin America

43 and exposes these contradictions. Further studies are required to gain a greater understanding
44 and generate lessons on how to manage such a complex crisis.

45 .

46

47 **Keywords:** social distancing; Latin America; Covid-19.

48

49

50 **Background**

51

52 COVID-19, a disease caused by SARS-CoV-2, was first registered in Latin America, in Brazil,
53 on February 26, 2020 [1], almost two months after the initial outbreak was detected in China.
54 On March 11, when the World Health Organization (WHO) declared COVID-19 a pandemic,
55 slightly more than 100 cases had been registered in the region, concentrated in thirteen
56 countries. Although the pandemic reached Latin America later than Europe, the number of
57 confirmed cases as of June 28, 2020 is over 2.4 million, corresponding to approximately 25%
58 of the total number of confirmed cases worldwide, with 110,000 deaths [2]. The emergence of
59 COVID-19 in the region occurred within a troubled political, economic and social context, in
60 which growing trends of poverty and social inequality now run contrary to previous decades of
61 economic growth and inequality reduction [3].

62

63 The pandemic has spread throughout the countries of Latin America, where the
64 epidemiological setting is complex [4], characterized by an ageing population, high rates of
65 morbidity and mortality from chronic non-communicable diseases, and high mortality from
66 accidents and violent causes. Hypertension, a disease that has been associated with a greater
67 risk of complications of COVID-19, affects near 18% of the adult population in the Americas
68 [5-7]. In addition, there are the endemic and emerging infectious diseases [8], including the
69 simultaneous circulation of three arboviruses (chikungunya, dengue and Zika) [9,10], a high
70 malaria annual parasite index, a high incidence of tuberculosis and a high prevalence of human
71 immunodeficiency virus (HIV) [11].

72

73 The COVID-19 pandemic represents an enormous challenge to the already overburdened and
74 underfinanced Latin American healthcare systems [12]. In addition to the fact that these

75 systems often operate at the limit of their capacity in terms of the availability of hospital beds,
76 intensive care units (ICUs) and healthcare professionals [13], there are huge inequalities in the
77 geographical distribution of these resources. As the COVID-19 pandemic progresses, the
78 capacity of the healthcare systems becomes overwhelmed, resulting in a high number of deaths
79 not only from this disease, but also from other causes that likewise require hospital care and
80 specialist resources [14,15].

81

82 In the absence of a vaccine or of any effective treatment for COVID-19, proven public health
83 measures such as the isolation of cases and quarantining of contacts had to be adopted to reduce
84 transmission of the disease. Since SARS-CoV-2 can be transmitted by asymptomatic
85 individuals and by those with mild symptoms, these strategies need to be combined with social
86 distancing measures to enable COVID-19 to be effectively controlled, with a reduction in
87 transmission, in the number of cases and, consequently, in the number of deaths [14,16,17].

88

89 With the epidemic ongoing and still not having reached its peak in several countries, the
90 objectives of the present paper were to describe the course of the COVID-19 pandemic in a
91 selection of 20 Latin American countries and to summarize the adoption of control measures
92 by analyzing the social distancing restrictions implemented in each one of the countries,
93 discussing changes in the social mobility of the population and their potential effects during
94 the epidemic.

95

96 **Methods**

97

98 *Setting*

99 Latin America and the Caribbean, with a population of over 569 million inhabitants, is
100 characterized by high urban density in its major capitals and metropolitan regions, with a
101 significant segment of the population living in slums and peripheral urban areas characterized
102 by extremely poor life and housing conditions [18,19]. Currently, over 80% of the population
103 live in cities [18], and in 2014 over 20% lived in slums [19]. Although the region's human
104 development index (HDI) had increased substantially up to 2018, reaching 0.759, poverty
105 increased again in 2019, with 30.8% of the population living below the poverty line and 11.5%
106 living in extreme poverty [20]. Serious sanitation problems persist, with 110 million
107 individuals having no access to sewage treatment and 36 million having no access to clean
108 drinking water [21].

109

110 A total of twenty countries were included in the present study, 17 of which are in continental
111 Latin America (Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama,
112 Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay and
113 Venezuela). The other countries included were the three Caribbean countries with more than
114 10 million inhabitants (Cuba, Haiti and the Dominican Republic).

115

116 These countries are diverse and range from small countries such as El Salvador, Haiti, the
117 Dominican Republic and Costa Rica to Brazil, a country of continental dimensions. The
118 countries with the largest populations are Brazil and Mexico, with 209 and 126 million
119 inhabitants, respectively (see supplementary Table 1). Nevertheless, population density is
120 highest in the smaller countries such as Haiti, El Salvador, the Dominican Republic and
121 Guatemala. These small countries, together with Bolivia, Paraguay, Honduras, Venezuela and
122 Ecuador, share some of the worst socioeconomic indicators, including the lowest HDIs, the
123 lowest per capita gross domestic product (GDP) and the lowest life expectancy at birth. Some

124 countries, albeit richer, have high inequality rates, particularly Brazil, which has the highest
125 Gini index.

126

127 All the countries selected for inclusion in the study share the same language, Spanish, except
128 for Brazil where Portuguese is spoken, and Haiti, where the official languages are Haitian
129 Creole and French. Most of the region is traditionally Catholic; however, there are influences
130 of other religions such as, for example, the African American religions practiced in Cuba, Haiti,
131 in the Dominican Republic, Colombia, Venezuela and Brazil. In addition, there has been an
132 increase in recent years in evangelical groups, which already correspond to one-fifth of the
133 population and have begun to exert a strong conservative influence on party politics and on
134 elections in countries such as Costa Rica, Colombia, Venezuela, Mexico and Brazil [22].

135

136 Another characteristic that these countries have in common is the contribution of their original
137 indigenous peoples to cultural traditions and in the formation of their populations. In 2015, the
138 indigenous population of Latin America was estimated at around 45 million individuals (8%
139 of the region's population), ranging from peoples in voluntary isolation to inhabitants of major
140 cities. In Bolivia and Guatemala, 62% and 41% of their populations, respectively, consist of
141 indigenous peoples [23]. Indigenous movements fighting discrimination and demanding
142 recognition of their rights have questioned the historical "invisibility" of these populations. The
143 mark of slavery on the history of various countries in which a considerable proportion of the
144 population is of African descent is also noteworthy, adding inequalities resulting from
145 structural racism to the already existing socioeconomic inequalities. In these regions, the black
146 and indigenous populations are those most vulnerable to COVID-19, while significant gender
147 inequalities add further disparities. This context reconfigures the pattern of occurrence of the

148 disease and of access to healthcare compared to the experience of Asian and European countries
149 [24].

150

151 *Data sources*

152 Epidemiological data for each country, including the number of cases and deaths, were
153 extracted from the webpage of the European Centre for Disease Prevention and Control [25].

154 The total number of COVID-19 tests performed in each country was extracted from the
155 Worldometer webpage [26]. The World Bank population sizes estimates for 2019 were used

156 [27]. Other documents consulted included the epidemiological bulletins issued by the WHO,

157 official documents from governmental agencies such as the Pan American Health Organization

158 and the United Nations Economic Commission for Latin America and the Caribbean (ECLAC).

159 Nationwide laws, decrees and directives on social distancing related to the control of COVID-

160 19 implemented in the twenty countries up to May 15, 2020 were consulted. For Brazil, given

161 the almost total lack of measures taken at federal government level in contrast to the actions

162 taken by state governors and mayors, the specific legislation implemented in the most populous

163 states, representing over 50% of the country's population, was taken into account. In addition,

164 data on mobility, clustered by country, were extracted from Google Mobility Reports [28] with

165 respect to the number and duration of visits individuals made to six distinct groups of locations:

166 1) Supermarkets and pharmacies; 2) Parks, beaches and public squares; 3) Public transport

167 hubs including bus, train and subway stations; 4) Retail and recreation facilities, including

168 malls, museums, bars and restaurants; 5) Residential; and 6) Workplaces. The figures extracted

169 correspond to changes in mobility at these locations, expressed as percentage changes from the

170 average baseline value for January 3 to February 6, 2020 [28].

171

172 *Data analysis*

173 The following indicators were constructed to analyze the epidemiological situation in the
174 countries evaluated: the cumulative number of confirmed COVID-19 cases and deaths, the
175 number of cases per 100,000 inhabitants, the number of deaths per 100,000 inhabitants, the
176 case fatality rate, i.e. the ratio between the number of confirmed deaths and the number of
177 confirmed cases of COVID-19, and the number of tests per confirmed case.

178

179 To summarize the social distancing measures, the countries were classified according to the
180 degree with which these measures could affect mobility. Measures were classified as: 1) *Mild*:
181 distancing recommended, events banned as a function of the number of attendees, and remote
182 working (or rotating schedules) established for civil servants; 2) *Moderate*: schools closed,
183 borders closed, all events banned, circulation between towns/cities suspended (public
184 transportation and private vehicles) and all leisure spaces closed; 3) *Strict*: activities in the
185 service and industrial sectors suspended, municipal transport (public and private) suspended
186 and curfews implemented; and 4) *Lockdown*: all non-essential activities banned including
187 going out for non-essential activities. These categories were used to classify countries over
188 time as: *null category*, when no measures had been adopted, or *mild*, *moderate*, *strict* or
189 *lockdown* when at least one of the measures listed under the respective classifications had been
190 adopted. In the case of Brazil, the date on which at least half the selected states had adopted at
191 least one measure was taken into consideration when defining the degree of social distancing
192 adopted in the country.

193

194 To analyze the data from Google Mobility Reports [28], it was calculated the average data on
195 mobility among the five non-residential categories (supermarkets and pharmacies; parks,
196 beaches and public squares; public transport hubs; retail and recreation facilities; and
197 workplaces) for each day . Mobility in residential locations was separated since it is understood

198 that the nature of social distancing measures is to encourage individuals to stay at home and to
199 reduce their mobility outside the home. R software, version 4.0.0 was used to process the data
200 and construct the graphs and figures.

201

202 **Results**

203

204 *The emergence and course of the COVID-19 pandemic in Latin America*

205 The first recorded case of COVID-19 in Latin America occurred in Brazil four days prior to
206 the WHO declaring a public health emergency of international concern [29] and two weeks
207 before declaring a pandemic [30]. The first case, registered on January 26, 2020, consisted of
208 a man living in the state of São Paulo in Brazil who had returned from a trip to Lombardy in
209 Italy [31]. At that time, the WHO had already reported a total of 82,294 confirmed cases in 47
210 countries, with 96% of cases having been recorded in China [32]. Prior to that, the United States
211 and Canada had notified 59 and 11 cases, respectively, all imported.

212

213 After Brazil, other Latin American countries began to report cases to the WHO and, by March
214 7, eight countries had already registered cases and two, Brazil and Ecuador, had reported local
215 transmission. In Brazil, the second country in the world in terms of number of cases, the
216 progression of the pandemic has been rapid, with more than 1.3 million cases and 57,000 deaths
217 registered (Figure 1A, Table S2). Ecuador was the first country to notify the occurrence of local
218 transmission to the WHO on March 3 when six cases were registered. Ecuador is the fifth
219 country in the region in terms of the number of cases per 100,000 inhabitants (Table S2).

220

221 The highest cumulative incidence rates per 100,000 inhabitants are in Chile and Peru, followed
222 by Panama, Brazil, Ecuador, and the Dominican Republic (Figure 1B). Although the absolute

223 number of deaths is highest in Brazil and Mexico, with 57,070 and 26,381 deaths, respectively,
224 up to the present date, the highest cumulative mortality rates are in Peru (28.6/100,000), Chile
225 (28.5/100,000), Brazil (27.2/100,000) and Ecuador (25.9/100,000) (Table S2 and Figure 1C).

