BOLETÍN EPIDEMIOLÓGICO SEMANAL

Instituto Pedro Kourí

DIRECCIÓN NACIONAL DE EPIDEMIOLOGÍA
MINISTERIO DE SALUD PÚBLICA

Dirección Postal: Inst. "Pedro Kourí". Apartado Postal 601 Marianao 13. La Habana, Cuba
e-mail: ciipk@ipk.sld.cu

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ACTUALIZACIÓN SEMANAL DE LA COVID-19 EN CUBA.

Al cierre del día de ayer, 6 de marzo, se encuentran ingresados un total de 7 mil 182 pacientes, sospechosos 4 mil 628, en vigilancia 40 y confirmados activos 2 mil 514.

Para la COVID-19 se realizaron un total de 10 mil 740 muestras para la vigilancia en el día, resultando positivas 548 para 5,1% de positividad. El país acumula 13 millones 166 mil 079 muestras realizadas y 1 millón 073 mil 504 positivas (8,2%). El 5,3% (29) de los 548 casos positivos fueron asintomáticos, acumulándose un total de 145 mil 293 que representa el 13,5 % de los confirmados hasta la fecha. Se acumulan 8 mil 501 fallecidos, letalidad de 0,79% vs 1,35%en el mundo y 1,78% en Las Américas; dos evacuados y 57 retornados a sus países. En el día hubo 398 altas, se acumulan 1 millón 062 mil 430 pacientes recuperados (99,0%). Se atienden en las terapias intensivas 24 pacientes confirmados de ellos 8 críticos y 16 graves.

Hasta el 06 marzo se reportan 192 países y 32 territorios con casos de COVID-19, asciende a 446 millones 204 mil 210 los casos confirmados (+ 1 millón 330 mil 430) con 60 millones 971 mil 430 casos activos y 6 millones 018 mil 146 fallecidos (+ 4 mil 586) para una letalidad de 1,35% (-0,01).

En la región de las Américas se reportan 150 millones 023 mil 371 casos confirmados (+ 114 mil 536), el 33,62% del total de casos reportados en el mundo, con 29 millones 246 mil 166 casos activos y 2 millones 677 mil 196 fallecidos (+ 1 mil 531) para una letalidad de 1,78% (-0,0. 1).

IMPACTO POTENCIAL DE OMICRON. ACTUALIZACIÓN EPIDEMIOLÓGICA Y GEOGRÁFICA DE LAS VARIANTES SARS-COV-2. (1,2).

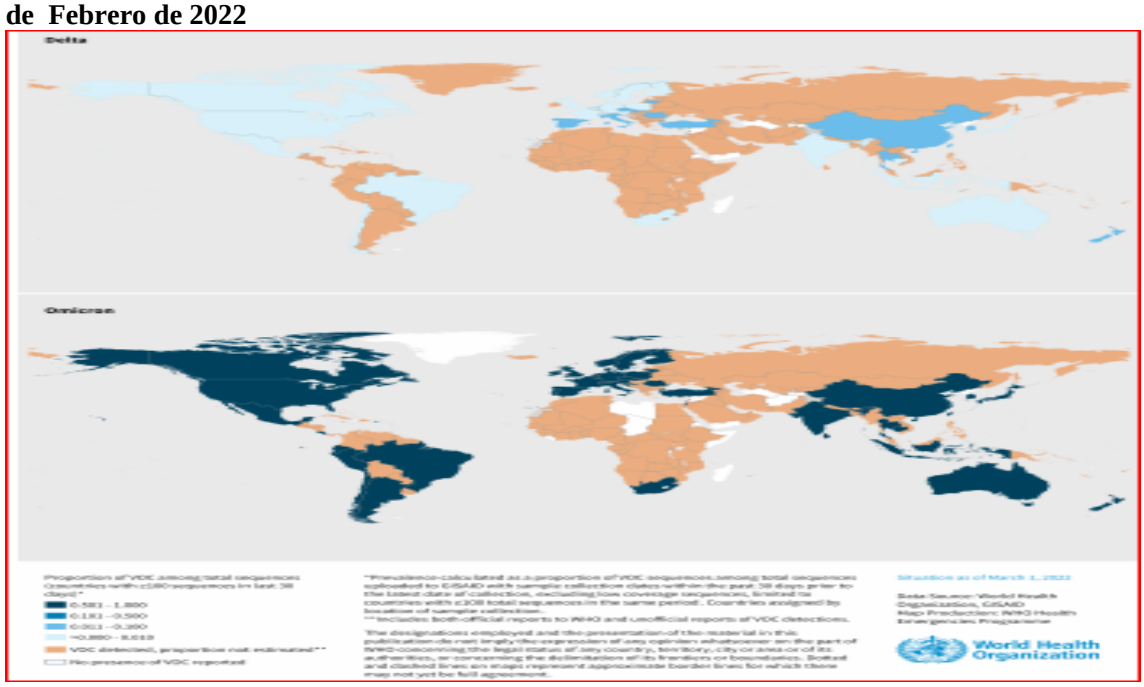
Elaborado por: Dra. Suset Oropesa. CIDR, Departamento de Virología. Instituto Pedro Kourí (3)