226

227 The countries with the highest case fatality rates are Mexico (12.1%) and Ecuador (8.1%),
228 while those with the lowest rates are Costa Rica (0.4%), Paraguay and Venezuela (0.8%). Two
229 different trends can be observed in case fatality rates over time: countries such as Haiti, Bolivia,
230 Honduras and Brazil had a rapid increase followed by a fall, while other countries such as
231 Mexico and Ecuador had a gradual increase followed by stabilization of the case fatality rate
232 (Figure 1D).

233

234 The Latin American countries in which more diagnostic testing was performed (reverse
235 transcription polymerase chain reaction [RT-PCR] and rapid testing) per million inhabitants
236 are Chile (56,481), Peru (49,901) and Venezuela (43,613) (Table S2). Compared to those
237 countries, testing is much lower in countries such as Haiti (994) and Guatemala (1,755). In
238 addition, for every three tests performed in Bolivia, Brazil, Guatemala, Haiti, Honduras or
239 Mexico, at least one is confirmed for Covid-19 (Table S2).

240

241 *The response of Latin American governments in restricting social mobility*

242 With the increase in the number of cases in each country, social distancing measures were
243 progressively implemented, with restrictions increasing over time and with half the countries
244 being under lockdown by the time the thousandth case was detected (Tables S3-4, Figures 1A-
245 D).

246

247 At the time of the first confirmed case of COVID-19 in each country, mild social distancing
248 measures had been implemented in Venezuela, Uruguay and Guatemala, and strict measures
249 in El Salvador and Haiti (Figure 2A). By the time the 50th case had been recorded in each
250 country, only Brazil, Mexico and Nicaragua had failed to implement any measures at all, while
251 seven countries (Bolivia, Ecuador, Honduras, Paraguay, Peru, El Salvador and Venezuela) had
252 adopted lockdown (Figure 2B).

253

254 Between confirmation of the 50th and 100th cases (Figure 2C, Tables S3-4), the governments
255 of Argentina and Colombia increased the levels of mobility restriction compared to the
256 preceding period. Whereas the Colombian government introduced strict measures, Argentina
257 and Peru proceeded to lockdown.

258

259 Mexico and Brazil only began to adopt measures just shortly before confirmation of the
260 thousandth case (Figure 2D), while Nicaragua still had no social distancing policy and Chile,
261 Colombia, Costa Rica and Panama had strengthened their measures. At this time in the
262 epidemic, all the countries with the exception of Nicaragua had already closed all teaching
263 establishments and ten of the twenty countries were in lockdown (Figure 2D). In general, there
264 was agreement regarding the degree of social distancing measures adopted in the different
265 countries.

266

267 The first measures to be implemented generally consisted of the quarantining of travelers and
268 of the contacts of patients with confirmed or suspected COVID-19, as well as the isolation of
269 confirmed and suspected cases. All except Cuba, Mexico, Brazil, Nicaragua and Venezuela
270 implemented mandatory quarantine and isolation measures (Table S3). Three countries
271 (Mexico, Panama and Venezuela) failed to adopt any type of border restriction. Nevertheless,

272 the countries neighboring Panama and Venezuela closed their borders. Furthermore, only three
273 countries (Cuba, El Salvador and Mexico) failed to adopt any measure whatsoever to restrict
274 the entry of foreign nationals and failed to quarantine or isolate individuals arriving from
275 abroad.

276

277 Only Costa Rica, El Salvador, Haiti, Mexico, Nicaragua and Paraguay failed to impose
278 restrictions on municipal, intercity and interstate transport. However, Costa Rica, Chile and
279 Uruguay imposed partial restrictions on the circulation of individuals and vehicles in their
280 municipalities.

281

282 All countries with the exception of Nicaragua closed their schools, with two (Peru and
283 Venezuela) closing educational activities as part of lockdown.

284

285 In ten countries, non-essential public services adopted remote working or the use of rotating
286 work schedules. Furthermore, most of the countries adopted measures regarding the closure of
287 non-essential services. Closure could be total or partial and involve either public or private
288 activities, while in some cases both public and private services were closed. In Mexico, for
289 example, all non-essential activities in both the public and private sectors were closed. In
290 Uruguay, non-essential activities in the public sector were closed, while in the private sector,
291 only those in major retail centers were closed.

292

293 In the eleven countries in which lockdown was implemented at some time during the course of
294 the pandemic (Argentina, Bolivia, Colombia, Ecuador, Guatemala, Honduras, Panama,
295 Paraguay, Peru, El Salvador and Venezuela), eight began by introducing nighttime curfews.
296 During lockdown, Panama and Peru introduced a gender-based rotation system in which only

297 women were allowed out on certain days and only men on the other days. In Bolivia,
298 restrictions to public mobility were based on identity card number.

299

300 To ensure social distancing, in addition to imposing fines governments have adopted measures
301 that include using the police and the armed forces to block the roads and highways, closing
302 establishments and confiscating vehicles or documentation, criminalizing non-compliance,
303 implementing prison sentences for individuals who disobey social distancing measures, and
304 imposing mandatory isolation in containment centers (Table S3).

305

306 The majority of countries made the use of facemasks obligatory nationwide (Table S2).
307 Venezuela was the first country to adopt this measure (as early as March) followed by Cuba
308 and Colombia. By the end of April, all the other countries had already adopted the use of
309 facemasks except for Bolivia, Brazil, Costa Rica and Nicaragua, where use was, however,
310 recommended in parts of the countries.

311

312 In each one of the countries, a strong association was seen between the degree of restrictive
313 measures implemented and the reduction in social mobility outside the home (Figure S1 and
314 Figure 3). Following the emergence of the pandemic in Latin America, social mobility had
315 already decreased in some countries such as Mexico, Peru and Brazil even prior to official
316 implementation of the measures. In Nicaragua, even without an official decree regarding social
317 distancing measures, there was a reduction of around 30% in the average social mobility
318 outside the home. Most countries maintained reductions of 50-80%. Despite the intermittences
319 recorded since March 1, there was a reduction of over 80% in the average social mobility
320 outside the home in Peru, Bolivia and Panama. With the exception of Venezuela and Paraguay,
321 there were reductions of over 60% in the countries that instituted lockdown.

322

323 The greatest reductions in social mobility, apart from those resulting from lockdown, occurred
324 following the partial or total prohibition of events (meetings, mass gatherings, sporting fixtures,
325 and cultural and religious gatherings, either banned completely or as a function of the number
326 of participants) and of the suspension of educational activities. In most of these cases, these
327 reductions were achieved when the degree of social distancing implemented in the countries
328 was classified as moderate. Lockdown appears to have contributed not only to reducing
329 mobility in countries such as Argentina, Bolivia, Ecuador, El Salvador, Peru and, later on, in
330 Guatemala, but also to maintaining low levels of social mobility outside the home, as seen in
331 Panama, Colombia and Paraguay.

332

333 *Relationship between control measures, social distancing and the course of the COVID-19*
334 *pandemic*

335 Some countries such as Argentina, El Salvador, Paraguay and Venezuela in which stronger
336 social distancing measures were implemented are among those in which the reduction in
337 mobility outside the home is greatest and where reported cumulative mortality rates are below
338 the median for the region (4.6/100,000 in June 28, 2020). On the other hand, in countries such
339 as Brazil and Mexico, where control measures were adopted later and/or to a lesser extent, the
340 reduction in mobility was less and mortality rates were higher. Nevertheless, exceptions
341 include countries such as Ecuador and Peru where stronger social distancing measures were
342 adopted and a reduction in social mobility was indeed achieved; however, these countries are
343 among those with the highest mortality rates. On the other hand, it is noteworthy that countries
344 such as Uruguay, Costa Rica and Haiti, where lockdown was not adopted, and even Nicaragua,
345 where no measures at all were implemented and where the reduction in social mobility was the
346 smallest, reported mortality rates are low.

347

348 **Discussion**

349

350 The later onset of the COVID-19 pandemic in the countries of Latin America compared to
351 those of Europe allowed social distancing measures aimed at controlling the disease to be
352 implemented early in several countries in the region. In general, in the twenty Latin American
353 countries evaluated here, gradual restrictions culminated in lockdown in eight, even before the
354 100th case was registered. In Brazil, as a result of the attitude of the current president of the
355 republic in denying the risks of the virus and minimizing the seriousness of the problem, it fell
356 to state and municipal governments to implement social distancing measures, which,
357 consequently, were instituted at a later stage compared to the other countries of Latin America
358 [33]. In Brazil and Mexico, which, taken together, account for half the region's population and
359 where lockdown was not adopted, the number of cases of the disease and the cumulative
360 mortality rates are the highest.

361

362 In addition to lockdown, the measures that had the greatest impact on social mobility included
363 the restriction of events (meetings banned, restrictions imposed on mass gatherings, sporting
364 fixtures cancelled, cultural and religious gatherings completely banned or as a function of the
365 number of participants) and the suspension of educational activities. In Mexico, for example,
366 social mobility began to decrease in the days that preceded the federal decision to close schools
367 but coincided with school closure in ten states of the country. Religious ceremonies, generally
368 held indoors, constitute an important form of social contact in Latin America and have been
369 strongly associated with high rates of COVID-19 infection [34]. If on the one hand, the closure
370 of schools reduces social interaction among children and young adults, who, since they tend to
371 develop milder or asymptomatic forms of the disease, are more likely to transmit it to their

372 family members [35,36], on the other hand, school closure affects families' ability to work and
373 may lead to an increase in intergenerational social interactions for the purpose of childcare
374 [37].

375

376 Social distancing measures may lead to a decrease in social mobility and social interactions
377 and, consequently, to a reduction in COVID-19 transmission, with these measures being
378 particularly effective when combined with the isolation of cases and quarantining of contacts
379 [33]. A study that investigated the association between the adoption of public health measures
380 and the epidemiological indicators of COVID-19 in twelve countries of South America found
381 that in countries in which measures were adopted within eleven days of the first case, the
382 growth rate in the number of cases was smaller [38]. Another study, conducted using data from
383 Google Mobility Reports for 130 countries between February and May 2020, found that fewer
384 cases of COVID-19 and fewer deaths from the disease were associated with an increased
385 number of individuals staying at home and with a reduction in social mobility outside the home
386 [39].

387

388 Caution is required when analyzing and comparing epidemiological indicators in such diverse
389 countries, bearing in mind that there are differences in the detection and registration of cases
390 and deaths, and that the number of tests performed varies from country to country. Generally,
391 in locations where the availability of testing is limited, testing tends to focus on moderate and
392 severe cases, a proportion of whom will die. In this respect, the under-reporting of cases in
393 relation to the number of deaths could lead to biased estimates of case fatality rates [40,41].
394 Reduced testing capacity, together with delays in data reporting and processing, could also lead
395 to an underestimation of the number of cases and deaths. Some studies have found atypical
396 increases in hospitalizations and deaths due to severe acute respiratory syndrome (SARS),

397 suggesting that these could have been caused by SARS-CoV-2 [42,43]. These increases in
398 SARS may be the result of lack of testing, false-negative results (poor sensitivity of the tests),
399 delays in processing the tests, delays in processing the epidemiological data, or failures in
400 reporting. Moreover, testing availability is crucial to enable cases to be isolated rapidly,
401 particularly in cases of asymptomatic or pre-symptomatic patients, thus reducing the capacity
402 of the disease to spread [44].

403

404 The potential of using mobility data obtained from cellphones and smartphones to improve
405 COVID-19 control strategies is considerable; however, data use may involve ethical issues and
406 privacy concerns [45-47]. Nevertheless, the data from Google Mobility Reports used in the
407 present study refer to users of smartphones who have a Google account and who activated the
408 location history setting [28], and does not refer to the entire population of the countries
409 analyzed. Despite the increase in the use of smartphones over recent years, there are relevant
410 differences with respect to the access and use of this technology in the different countries as a
411 consequence of socioeconomic and cultural aspects [48]. Data from the World Bank for 2018
412 show that the number of cellphones differs in the different countries of Latin America, ranging
413 from 57.5 per 100 inhabitants in Haiti to 169.9 per 100 inhabitants in Costa Rica [48]. In
414 Argentina, 68% of adults own a smartphone compared to 60% in Brazil and 52% in Mexico,
415 with percentages being higher among the younger populations and those with higher education
416 and income levels [48].

417

418 In general, the countries that implemented social distancing measures earlier and where the
419 reductions in social mobility were greatest also had the lowest cumulative incidence and
420 mortality rates, as was the case of Argentina and Uruguay. Argentina, like Brazil and Mexico,
421 is a federal republic; however, the president, Alberto Fernandez, has given priority to

422 implementing a plan to tackle COVID-19 by working together with the governors of each
423 province, and has launched a package of economic measures aimed at mitigating the effects of
424 the contingency measures, particularly among the poorest segments of the population.
425 Consequently, transmission has been reduced; however, it proved impossible to completely
426 contain spread to the most vulnerable segments of the population in the most densely populated
427 neighborhoods, resulting in the adoption of lockdown [44]. Uruguay is a small country with a
428 population of fewer than 3.5 million inhabitants, 96% of whom live in urban areas. The past
429 fifteen years have seen major investments in health, with advances in ensuring universal access
430 to healthcare services and a strong presence of the state in this sector. Control measures were
431 implemented early in the pandemic and with the compliance of the population, resulting in a
432 positive outcome regarding control of the pandemic without the need for stricter control
433 measures such as curfew or lockdown. This positive response has been attributed to the
434 democratic and civic tradition of the population of Uruguay following a long, hard experience
435 with dictatorship, and also to the relative confidence of the population in the government [49].

436

437 Of the Latin American countries with the greatest number of cases and the highest incidence
438 rates of the disease, Chile is the country with the lowest mortality rate from COVID-19. The
439 country, which did not implement the strictest social distancing measures, has a low population
440 density and a high level of social development. Indeed, it has the highest HDI of the region and
441 is the only Latin American country to be included in the World Bank's list of high-income
442 countries [50].

443

444 Ecuador and Peru stand out because of the high cumulative mortality rates per 100,000
445 inhabitants in these countries, despite the fact that they both adopted strict social distancing
446 measures at a relatively early stage, with a marked reduction in the social mobility of their

447 populations. Peru is one of the countries in the region in which most testing has been performed,
448 which could have contributed to a lower rate of under-reporting of deaths. Despite the rapid
449 response, the considerable proportion of the population living in poverty and in overcrowded
450 housing probably accelerated the spread of the disease, quickly overwhelming the capacity of
451 the already fragmented and inequitable healthcare system [51]. Indeed, the segmentation of the
452 healthcare system has been identified as another major problem in tackling the pandemic in the
453 country. The Ministry of Health covers 65% of the country's population, including the poorest
454 segments, those working in the informal job market, the unemployed and their families,
455 through its Comprehensive Health Insurance System. The Department of Social Security
456 covers formal workers, a segment that corresponds to 20% of the population. Finally, the
457 remaining 15% of the population has no access to healthcare at all [49]. Peru has the equivalent
458 of 5.8 ICUs per 100,000 inhabitants, less than half the capacity of Italy, for example, which
459 has 12.5 ICUs per 100,000 inhabitants [13]. Furthermore, over half the households in the
460 country have no refrigerator, thus increasing the number of visits families have to make to food
461 markets, and almost 60% of Peruvians have no bank account, leading to crowding at banks to
462 receive government aid [50]. The proportion of individuals with no access to sewerage in the
463 country is 26% [19]. Ecuador, where the government is largely unpopular and where there is a
464 significant lack of high complexity healthcare services, with insufficient numbers of ICU beds,
465 mechanical ventilators and intensivists [49], also faces problems related to inequality and
466 poverty and has been highlighted as the country where control measures were implemented in
467 the most unequal manner and where monitoring the disease in vulnerable populations such as
468 indigenous peoples and Venezuelan migrants has proved difficult [52].

469

470 Haiti and Nicaragua have reported low mortality rates despite having adopted less restrictive
471 measures or no measures at all. The registration of cases and deaths in Haiti may have been

472 biased in view of the precarious socioeconomic and health conditions in the country [53]. Haiti
473 has the highest population density, the lowest life expectancy at birth and the lowest HDI of
474 the 20 countries evaluated here. Poverty affects almost 70% of families, while 43% of the
475 population lives in rural areas, and the education and healthcare systems are precarious.
476 Together, these factors hamper prevention, diagnosis and treatment [53,54]. Additionally, Haiti
477 is the country where the fewest tests have been performed up to the present moment (994 per
478 1,000,000 inhabitants), probably indicating under-reporting of cases. Nicaragua is also one of
479 the poorest countries, with rural residents corresponding to 43% of the population. There are
480 no data on the number of tests performed, which also makes assessing the number of registered
481 cases and deaths difficult. The situation in the country is unstable and the government, in
482 addition to not adopting social distancing measures, has encouraged mass gatherings [55,56].
483 Interpreting the data on these two countries certainly demands caution and further
484 investigation.

485

486 Venezuela is perhaps the country in the region that is in the most critical political situation. The
487 prolonged and complex crisis, with international repercussions and a major ideological debate
488 in the media, hampers interpretation of the country's results. The government adopted social
489 distancing measures at an early stage, and it is one of the countries in the region with the highest
490 number of tests performed, which could explain the low number of reported cases and deaths.
491 Still, these numbers have been questioned [51], largely due to reports that the indicators of
492 maternal and child mortality had almost doubled between 2013 and 2016 and the incidence of
493 infectious diseases such as tuberculosis, HIV infection and vaccine-preventable diseases has
494 increased during the economic and political crisis in the country [57]. Nevertheless, the
495 scientific literature on the epidemiological situation in the country is sparse and, certainly, the

496 situation in relation to COVID-19 will only be fully clarified following future scrutiny and
497 analyses.

498

499 In several countries in the region, the fragility of the healthcare system means that they struggle
500 to cope with the demand for the high-complexity care required by COVID-19. The public and
501 private healthcare costs in Latin America and the Caribbean are around 8.6% of the GDP,
502 whereas in the countries of the Organisation for Economic Co-operation and Development, a
503 group of the world's richest countries, this percentage is 12.6% [18].

504

505 The conditions of poverty and social inequality in the populations of Latin America are
506 exacerbated in traditional communities, which are also more vulnerable to mortality from
507 COVID-19. The discrimination of indigenous peoples and the poverty resulting from the
508 systematic expropriation of their lands, the overlap of infectious and non-infectious diseases
509 with the persistently high proportion of malnutrition and obesity, in addition to the difficulties
510 in complying with social distancing and the isolation of cases, and the poor healthcare in these
511 groups, may result in a higher number of deaths compared to the general population [23].

512

513 The social vulnerability of the populations of Latin America directly affects compliance with
514 social distancing measures. Restrictions to job-related activities demand government actions to
515 guarantee not only the survival of families during and after the health crisis, but also to ensure
516 compliance with the control policies for COVID-19 [58].

517

518 In these Latin American countries, the emergency measures adopted, particularly those aimed
519 at protecting the most vulnerable segments of the population, were, in general, limited, and
520 included: increasing the population already covered by income transfer programs (Brazil and

521 Guatemala); transfer of additional benefits for families already receiving benefits from other
522 social programs and for population groups or groups of workers in a situation of vulnerability
523 (Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, El Salvador, Ecuador, Panama,
524 Paraguay, Peru, Uruguay and Venezuela); distribution of food supplies to more vulnerable
525 segments of the population (Honduras, Panama, Uruguay); disconnection prohibited in cases
526 of non-payment of bills for essential public utility services such as electricity, gas and water
527 supplies (Argentina, Bolivia, Colombia, Ecuador and certain states of Brazil), temporary
528 suspension of utility service charges (El Salvador), control or reduction in the price of these
529 utility service charges (Colombia, Ecuador, Panama and Peru); price controls for essential
530 goods (Argentina, Bolivia, El Salvador, Guatemala and Panama); reimbursement of value
531 added tax for low-income families (Colombia) and early income tax refunds for autonomous
532 workers (Chile); lines of credit (Brazil and the Dominican Republic), and flexibility,
533 refinancing or temporary suspension of debt repayment (Bolivia, Brazil, Chile, Colombia, El
534 Salvador, Ecuador, Haiti, Honduras, Paraguay, Peru, the Dominican Republic and Uruguay),
535 particularly for the poorest segments of the population and for autonomous workers [58].

536

537 Although this wide range of measures has been proposed in different countries, the social and
538 economic crisis affecting the countries of this region may have hindered implementation, with
539 the programs failing to benefit all those who need them. In Peru, for example, social care for
540 native peoples was based on a registry that represented only 27% of the population [57]. In
541 Brazil, the government emergency benefit program may exclude 7.4 million eligible
542 individuals who will have difficulty requesting aid due to their problems accessing the Internet
543 (the technological option adopted by the government for the registration of eligible
544 individuals). In addition, 6.1 million workers could be excluded because it is limited to two
545 beneficiaries per household, and the program will not help the 26-million middle-income

546 workers who in the event of being fired, will be unable to access unemployment benefit [59].
547 Therefore, the coverage of the actions, the duration of the emergency measures, the value of
548 the resources allocated, and the rules for their implementation, which often include means of
549 distribution that force beneficiaries into crowded situations, are crucial aspects that need to be
550 dealt with for these policies to ensure compliance with social distancing measures.

551

552 Under the justification of preserving jobs and protecting companies [59], three Latin American
553 countries (Argentina, Brazil and Chile) opted to relax current employment laws by considering
554 the pandemic a force majeure, allowing the suspension of work contracts, and reductions in
555 working hours and salaries. These measures, as well as constituting a setback in labor relations,
556 are harmful in that they permit salaries to be reduced during the pandemic.

557

558 The most vulnerable populations are those most likely to be fired or to suffer cuts to their
559 salaries and in general such individuals are more likely to be in the informal job market. In
560 2016, 53% of workers in Latin America were informal workers, with women, indigenous
561 people, those of African descent and migrants being over-represented in this the group [61].
562 According to data from ECLAC and from the International Labor Organization, the recession
563 of 2020 will have a strong impact on the job markets of Latin America and the Caribbean, with
564 estimates suggesting that more than 11.5 million workers have lost or will lose their jobs this
565 year, increasing the number of unemployed from 26.1 to 37.6 million and the unemployment
566 rate from 8.1% to 11.5% by the end of the year. Policies of social protection must be adopted
567 to enable the population to comply with social distancing measures, for these measures to be
568 effective and, principally, to avoid a decline in the life conditions of the population already
569 marked by inequality [2] and avoid increasing food insecurity and malnutrition in vulnerable
570 segments of the population [62].

571

572 Compliance with social distancing measures also depends on coordinated actions by
573 governments and the recommendations of political leaders, who, in some countries, have acted
574 in defiance of the guidelines issued by the health authorities. This is the case in Brazil, Mexico
575 and Nicaragua. The Nicaraguan government failed to adopt any social distancing measures at
576 all. The president, Daniel Ortega, refused to promote social distancing and the Vice-President,
577 Rosario Murillo, organized protest marches under the banner "Love in the Time of COVID-
578 19" [55]. In Brazil, at federal government level, only measures related to border controls and
579 the entry of non-nationals into the country were adopted. The President, Jair Bolsonaro, in
580 addition to minimizing the seriousness of the situation, has opposed social distancing measures
581 and rallied groups of his supporters to protest in the streets [63]. At the beginning of the
582 epidemic, the Mexican President, Andrés Manuel López Obrador, also underestimated the
583 disease and encouraged people to continue frequenting places such as restaurants [64]; however
584 as the pandemic progressed, he changed his discourse and began to endorse the health
585 recommendations.