La epidemiología del SARS-COV-2 se caracteriza por el predominio global de la variante Omicron, de las 488 463 secuencias enviadas a GISAID a partir de muestras coleccionadas en los últimos 30 días, el 99.5 % pertenecían a esta variante. Entre las otras variantes, solo se reporta Delta con alguna circulación significativa. Otras secuencias NO VOC/ NO VOI fueron informadas por GISAID.

Tabla 1. Propagación geográfica y prevalencia de las VOCs (Secuencias enviadas a GISAID)

VARIANTES VOCs	02/03/2022	22/02/2022
Total	488463	494350
Ómicron	486132 (99,5%)	490519 (99,1%)
Delta	1601 (0.3%)	3841 (0.8%)
Gamma	NO	NO
Alfa	6 (<0.1%)	1 (<0.1%)
Beta	NO	NO
VOI, Mu. Lambda	NO	NO

Prevalencia de las variantes de preocupación (VOCs) Delta y Omicron en los últimos 30 días, 22 de Febrero de 2022



Actualización de la VOC Omicron y resumen de su impacto potencial (3,4)

Basado en las evidencias disponibles, sobre todo el riesgo global relacionado con la variante Omicron se mantiene muy alto. (Tabla No. 2) Desde la primera información de la variante Omicron en noviembre 2021, casi 1.5 millones de secuencias han sido depositadas en GISAID. Desde la primera semana de enero de 2022, a Omicron pertenecían el 90 % de las secuencias enviadas; para la semana cinco, Omicron había reemplazado en su mayor parte al resto de las variantes y ahora está por encima del 99 % de las secuencias estudiadas. Entre los linajes principales de Omicron, BA.1 predomina, seguido por BA.1.1 y BA.2, y la BA.3 resulta la menos detectada. Las tendencias semanales (**figura 4, panel A**) demuestran que la proporción relativa de BA.2 se ha incrementado con el paso del tiempo para situarse en la segunda posición, después de BA.1.1, en la semana 6.También resultó el linaje predominante en 18 países.

Desde lo geográfico, la tendencia de detección más pronunciada de BA.2 fue en el Sudeste Asiático, seguida del Mediterráneo Este, Africa, Pácifico Oeste y las regiones europeas. En contraste, se ha detectado muy poco BA.2 en Las Américas, y del linaje del BA.3 no se ha realizado ningún hallazgo.

El número de secuencias semanales de Omicron es decreciente de forma sostenida desde el comienzo de 2022 (**figura 4, panel B).**

Estas tendencias deberían ser interpretadas con alguna cautela debida a las limitaciones de los sistemas de vigilancia, incluyendo las diferencias en la capacidad de secuenciación y las estrategias de muestreo entre países, así como también debido a los retrasos en la información entre la colección del espécimen y el envío de las secuencias a GISAID durante el período presentado.