586

587 Lack of coordinated governmental response has created a scenario in which socioeconomic
588 inequality is reflected in unequal access to information on COVID-19 [65]. People with higher
589 incomes tend to obtain information from various different sources including periodicals and
590 television news programs, while those with lower incomes often obtain information through
591 social media networks and are consequently subject to great level of misinformation and fake
592 news. Nevertheless, although information is important, behavioral aspects can influence
593 compliance with social distancing, particularly the motivation to protect those closest to the
594 individual: people they love, neighbors and family members [66]. Since this pandemic has been

595 occupying social media on a daily basis, it is possible that people are adopting measures they
596 trust, thus reducing mobility outside the home.

597

598 From the results of the present study, it is clear that, in addition to structural factors related to
599 material living conditions and the mechanisms of discrimination in access to healthcare
600 resources, even with the lack of government actions or ambiguity with respect to those actions,
601 behavioral factors can affect compliance with social distancing measures, as shown by the
602 reduction in social mobility in Nicaragua or even in Brazil or Mexico. Another aspect that
603 merits investigation is the contribution of the widespread use of facemasks in the epidemic in
604 Latin America, which, alone or in combination with lockdown, has been indicated as having
605 great potential to reduce the transmission of COVID-19 [67,68].

606

607 **Conclusions**

608

609 In general, as in other continents, the Latin America countries that adopted more restrictive
610 measures at an early stage and in a coordinated fashion, achieved the best results in the control
611 of the COVID-19 pandemic. Nevertheless, this equation does not appear to guarantee a positive
612 result across all regional settings, possibly due to the vast social inequalities and chronic
613 deficiencies of the healthcare systems, particularly in those in which the neoliberal policy
614 model of reducing the role of the state in health and social policies was adopted, a scenario that
615 is rendered even more complex due to the recurrent political crises. The COVID-19 pandemic
616 continues to grow in Latin America and exposes these contradictions, with future studies being
617 required to improve understanding and generate lessons on how to manage such a complex
618 crisis.

619

620 The immense social, racial and ethnic inequalities present in Latin America confer particular
621 characteristics to the pandemic and the measures necessary to combat it. Many of these aspects
622 differ considerably from those seen in countries of Europe and Asia, representing a huge
623 challenge. Notwithstanding, what appears clear is that to adequately control this epidemic and
624 any future epidemics in Latin America, strengthening the public healthcare systems is crucial,
625 including the provision of universal and equal access to basic and high-complexity services,
626 the availability of high quality, transparent health data and the adoption of intersectoral health
627 policies and social protection aimed at reducing inequalities and achieving greater social
628 justice.

629

630 **List of Abbreviations**

631 ECLAC Economic Commission for Latin America and the Caribbean

632 GDP Gross domestic product

633 HDI Human development index

634 HIV Human immunodeficiency virus

635 ICU Intensive care unit

636 SARS Severe acute respiratory syndrome

637 WHO World Health Organization

638

639 **Declarations**

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877 **Figure Legends:**

878 **Figure 1.** Trends in the number of cases and deaths from COVID-19 in Latin America.

879 *Legend:* (A) Cumulative number of cases; (B) Number of cases per 100,000 inhabitants; (C)
880 Number of deaths per 100,000 inhabitants; (D) Fatality among confirmed cases. The analyses
881 were performed using data from the European Centre for Disease Prevention and Control up
882 to June 28, 2020. Code adapted from Kieran Healy (twitter).

883 **Figure 2.** Restrictive degrees in social distancing measures as implemented in each Latin
884 American country.

885 *Legend:* (A) At the time of diagnostic confirmation of the 1st case of COVID-19; (B) 50th case;
886 (C) 100th case; (D) 1000th case. Data collected up to May 15, 2020. *White* - no measures; *yellow*
887 - countries with mild restrictions; *orange* - countries with moderate restrictions; *red* - countries
888 with strict restrictions; and *maroon* - countries with lockdown. Up to June 28, 2020, Uruguay
889 had not yet reached 1,000 cases; however, for the purpose of comparison, the same level of
890 restriction in Figure 2C was applied for that country.

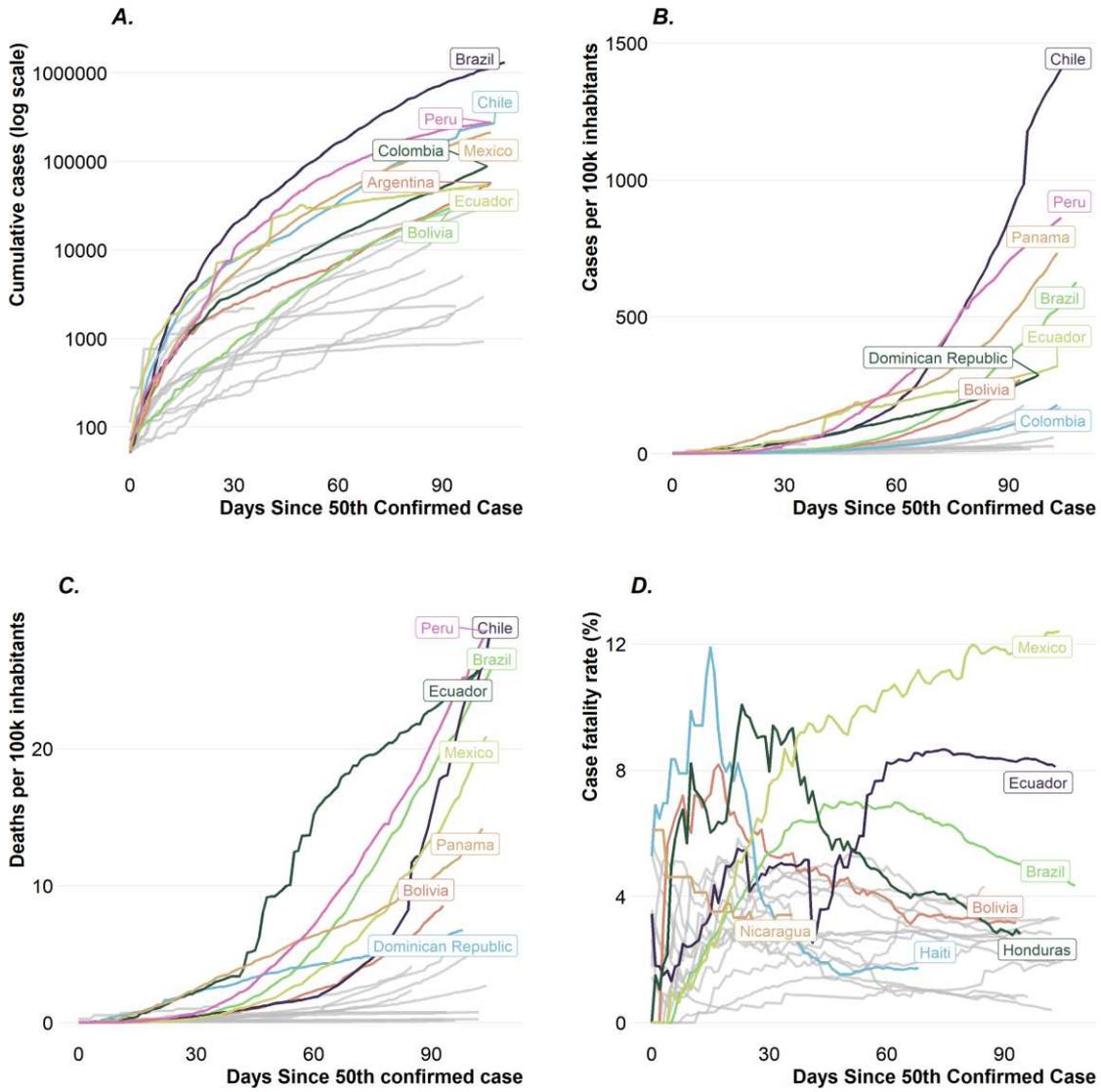
891 **Figure 3.** Changes in mobility outside the home in the Latin American countries evaluated.

892 *Legend:* No data available in Google Mobility Reports on social mobility in Cuba.

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895 **Figure 1.**



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905 **Figure 2.**

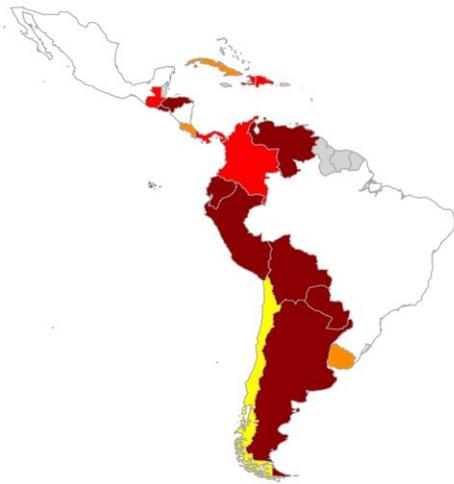
A. At 1st confirmed case of Covid-19



B. At 50th Covid-19 confirmed case



C. At 100th Covid-19 confirmed case



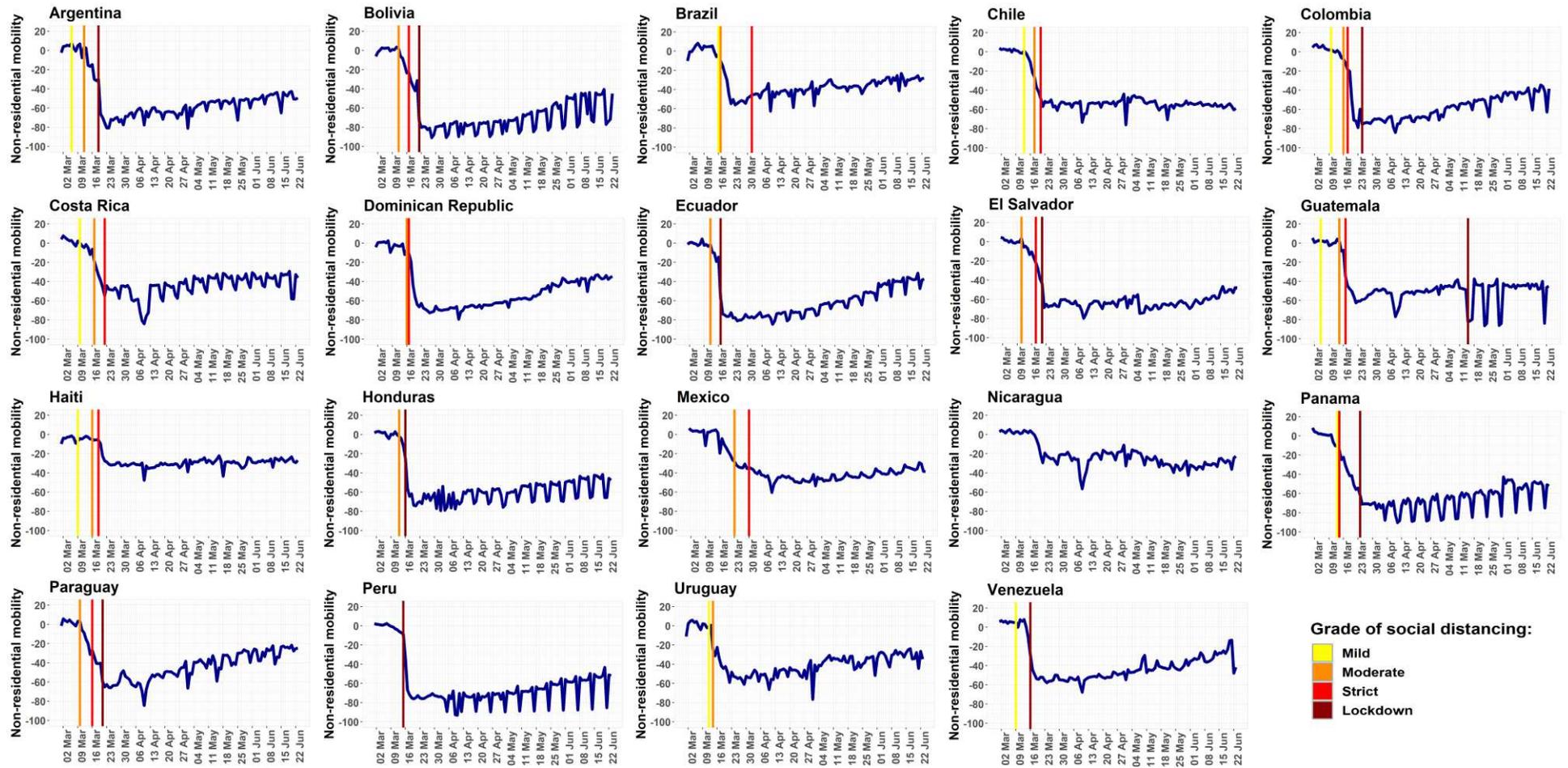
D. At 1000th Covid-19 confirmed case



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Figure 3



Additional file – Supplementary material

Covid-19 in Latin America countries: Course of the pandemic and the different responses towards control

Julia M Pescarini, Ismael H Silveira, Jaime A Souza-Filho, Rosana Aquino, Mauricio L Barreto and Estela ML Aquino

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Table S4. Control measures implemented in each one of the countries of Latin America over time.22

Figure S1. Social mobility according to type of location in Latin America.

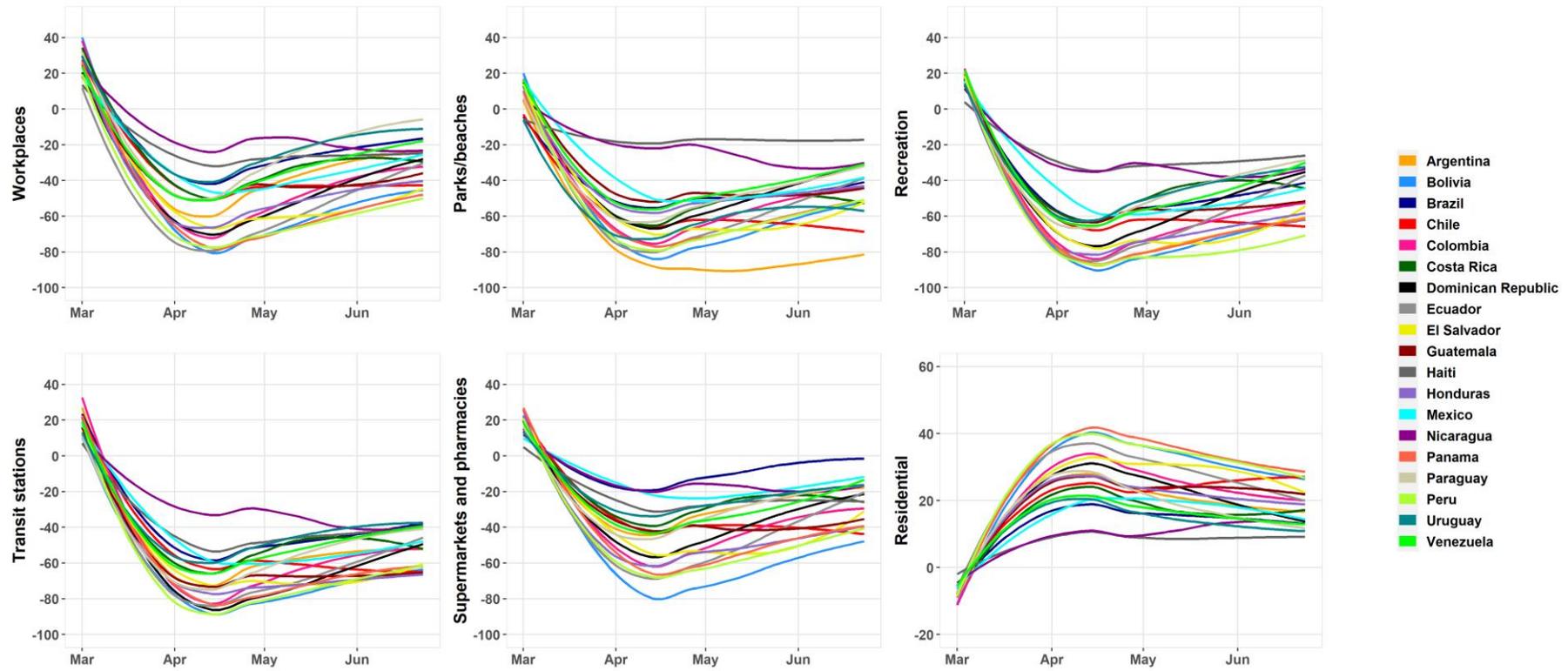


Table S1. Sociodemographic indicators of the 20 Latin American countries included in the study.

Country	Population	Population density	Urban population (%)	Life expectancy at birth (years)	Population aged ≥65 (2018)	Total fertility rate (births per woman)	Poverty headcount ratio at national poverty lines (% of population)	Poverty headcount ratio at \$1.90 a day (2011 PPP) (% of population)	Income share held by lowest 20%	Under-5 mortality rate (per 1,000 live births)	HDI 2019	GINI Index	Mobile cellular subscriptions (per 100 people)
Argentina	44,484,502	16.3	93	76.5	11.1	2.3	32	1	5	9.9	0.830	41.20	132.09
Bolivia	11,353,142	10.5	69	71.2	7.2	2.7	34.6	4.5	4.6	26.8	0.703	44.00	100.82
Brazil	209,469,333	25.1	88	75.7	8.9	1.7	..	4.4	3.1	14.4	0.761	53.30	98.84
Chile	18,729,160	25.2	85	80.0	11.5	1.6	..	..	..	7.2	0.847	46.60	134.44
Colombia	49,648,685	44.7	80	77.1	8.5	1.8	27	4.1	4	14.2	0.761	49.70	129.91
Costa Rica	4,999,441	97.9	80	80.1	9.5	1.8	21.1	1.4	4.3	8.8	0.794	48.30	169.93
Cuba	11,338,138	109.0	78	78.7	15.2	1.6	..	..	..	5	0.778	..	47.39
Dominican Republic	10,627,165	220.0	85	73.9	7.1	2.3	22.8	0.4	5.8	28.8	0.745	45.70	84.10
Ecuador	17,084,357	68.8	63	76.8	7.2	2.4	23.2	3.3	4.6	14.2	0.758	44.70	92.32
El Salvador	6,420,744	309.9	73	73.1	8.3	2.0	..	1.5	6.2	13.7	0.667	38.00	146.92
Guatemala	17,247,807	161.0	52	74.1	4.8	2.9	..	..	..	26.2	0.651	48.30	118.67
Haiti	11,123,176	403.6	57	63.7	4.9	2.9	..	..	..	64.8	0.503	41.10	57.53
Honduras	9,587,522	85.7	57	75.1	4.7	2.5	48.3	16.5	3	17.6	0.623	50.50	79.15
Mexico	126,190,788	64.9	84	75.0	7.2	2.1	41.9	1.7	5.4	12.7	0.767	48.30	95.23
Nicaragua	6,465,513	53.7	57	74.3	5.2	2.4	..	..	..	18.3	0.651	46.20	115.10
Panama	4,176,873	56.2	68	78.3	8.1	2.5	..	1.7	3.6	15.3	0.795	49.90	137.00
Paraguay	6,956,071	17.5	62	74.1	6.4	2.4	24.2	1.6	4.7	20.2	0.724	48.80	106.95
Peru	1,989,256	25.0	79	76.5	8.1	2.3	20.5	2.6	4.9	14.3	0.759	43.30	..
Uruguay	3,449,299	19.7	96	77.8	14.8	2.0	8.1	0.1	5.9	7.6	0.808	49.50	149.90
Venezuela	28,870,195	32.7	NA	72.1	7.3	2.3	..	..	..	24.5	0.726	46.90	71.77

Legend: Population density: people per square km of land area; PPP: Purchasing power parity; HDI: Human development index.

Table S2. First confirmed case, first community transmission, and epidemiological indicators on June 28, 2020.

Country	Date of first confirmed case	Cases	Deaths	Cases/100,000	Deaths/100,000	Case fatality rate (%)	Tests/million	Tests/cases
Argentina	03 Mar	57731	1207	129.7	2.7	2.1	7456	5.8
Bolivia	11 Mar	30676	970	270.2	8.5	3.2	6072	2.3
Brazil	26 Feb	1313667	57070	627.1	27.2	4.3	14196	2.3
Chile	03 Mar	267766	5347	1429.7	28.5	2.0	56481	4.0
Colombia	07 Mar	88591	2939	178.4	5.9	3.3	14266	8.2
Costa Rica	06 Mar	2979	12	59.6	0.2	0.4	7558	12.9
Cuba	11 Mar	2330	86	20.6	0.8	3.7	14685	71.4
Dominican Republic	01 Mar	30619	718	288.1	6.8	2.3	13465	4.8
Ecuador	29 Feb	54574	4424	319.4	25.9	8.1	8223	2.7
El Salvador	19 Mar	5934	152	92.4	2.4	2.6	24329	26.6
Guatemala	13 Mar	16397	706	95.1	4.1	4.3	1755	1.9
Haiti	19 Mar	5777	100	51.9	0.9	1.7	994	2.0

Honduras	11 Mar	17007	479	177.4	5.0	2.8	2175	1.3
Mexico	28 Feb	212802	26381	168.6	20.9	12.4	4314	2.6
Nicaragua	19 Mar	2170	74	33.6	1.1	3.4	-	-
Panama	10 Mar	30658	592	734.0	14.2	1.9	29107	4.1
Paraguay	07 Mar	1942	15	27.9	0.2	0.8	9390	34.5
Peru	06 Mar	275989	9135	862.8	28.6	3.3	49901	6.0
Uruguay	13 Mar	924	26	26.8	0.8	2.8	18593	69.9
Venezuela	13 Mar	5130	42	17.8	0.1	0.8	43613	241.8

* Community transmission is presumed when confirmed cases cannot be linked to chains of transmission in a large number of cases, or from an increase in positive tests using samples from sentinel sites (systematic routine tests of respiratory tract samples from established laboratories), or from clusters of cases, i.e. cases grouped in time, geographical location and/or common exposures.