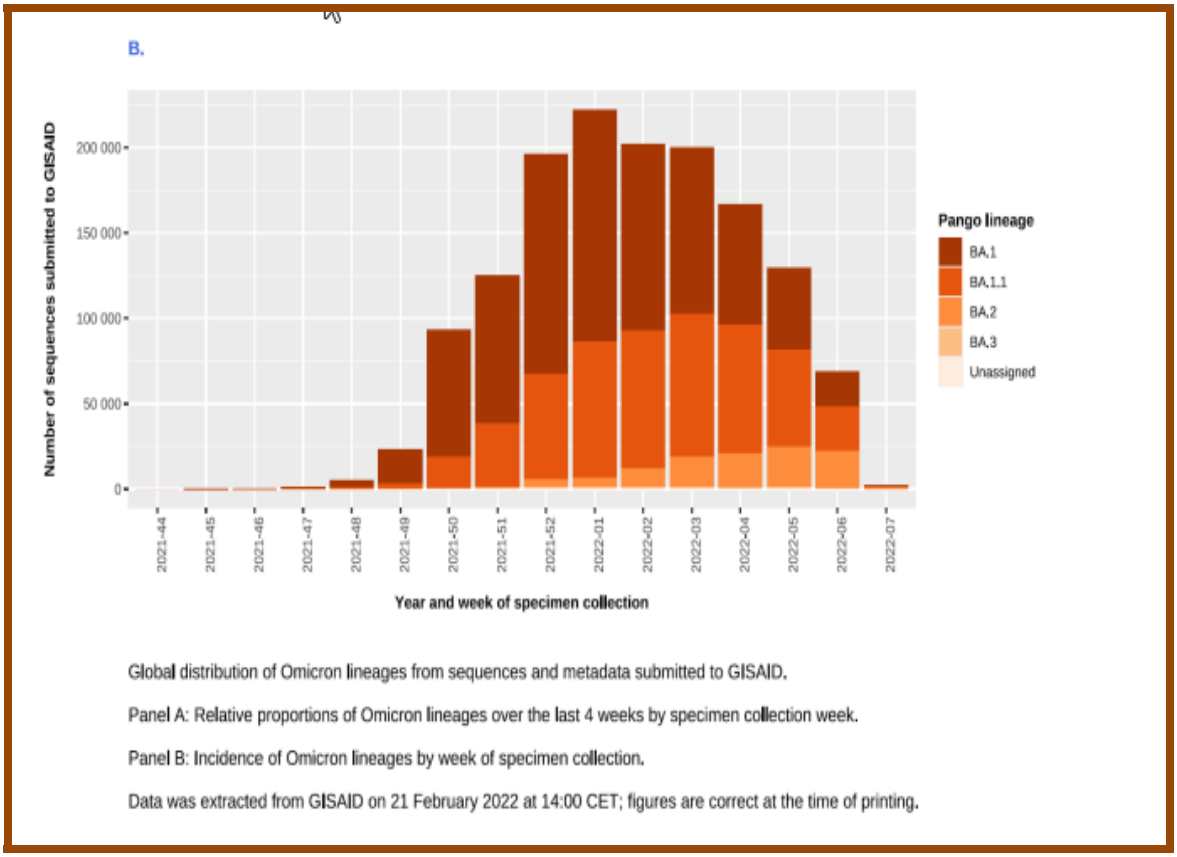
Figura 4. Distribución global y la proporción relativa de los linajes de Omicron según las secuencias enviadas a GISAID, presentado por la semana de colección de las muestras

A.

				Overall (%)	Last 4 weeks by collection date (%)			
Lineage	Countries	Sequences[a]	SGTF[b]	Total	2022-04	2022-05	2022-06	2022-07
BA.1	151	831 022	96.42	55.89	42.18	37.04	30.21	26.67
BA.1.1	139	539 618	95.66	36.29	45.25	43.93	37.41	36.49
BA.2	85	110 905	0.10	7.46	12.23	18.56	31.91	35.80
BA.3	19	422	99.05	0.03	0.04	0.02	0.02	0.05
Unassigned	56	4 834	17.81	0.33	0.31	0.45	0.46	0.99

[a]Data source: sequences and metadata from GISAID

[b]Percentage of sequences with Spike H 69-70 deletion associated with S gene target failure



Global distribution of Omicron lineages from sequences and metadata submitted to GISAID.