Table S3. Control measures implemented in each one of the Latin American countries

Country	Social Distancing						Isolation of cases	Use of facemasks ¹	Express use of police power	Other exceptional measures
	Events	Education	Industry and Commerce	Parks, pools, etc.	Mobility	Work				
Costa Rica[1-6]	Mass gatherings banned except in open air (12 Mar). All meetings banned (21 Mar)	All educational activities suspended (17 Mar)	Non-essential services involving face-to-face contact with the public closed (03 Apr)	Access to beaches and parks suspended (24 Mar)	Borders closed to non-resident foreign nationals (19 Mar); Nighttime curfew imposed except for essential transport (22 Mar); Rotating schedules for non-essential vehicles (04 Apr)	Remote working for civil servants (10 Mar); Residence permit withdrawn from non-nationals who leave the country (24 Mar)	Fourteen-day quarantine for anyone coming into the country (19 Mar)	Recommended	Police forces to ensure compliance with measures; The Ministry of Health or the police to close establishments that fail to comply with measures (16 Mar); Traffic fines for unauthorized circulation (24 Mar)	
Cuba[7-8]	Events postponed (19 Mar)	All educational activities suspended (24 Mar)	Cinemas, discotheques, bars and nightclubs closed (24 Mar)	Pools, gymnasiums, parks and camping sites closed (24 Mar)	Borders closed to non-residents (21 Mar); All public and private interstate transport suspended (24 Mar); Borders closed (02 Apr)	Employees with symptoms of the disease banned from frequenting their workplaces (24 Mar)	Centers for the isolation of suspected and confirmed cases (05 Mar); Fourteen-day quarantine for anyone coming into the country (24 Mar); Cordons sanitaires in some communities with confirmed cases (31 Mar)	Mandatory (02 Apr)		

El Salvador[9-12]	Events deemed a health risk banned (14 Mar); All meetings banned (21 Mar)	All educational activities suspended (11 Mar)	Bars, discotheques, gymnasiums and establishments that sell alcoholic beverages or that provide entertainment closed (16 Mar); Restaurants and snack bars closed (17 Mar); Call centers closed (18 Mar); Non-essential businesses and tax-free zones closed (18 Mar); Retail centers closed (19 Mar); All non-essential services closed (30 Mar)	Recreational activities in public places banned (03 Apr)	Borders closed to non-resident foreign nationals (11 Mar); Circulation of individuals other than essential workers banned (21 Mar); Requirement to carry permit to go out, restricted to essential workers (21 Mar); Lockdown in municipalities with high infection rates (17 Apr)	Activities of all civil servants suspended except for those working in health, civil protection and public security (11 Mar); Job and salaries secured for individuals in quarantine (11 Mar); Paid leave for workers in the private sector identified as being in at-risk groups (16 Mar); Circulation of individuals and vehicles banned except for essential workers (21 Mar); Temporary paid leave or remote working for at risk groups (30 Mar)	Isolation of all individuals entering the country (11 Mar); Isolation of suspected and confirmed cases (13 Mar); Creation of cordons sanitaires (14 Mar)	Mandatory (08 Apr)	Isolation for 30 days in containment centers created by the state for individuals who fail to comply with the isolation order, with powers to increase isolation by 6 days if a case of the disease is confirmed in the center (13 Mar); Police forces used to ensure compliance with measures (14 Mar); Individuals who circulate without justification sent to containment center for 30 days' isolation (21 Mar)	Constitutional court banned detention in containment centers determined by the Executive Council; Irregular detentions by the police; State concedes aid to those held in containment centers; Those prevented from working due to obligatory isolation cannot be fired or have their salaries reduced.
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Guatemala[13-14]	Public events cancelled (05 Mar); Events need authorization from the Ministry of Health (05 Mar); Gatherings of more than 100 individuals banned (14 Mar); All events banned (17 Mar)	All educational activities suspended (14 Mar)	Retail centers closed (17 Mar); Businesses and services must close between the hours of 9 pm and 4 am (17 Mar); Consumption and sale of alcoholic beverages at night banned (17 Mar); Businesses and services banned from operating (30 Mar); Municipal markets must close at 1 pm (30 Mar); Consumption and sale of alcoholic beverages banned (06 Apr)	Activities in public places banned (05 Apr); Social visiting outside the municipality banned (05 Apr)	Non-nationals who have been in China in the preceding 15 days not allowed into the country. Nationals in the same situation to be submitted to clinical evaluation, with possible isolation (31 Mar); Individuals arriving from countries with a high number of cases banned from entering the country (12 Mar); Borders closed (17 Mar); Curfew imposed between the hours of 4 pm and 4 am (22 Mar); Municipal and intercity transport suspended (17 Mar); Travel outside the state forbidden (05 Apr)	Non-essential on-site activities in the public sector suspended (17 Mar)	Isolation of suspected and confirmed cases and contacts (05 Mar); Isolation of all individuals entering the country (11 Mar); Institution of cordons sanitaires (21 Mar)	Mandatory (12 Apr)	Restrictions in movement enforced by police (29 Mar); Individuals disobeying obligatory isolation to respond criminally (29 Mar);
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Haiti[15-16]	Meetings involving more than 10 individuals banned (19 Mar)	All educational activities suspended (19 Mar)	Recommendation to limit indoor leisure activities (19 Mar); Businesses closed (19 Mar)		Travelers who have been in areas with high infection rates in the preceding 14 days banned from entering the country (09 Mar); Borders closed (16 Mar); Ports and airports closed (19 Mar); Nighttime curfew (19 Mar)	Rotating schedules for non-essential civil servants (19 Mar)	Fourteen-day preventive isolation for individuals entering the country from an infected area (19 Mar)	Mandatory (11/05)	Public forces to ensure compliance with measures (19 Mar)	
Honduras[17-19]	Events banned (13 Mar); Gatherings of more than 50 individuals banned (13 Mar)	Primary and secondary schools closed (13 Mar); Universities closed (16 Mar)	Retail centers closed (16 Mar); Non-essential activities in the public and private sectors suspended (16 Mar)		Non-residents arriving from Europe, China, Iran and South Korea banned from entering the country (13 Mar); Borders closed (16 Mar); Public transport suspended (16 Mar); Municipal and intercity circulation banned in cities with a greater number of cases (16 Mar)	Remote working for those over 60 years of age (14 Mar); Circulation banned except for essential activities (16 Mar)	Self-isolation at home for residents arriving from Europe, China, Iran and South Korea (13 Mar); Isolation for all entering the country (16 Mar)	Mandatory (13 Apr)	Police to give support to prevent mass gatherings of individuals above permitted levels (15 Mar); Establishments charged with criminal offence for disobeying measures (15 Mar).	

Mexico[20-21]	Recommendation to ban events of more than 100 individuals (24 Mar); Events of more than 50 individuals banned (31 Mar)	All educational activities suspended (23 Mar) — 11 states suspended classes earlier, on dates ranging from 17 Mar to 20 Mar	Non-essential activities in the public and private sectors suspended (30 Mar)			Remote working for civil servants in at-risk groups and rotating schedules for the others (23 Mar); Remote working for all civil servants able to work from home (27 Mar); Voluntary self-isolation at home recommended for non-essential workers (30 Mar)		Mandatory (20/05)	Police forces to ensure compliance with measures (24 Mar);	
Nicaragua[22]								Recommended in parts of the country		
Panama[23]	Events involving more than 50 individuals banned (13 Mar)	All educational activities suspended (20 Mar)	Non-essential businesses and services suspended (19 Mar); Sale of alcoholic beverages banned (24 Mar)	Public and private collective leisure spaces closed (16 Mar)	Disembarking from vessels coming from risk areas banned (13 Mar); Nighttime curfew (14 Mar); International flights suspended (19 Mar); Lockdown (24 Mar); Rotating schedules according to gender for access to on-site retail and other services (30 Mar)	Workers in at-risk groups given the right to bring forward vacation time (16 Mar)	Isolation for suspected and confirmed cases at home or in a hotel designated by the state (23 Mar)	Mandatory (07 Apr)	Sanctions including fines for individuals and fines and closure for establishments not complying with measures	

Dominican Republic[24]	Events banned (17 Mar)	All educational activities suspended (16 Mar)	On-site and non-essential businesses and services suspended (17 Mar)	Access to beaches, rivers and pools banned (02 Apr)	Cruise ships not allowed to dock (16 Mar); Flights from Europe, Iran and South Korea banned (16 Mar); Borders closed (19 Mar); Nighttime curfew (20 Mar)	Remote working and rotating schedules for non-essential civil servants (20 Mar)	Isolation for individuals who have been in Europe, China, Iran or South Korea in the preceding two weeks (16 Mar)	Mandatory (18 Apr)	Enforced by police	

Argentina[25]	Mass gatherings banned, and cultural spaces and establishments closed (12 Mar)	All educational activities suspended (16 Mar)	All non-essential activities suspended (19 Mar)	National parks and protected areas closed (15 Mar)	Flights from affected countries suspended (12 Mar); Borders closed to non-residents (16 Mar); Long-distance public transport suspended and restrictions imposed for permitted vehicles (17 Mar); Circulation banned except for essential activities (19 Mar) Borders closed to residents (26 Mar); Gradual entry of residents into the country through a "sanitary corridor" (01 Apr); Domestic flights suspended (27 Apr)	Special leave of absence for workers in the public and private sector returning to the country from affected places to remain in quarantine (06 Mar); Leave of absence for workers in all teaching institutes and those in the public and private sectors who are in the obligatory isolation group (suspected and confirmed cases, contacts and travelers) (12 Mar); Leave of absence for workers in at-risk groups (17 Mar); Remote working for civil servants (17 Mar)	Isolation of travelers who develop symptoms (11 Mar); Isolation of cases, including suspected cases and contacts (12 Mar); Obligatory quarantine for travelers returning to the country (17 Mar); General preventive isolation including prohibition of circulation in streets and highways in the country, except for essential activities (19 Mar)	Mandatory (20 Apr)	Information that an individual has failed to comply with isolation laws to be evaluated by a specific entity (12 Mar); A special telephone line for individuals to inform cases of non-compliance is created (17 Mar); In cases of infraction, vehicles can be detained (19 Mar)
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Bolivia[26]	<p>Events involving more than 1,000 individuals banned (12 Mar);</p> <p>Events involving more than 100 individuals banned (16 Mar);</p> <p>All meetings banned (25 Mar)</p>	<p>All educational activities suspended (12 Mar)</p>	<p>Opening hours of non-essential activities restricted (17 Mar)</p>	<p>Events in gymnasiums and parks banned (16 Mar);</p> <p>Events in discotheques, bars and cinemas banned (16 Mar)</p>	<p>Flights from Europe suspended (13 Mar);</p> <p>Nighttime curfew (17 Mar);</p> <p>Public transport schedules restricted (17 Mar);</p> <p>Non-nationals arriving from affected areas banned from entry (18 Mar);</p> <p>Travel between provinces banned (20 Mar);</p> <p>Borders closed (21 Mar);</p> <p>International air, sea and road transport suspended (21 Mar);</p> <p>Lockdown (22 Mar);</p> <p>Circulation of unauthorized vehicles banned (22 Mar);</p> <p>One person per household allowed out to purchase basic necessities in the morning (22 Mar);</p> <p>Permission to circulate granted according to a rotating schedule based on identity card number and in close vicinity to home (25 Mar)</p>	<p>Continuous working hours for activities in public and private sector (16 Mar);</p> <p>Leave of absence for the elderly, for pregnant women, those with chronic diseases and for parents of children under 5 years of age (17 Mar);</p> <p>Work activities in public and private sectors suspended (25 Mar)</p>	<p>Fourteen-day quarantine for those entering the country (13 Mar);</p> <p>Isolation of confirmed and suspected cases (17 Mar);</p> <p>Lockdown (22 Mar)</p>	<p>Recommended in parts of the country</p>	<p>Closure of private establishments;</p> <p>Detention of 8 hours, fine and criminal record for offense against public health in cases of non-compliance or of encouraging non-compliance (sentence of 1-10 years);</p> <p>Fine and confiscation of any vehicle circulating without authorization (25 Mar)</p>
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Brazil[27-35]	Partial prohibition of events by state governors in the majority of the most populous states (16 Mar)	Educational activities suspended by state governors in the majority of the most populous states (17 Mar)	Non-essential businesses and services closed in the majority of the most populous states (01 Apr)	Parks and beaches closed by state governors in the majority of the most populous states (19 Mar)	All borders closed except for the border with Uruguay (19 Mar); Intercity transport suspended by state governors in the majority of the most populous states (20 Mar); Entry of non-nationals arriving from countries with high infection rates banned (23 Mar); Entry of non-nationals into the country banned (30 Mar)	Remote working for federal and state civil servants belonging to at-risk groups in the majority of the most populous states (17 Mar)		Recommended in parts of the country	Use of police by the states	
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Chile[36]	Events involving more than 500 individuals banned (13 Mar); Events involving more than 50 individuals banned (25 Mar)	All educational activities suspended in establishments in which there are cases (13 Mar); All educational activities suspended (25 Mar)	Cinemas, theaters, bars, discotheques, nightclubs, restaurants and cafés closed (21 Mar)	Open-air gymnasiums closed (21 Mar)	All travelers entering the country obliged to complete a self-declaration form on their state of health (28/02); Disembarking from cruise ships banned (15 Mar); Borders closed for air and sea transport (18 Mar); Nighttime curfew and safe-conduct required for circulation nationwide (22 Mar); Curfew restrictions in some places (20 Mar); Cordons sanitaires with entry/exit forbidden (23 Mar); Travelling to places other than main home forbidden (23 Mar)	Remote working for civil servants in at-risk groups and rotating schedules for the remainder (13 Mar)	Isolation of confirmed and suspected cases and of travelers returning from affected areas (13 Mar); Self-isolation of elderly (24 Mar); Isolation sites for those who fail to comply with quarantine (25 Mar); Lockdown in certain districts established by the government (26 Mar)	Mandatory (08 Apr)	Fines and sentences for those who fail to comply with quarantine (25 Mar); Isolation in hostels for those who do not comply with quarantine (25 Mar)	State of exception, with the adoption of nationwide restriction measures and stricter measures in the most affected parts of the country (19 Mar)
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Colombia[37-38]	Events involving more than 500 individuals banned (12 Mar); Events involving more than 50 individuals banned (19 Mar)	Educational activities at primary and secondary school level suspended (16 Mar); All educational activities suspended (20 Mar)	Retail establishments closed, as well as entertainment and leisure activities and face-to-face food outlets (18 Mar)	Lockdown (25 Mar)	Closure of land, river and sea borders with Venezuela (13 Mar); Closure of borders with Panama, Ecuador, Peru and Brazil (16 Mar); Entry of passengers from international flights suspended (20 Mar); All domestic flights suspended (25 Mar); Lockdown, with only one person from each nuclear family being allowed out for essential activities (25 Mar)	Only essential activities. Workers need to be accredited (25 Mar)	Fourteen-day quarantine for individuals entering the country from countries with high infection rates (10 Mar); Elderly asked to self-isolate (20 Mar)	Mandatory (04 Apr)	Fines and sentences (25 Mar)	Decree determining the instructions for governors and mayors to adopt measures to restrict circulation and regarding the opening of establishments, adopted in different ways (18 Mar)
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Ecuador[39-40]	Events involving more than 30 individuals banned (12 Mar)	Educational activities suspended (12 Mar)	Non-essential businesses with more than 30 customers attending simultaneously closed and restrictions regarding the opening hours of restaurants (16 Mar); Non-essential on-site industrial activities and restaurants banned, as well as retail and services with more than 30 individuals (17 Mar)		Disembarking from cruise liners banned (16 Mar); Domestic flights suspended (17 Mar); Rotating schedules of vehicles for municipal and intercity transport (17 Mar); Interstate passenger transport banned (17 Mar); Arrival of international passenger flights banned (17 Mar); Circulation restricted to essential activities and work only (17 Mar); Nighttime curfew (17 Mar); Rotating schedules for all vehicles (18 Mar); Curfew prolonged (24 Mar)	Circulation restricted to essential activities and statement of safe-conduct required to confirm essential activity (17 Mar)	Fourteen-day quarantine for travelers arriving from countries with high infection rates (13 Mar); Fourteen day quarantine for travelers arriving from other countries (17 Mar); Obligatory isolation for confirmed and suspected cases in adults over 60 years of age (20 Mar)	Mandatory (08 Apr)	Police and armed forces to ensure compliance with measures; Fines in cases of non-compliance with rotating schedules based on vehicle license plates (16 Mar); Prison sentence of 1-3 years for misuse of safe-conduct (16 Mar); Fine and prison for non-compliance with restrictions to circulation (16 Mar)	State of exemption decreed
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Paraguay [41--42]	Events banned (10 Mar)	All educational activities suspended (10 Mar)	All non-essential activities suspended (21 Mar)	Circulation in streets prohibited, except in cases of need or emergency (21 Mar)	Borders closed except for residents and members of diplomatic missions (17 Mar); Nighttime curfew except for essential services and nightshift workers (16 Mar); Circulation in streets prohibited except for cases of need, urgency or when performing activities defined as essential (21 Mar) Rotating schedules for private vehicles (09 Apr)	Special working hours for civil servants from 9 am to 4 pm except for essential services (13 Mar); Circulation for work prohibited except for essential services (21 Mar)	Isolation of confirmed cases (15 Mar); Supervised isolation at home for 14 days for all individuals returning to the country (15 Mar); Preventive self-isolation for all for health reasons, nighttime curfew (16 Mar); Obligatory health quarantine for travelers in institutions defined by the government (28 Mar); Supervised isolation of cases in temporary hostels for vulnerable individuals who so wish or who have failed to comply with isolation (09 Apr)	Mandatory (20 Apr)	Sanctions with fines for those not complying with health measures (16 Mar); Police and armed forces can restrict the movement of vehicles and individuals, and breaking the law can result in the vehicle being confiscated following fiscal or judicial intervention (20 Mar); Citizens must carry authorization to circulate, with sanctions that include prison for non-compliance (03 Apr); Individuals testing positive who do not comply with quarantine to be prosecuted (05 Apr)	Senate approves exceptional extension to the mandate of the municipal authorities for one year (01 Apr)
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Peru[43]	Public facilities closed (15 Mar); Parades, festivals, civil and religious activities suspended (15 Mar)	Educational activities suspended (15 Mar)	Access to non-essential establishments suspended and restrictions imposed regarding access to essential services (15 Mar); Restaurants closed (15 Mar)	Circulation in streets prohibited except for cases of need or urgency (17 Mar)	Borders closed and intercity transport prohibited except for cargo (15 Mar); Circulation within towns/cities only for essential activities (15 Mar); Reduction of 50% in availability of urban transport, and interstate air, road and river transport suspended (15 Mar); Nighttime curfew (18 Mar); Use of private vehicles banned except for essential activities and for urgent medical care (18 Mar); Only 1 family member can go out for essential activities, in compliance with rotating schedules based on gender, and never on Sundays (02 Apr); Only 1 family member can go out from Monday to Saturday (10 Apr)	Obligatory registration for workers performing essential activities (17 Mar)	Fourteen-day self-isolation at home for travelers from countries with epidemiological history of the disease (15 Mar)	Mandatory (07 Apr)	During the state of national emergency, restrictions were placed on constitutional rights regarding freedom and personal safety, the sanctity of the home and freedom to meet and of movement within the country; The police can detain individuals and check merchandise, vehicles and establishments to prevent unauthorized services and activities from being performed. The police can confiscate documents of drivers and vehicles (18 Mar); Application of fines to be paid within 5 days. If not paid, individuals will be banned from signing contracts, accessing banking and notarial services and travelling abroad (14 Apr)
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Public events suspended (13 Mar); Mass gatherings discouraged (13 Mar) Recommendation not to have private parties (11 Mar); Public establishments closed (14 Mar)	Educational activities suspended (14 Mar)	All major establishments closed except for grocery stores and pharmacies (17 Mar); Priority opening hours for the elderly in supermarkets (24 Mar)	Public and private thermal tourist attractions closed (13 Mar); Camping sites and public resorts closed (31 Mar)	Disembarking from cruise ships banned (13 Mar); Passengers arriving on flights from abroad allowed to disembark at only two airports (16 Mar); Borders with Argentina closed except for cargo (17 Mar); Cordon sanitaire to evacuate persons from the port of Montevideo to travel to airport (20 Mar); Flights from Europe suspended (22 Mar); Leaving the country for tourism banned (24 Mar); Reduction in the frequency of municipal transport at weekends (27 Mar); Reduction of 50% in the availability of public transport at weekends (01 Apr); Availability of public transport doubled at peak times (10 Apr)	Remote working advised for public and private sectors (15 Mar); Preventive self-isolation for those over 65 years of age (civil servants should stay at home and sick pay to be provided for workers in the private sector) (24 Mar)	Quarantining of passengers returning to the country from affected areas (12 Mar); Isolation of cases, of individuals with respiratory symptoms, of contacts and of individuals returning to the country from areas of risk (13 Mar); Preventive self-isolation for those over 65 years of age (24 Mar); Hostels for the homeless elderly (19 Mar)	Mandatory (23 Apr)	Charges of non-compliance with isolation to be evaluated by a specific entity (13 Mar)
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Venezuela[46-47]	Events and gatherings in public spaces (museums, concerts, churches, etc.) suspended (12 Mar)	Educational activities suspended (16 Mar)	All non-essential activities closed; restaurants can operate only for home delivery (16 Mar)	Circulation in streets prohibited (16 Mar)	Flights from Europe and Colombia suspended (15 Mar); Interstate travel prohibited (17 Mar); Subway and train services suspended (17 Mar); Lockdown in some regions (16 Mar); National lockdown (17 Mar)	Legal suspension of work activities except for essential activities, with corresponding identification required (16 Mar)	Quarantine for travelers coming from affected areas (09 Mar); Isolation of confirmed and suspected cases	Mandatory (18 Mar)		
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¹ Data obtained from Masks4All. What Countries Require Public Mask Usage To Help Contain COVID-19? <https://masks4all.co/what-countries-require-masks-in-public/>. Accessed June 13, 2020.

Table S4. Control measures implemented in each one of the countries of Latin America over time.

	Costa Rica	Cuba	El Salvador	Guatemala	Haiti	Honduras	Mexico	Nicaragua	Panama	Dominican Republic	Argentina	Bolivia	Brazil	Chile	Colombia	Ecuador	Paraguay	Peru	Uruguay	Venezuela
Previous days							28/Feb ¹			01/Mar ¹	03/Mar ¹		26/Feb ¹	03/Mar ¹		29/Feb ¹				
05/Mar				pBE QUAR																
06/Mar	¹										QUAT							¹		
07/Mar															¹		¹			
08/Mar																				
09/Mar					TRAV															QUAT
10/Mar	FCS								¹						QUAT		BE CTE			
11/Mar		¹	CTE pBOR FCS QUAT	QUAT		¹						¹								
12/Mar	pBE			TRAV						QUIS pBE ITRA	pBE CTE	²		pBE		pBE CTE			QUAT	pBE
13/Mar			QUAR	¹		BE CTE TRAV			pBE ITRA		ITRA QUAT			pBE FCS QUIS	pBOR	QUAT	FCS		pBE ¹ PUBL PRIL	¹

																			ITRA QUIS	
14/Mar			pBE	pBE CTE					CURF										PUAS CTE	
15/Mar										PUBL		³	ITRA ²		ITRA	QUAT QUIS	LDWN			ITRA
16/Mar			PRIL		BOR	pSER LDWN BC QUAT	²		PUBL PRIL	CTE ITRA ITRA QUAT	CTE ² pBOR	pBE PRIL PUBL	Pbe*		CTE BOR	pBOR	CURF	²		LDWN
17/Mar	CTE		pSER	BE pSER BOR CTRA STRA FCS				²		BE SER	STRA FCS QUAT LICN	pSER CURF CTRA LICN QUIS	CTE* FCS	³	²	LDWN ² QUAT	pBOR	BOR	pSER pBOR	
18/Mar	²		INDU									Pbor		BOR	PRIL SER	³		³	²	
19/Mar	pBOR QUAT		pSER ¹	pBE ¹ INDU CTE PORT FCS CURF QUAT			³	¹	SER ³	BOR	LDWN		PUBL* pBOR		pBE ³					
20/Mar									CTE	CURF FCS	³	NTRA	STRA*	CIRT	ISOL ITRA					
21/Mar	BE ³	pBOR	LDWN	CORD								BOR		PRIL			LDWN		³	

22/Mar	CURF			CURF						23		LDWN	4	CURF					
23/Mar							CTE FCS		QUIS				TRAV	CORD					
24/Mar	PUBL	CTE PUBL NTRA QUAT							LDWN					ISOL					QUIS 2
25/Mar												IDCR	pBE CTE	LDWN	4				
26/Mar		2				2					BOR			4					3
27/Mar												2						2	
28/Mar																		QUAT	
29/Mar		3				3													
30/Mar			SER	SER			PPAS		GNDR				ITRA						
31/Mar				TRAV			pBE ⁴		4			3							pBE PUBL
01/Apr										4			SER*					4	CIRT
02/Apr		BOR								PUBL	4				4				GNDR
03/Apr	pSER		PUBL																
04/Apr	CIRT		2	2															
05/Apr				PUBL NTRA														3	
09/Apr			3															QUIS	

10/Apr				3															
17/Apr			CORD																
20/Apr		4																	
21/Apr					2														
27/Apr										NAIR									
11/May				CURF ⁴															
15/May				LDWN															
Following					05/May ³			23/May ^{2,3}											
g	29/May ⁴		13/May ⁴			03/May ⁴					28/Apr ⁴							03/Jun ⁴	25/May ⁴
days					26/May ⁴			03/Jun ⁴											

¹ 1st confirmed case of COVID-19. ² 50th confirmed case of COVID-19. ³ 100th confirmed case of COVID-19. ⁴ 1000th confirmed case of COVID-19.