Panel A: Relative proportions of Omicron lineages over the last 4 weeks by specimen collection week.

Panel B: Incidence of Omicron lineages by week of specimen collection.

Data was extracted from GISAID on 21 February 2022 at 14:00 CET; figures are correct at the time of printing.

Tabla 2. RESUMEN DE LAS EVIDENCIAS DE LA VARIANTE OMICRON

Domain	Indicator	Main results
Epidemiology	Impact on disease incidence	- Omicron continues to spread globally and has been identified in most countries in all six WHO regions. - Globally, during the week of 14 through 20 February 2022, the number of new COVID-19 cases decreased by 21% as compared to the previous week. The number of new deaths also showed a decreasing trend (8%). At the regional level, the Western Pacific Region reported a 29% increase in the number of new weekly cases while all other regions reported decreases. - It is important to note that these trends may be due, in part, to an overall decrease in testing as some countries may have changed their testing and sequencing policies during the presented period.
	Impact on transmission	- An analysis based on the methods used by Campbell et al [1], and that focused on countries with sufficient sequence data uploaded to GISAID as of 18 February, found a growth rate advantage of Omicron over Delta in all countries. - This translated to a pooled mean transmission advantage (i.e., relative difference in effective reproduction numbers) of 77% (95% CI: 66% – 95%) across epidemiological contexts, under the assumption of an unchanged generation time (i.e. the duration between the moment a person gets infected to the moment they infect another person). The generation time of Omicron has been found to be shorter as compared to Delta, which suggests the transmission advantage may be lower than estimated above; for a 20% shorter generation time, the estimated pooled mean transmission advantage of Omicron over Delta is 66% (95% CI: 60% – 82%). - The same analysis demonstrates a growth rate advantage of the Omicron Pango lineage BA.2 over the Pango lineage BA.1, with a pooled mean transmission advantage of 63% (95% CI: 47% – 77%), under the assumption of an unchanged generation time. - Higher secondary attack rates were reported for Omicron compared to Delta: 13.6% (95% CI: 13.1%-14.1%) vs 10.1% (95% CI: 10.0%-10.2%) in the United Kingdom,[2] and 31% vs. 21% in Denmark.[3] - Researchers in China, Hong Kong SAR[4] found that Omicron had a higher tropism for the bronchi tissue compared to lungs. In the United Kingdom,[5] Omicron was found to infect the upper respiratory tract more rapidly than Delta, yielding about 100-fold higher titres. - Two studies conducted in South Africa [6,7] reported evasion from vaccine-induced and infection-induced immunity by Omicron. This could also be a contributing factor to the higher growth rates of Omicron compared to Delta.
	Impact on disease severity	Following analyses of patterns in recent medical consultations and hospitalizations, Omicron was consistently found to be associated with less severe disease compared to Delta across studies conducted in the United Kingdom,[8] the United States of America,[9,10] Canada[11] and South Africa.[12]