Abbreviations for measures related to education, services and industry: CTE - Closure of Teaching Establishments; pBE - Partial Ban on Events; BE - Ban on Events; PUBL - Closure of Public Leisure Spaces; PRIL - Closure of Private Leisure Spaces; PPAS - Public and Private non-essential Activities Suspended; PUAS - Public non-essential Activities Suspended; INDU - Non-essential Industries Closed; SER - All non-essential Businesses and Services Closed; NSER - All non-essential Businesses and Services Closed during nighttime; pSER - partial Closure of non-essential Businesses and Services. **Abbreviations for measures related to circulation:** LDWN - Lockdown; CORD - Cordons Sanitaires; CURF - Night Curfew; GNDR - Gender-based Circulation Control; IDCR - ID-based Circulation Control; CIRT - Intracity Circulation Restrictions; CTRA - Public Urban Transport; STRA - Intercity Transport; NTRA - Interstate Transport; NAIR - Domestic Flights Suspended. **Abbreviations for measures related to quarantine, isolation and international travelling:** BOR - Border Closure; pBOR - partial Border Closure; TRAV - Restrictions for Travelers from High Risk Areas; PORT - Closure of Ports and Airports; ITRA - International Travelers Restrictions; QUAT - Quarantine of Travelers; QUAR - Quarantine of Residents; QUIS - Quarantine and Isolation of residents; ISOL - Isolation of members of Risk Groups. **Abbreviations for measures related to workers:** FCS - Flexible work schedules for Civil Servants (remote working, fewer working hours or suspension of activities); LICN - Leave for Workers in at-risk groups.

The highlighted cells indicate the dates of the 1st, 50th, 100th and 1000th confirmed case in each country. *: Date of adoption of measures at state level in at least 3 of the 5 most populous states in the country.

**: The 50th and 100th cases were confirmed on the same date.

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Figures

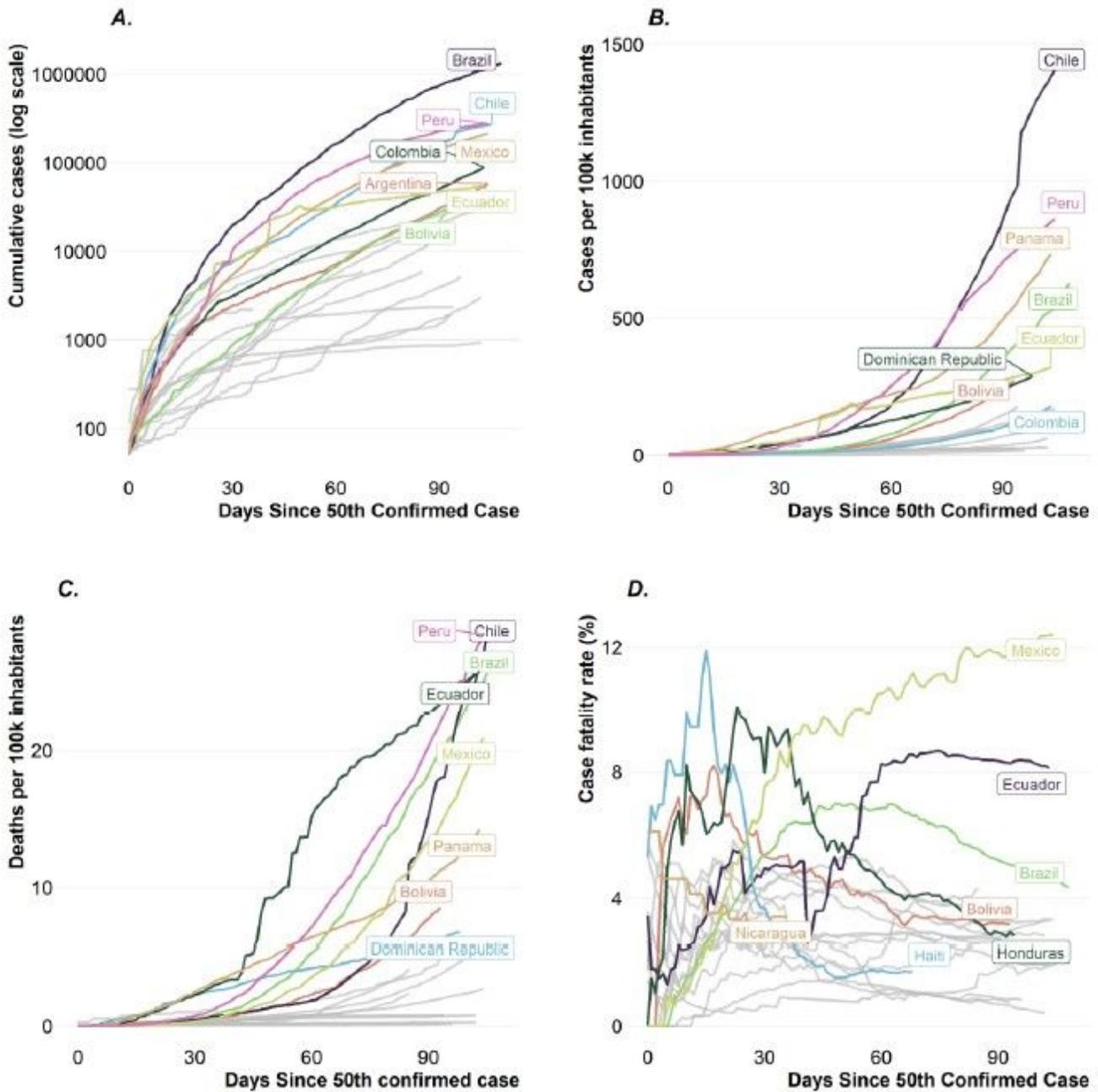


Figure 1

Trends in the number of cases and deaths from COVID-19 in Latin America. Legend: (A) Cumulative number of cases; (B) Number of cases per 100,000 inhabitants; (C) Number of deaths per 100,000 inhabitants; (D) Fatality among confirmed cases. The analyses were performed using data from the European Centre for Disease Prevention and Control up to June 28, 2020. Code adapted from Kieran Healy (twitter).

A. At 1st confirmed case of Covid-19

B. At 50th Covid-19 confirmed case



C. At 100th Covid-19 confirmed case

D. At 1000th Covid-19 confirmed case



Figure 2

Restrictive degrees in social distancing measures as implemented in each Latin American country. Legend: (A) At the time of diagnostic confirmation of the 1st case of COVID-19; (B) 50th case; (C) 100th case; (D) 1000th case. Data collected up to May 15, 2020. White - no measures; yellow - countries with mild restrictions; orange - countries with moderate restrictions; red - countries with strict restrictions; and maroon - countries with lockdown. Up to June 28, 2020, Uruguay had not yet reached 1,000 cases; however, for the purpose of comparison, the same level of restriction in Figure 2C was applied for that country.

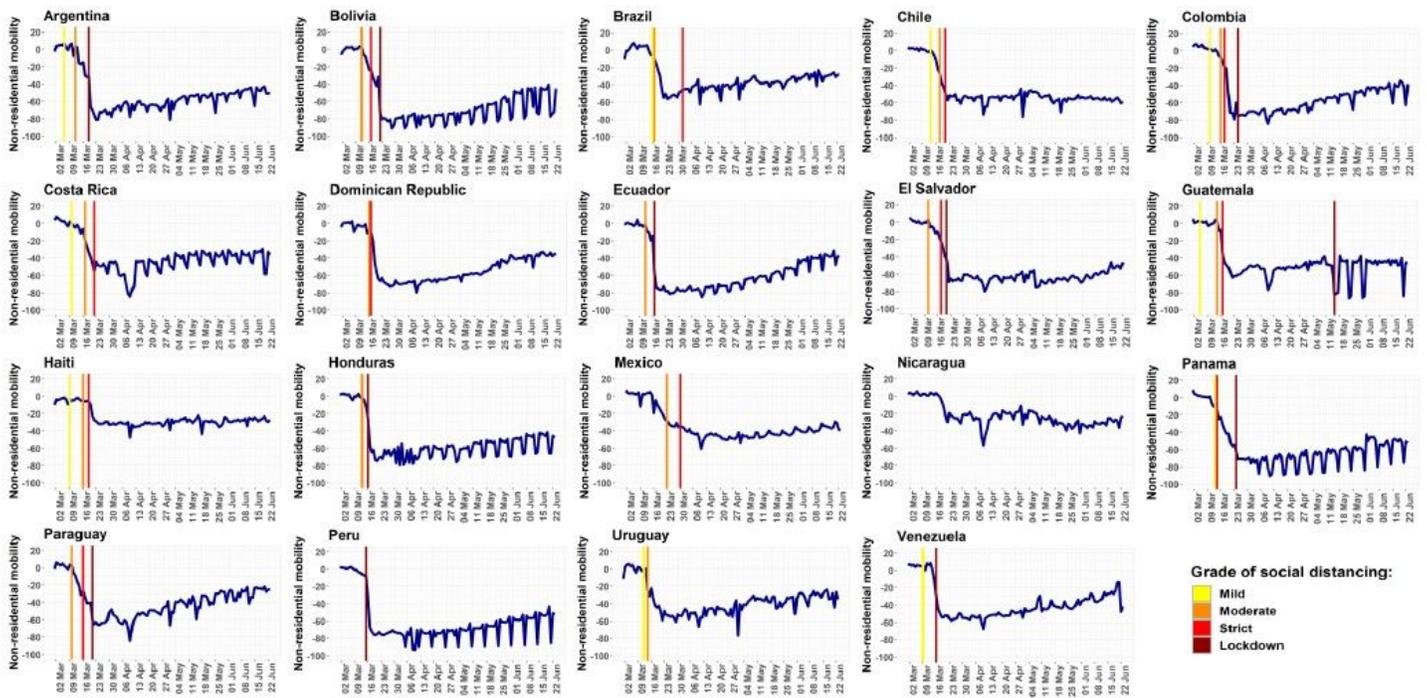


Figure 3

Changes in mobility outside the home in the Latin American countries evaluated. Legend: No data available in Google Mobility Reports on social mobility in Cuba.

Supplementary Files

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