Domain	Indicator	Main results
Immune response	Impact on reinfection	Preliminary data on Omicron in individuals previously infected with SARS-CoV-2 since the start of the pandemic showed an increase in the number of reinfections in Denmark[13] and Israel.[14] A higher risk (RR = 3.3; 95%CI: 2.8 – 3.8) of reinfection with Omicron compared to other SARS-CoV-2 variants was reported across the United Kingdom, with an even higher risk (RR = 5.4; 95%CI: 4.9 – 6.0) when reported only from England. [15]
	Impact on vaccination	Results of vaccine effectiveness (VE) studies are difficult to interpret, and estimates vary with the type of vaccine administered and the number of doses and scheduling (sequential administration of different vaccines). Studies conducted in the United Kingdom and the United States of America reported 60% – 75% vaccine effectiveness against symptomatic infection with Omicron.[16] See more details in the section below.
	Impact on antibody responses and cellular immunity	An analysis of neutralization data from 23 laboratories found a 20-fold reduction in neutralization associated with the Omicron variant in unvaccinated, previously infected individuals or individuals who had received two vaccine doses, while sera from vaccinated individuals with previous infection or individuals who had received three vaccine doses showed a seven-fold reduction.[17] This reduced
		humoral response could be associated with an increased risk of reinfection. Conversely, studies on cellular immunity showed well preserved responses (70% – 80% of CD4+ and CD8+ responses) that could be associated with a decreased risk of severe disease.[18–22]
Diagnostic tools	Impact on PCR assays	Apart from the BA.2 lineage, all Omicron descendent variants have the 69-70 deletion responsible for S-gene target failure. Evaluation of PCR tests for SARS-CoV-2 that include multiple gene targets revealed limited impact of the Omicron variant on the diagnostic test accuracy of these assays.[23,24]
	Impact on Rapid Diagnostic tests	Preliminary data showed contradictory results, with some indicating that Ag-RDTs have similar sensitivity to Omicron as to the wild-type virus or other VOCs, while other studies found a difference. This variability in test performance was also found in more recent studies.[25,26]
Impact on treatment	Impact on antivirals	Preliminary data from several research projects showed no difference in the effectiveness of antiviral agents against Omicron.[27–29]
	Impact on biologicals	Studies on the effectiveness of monoclonal antibodies for treating patients with Omicron reported conserved neutralizing activity for three broadly neutralizing monoclonal antibodies (sotrovimab, S2X259 and S2H97) and a reduction in effectiveness of other monoclonal antibodies (**Planas 2021, VanBlargan 2021, Cameroni 2021, Wilhelm 2021, Roche 2021**).[30–34]
	Other treatment options	It is anticipated that other therapeutics for the clinical management of severe and critical COVID-19 patients (e.g. Interleukin-6 receptor blockers and corticosteroids, will maintain their effectiveness.

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Cuba, Enfermedades de Declaración Obligatoria (EDO) Seleccionadas.
Número de casos en la semana y acumulados hasta: 19/02/22

ENFERMEDADES	EN LA SEMANA		ACUMULADOS		TASAS	
	2021	2022	2021	2022	2021	2022*
FIEBRE TIFOIDEA	-	-	-	-	-	-**
SHIGELLOSIS	2	2	13	5	0.32	0.12
D. AMEBIANA AGUDA	-	-	-	-	0.01	0.01**
TUBERCULOSIS	7	13	45	80	3.77	6.77
LEPRA	2	-	11	14	0.72	0.93
TOSFERINA	-	-	-	-	-	-**
ENF. DIARREICAS AGUDAS	1545	2223	10866	14907	937.37	1298.39
M. MENINGOCÓCCICA.	1	-	1	-	0.04	0.04**
MENINGOCOCCEMIA	-	-	-	-	-	-**
TÉTANOS	-	-	-	-	-	-**
MENINGITIS VIRAL	18	12	120	84	5.55	3.92
MENINGITIS BACTERIANA	3	2	16	21	0.95	1.26
VARICELA	161	186	1269	1014	35.03	28.26
SARAMPIÓN	-	-	-	-	-	-**
RUBÉOLA	-	-	-	-	-	-**
HEPATITIS VIRAL	19	15	258	105	11.64	4.78
PAROTIDITIS	-	-	-	-	-	-**
PALUDISMO IMPORTADO	-	-	2	-	0.08	0.08**
LEPTOSPIROSIS	1	-	4	-	0.13	0.13**
SÍFILIS	62	104	479	676	33.93	48.34
BLENORRAGIA	42	37	343	236	15.81	10.99
INFECC. RESP. AGUDAS	40585	55824	308266	614750	25565.23	51474.96

Fuente: EDO PARTE TELEFONICO SUJETO A MODIFICACIONES.
*TASA ANUAL ESPERADA, AJUSTADA SEGÚN EL AÑO ANTERIOR.
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Teléfono; (53-7) 2807625 y 2553205 Fax: (53-7) 2046051 y (53-7) 2020633
Internet: **http://instituciones.sld.cu/ipk**