IATA CARGO WEBINARS

21 April 2021

Three-Part Webinar Series Webinar 3: Key learnings from the ongoing vaccine distribution effort and paving the way for the future

Welcome

Key learnings from the ongoing vaccine distribution effort and paving the way for the future

Andrea Gruber Head, Special Cargo IATA





IATA CARGO WEBINARS



This session is conducted under the Competition Law Compliance



Microphones have been muted

Please submit your questions through the **Question box** and **send to Everyone**



The webinar is being recorded and will be made available afterwards, including the PPT slides.



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Transport of Vaccines and Life Science Products by Air



Speaker biographies are available on the IATA website



Recent Economic Developments in the Air Cargo Market and the Vaccine Roll-Out

Brian Pearce Chief Economist IATA





COVID-19 Outlook for air cargo

Brian Pearce

Chief Economist

19th April 2021



Air cargo volumes back to pre-crisis levels, unlike pax Global RPKs fell to -75% vs Feb 2019, but cargo tonne km 9% higher

Cargo tonne km (CTK) and passenger km (RPK), Jan 2020 = 100



Source: IATA Economics using data from IATA Monthly Statistics. Data is adjusted for seasonality.

But big differences between major trade lanes Strongest trade lanes between Asia & N America and over M East hubs

Cargo tonne km flown by major trade lane, indexed Jan 2020=100, segment basis



Source: IATA Economics using data from IATA Monthly Statistics

'V-shape' economic recovery has driven cargo demand Global output back above pre-crisis levels but has pulled fuel costs up

Global industrial production and jet fuel prices



Source: IATA Economics using data from Refinitiv Datastream and Platts

Trade lanes reflect relative economic strength of regions Asia and N America relatively strong vs Europe. Outlook +ve for all.





Source: IATA Economics using data from Oxford Economics

Vaccine rollout brings recovery but large differences Widespread vaccination only in advanced economies by late 2021



Source: IATA Economics using forecasts from Airfinity Science Tracker https://science.airfinity.com/covid-19-science-macro as of 5/3/21

Governments have mostly kept borders closed to travel Travel restrictions tightened in January keeping international travel low

International travel stringency index weighted by population (Jan 2020-March 2021)



Source: IATA Economics analysis based on Oxford University data

Cargo faces a continuing capacity shortage Freighters highly utilized but much capacity in passenger fleet is grounded



Source: IATA Economics using data from IATA Monthly Statistics

'Preighters' have played important role on some markets More than one fifth of cargo carried by preighters on top ME trade lanes



Source: IATA Economics using data from IATA Monthly Statistics

Capacity shortage has elevated yields and revenues Slow opening of borders to travel likely to support cargo strength in 2021





Source: IATA Economics using data from IATA Monthly Statistics and CargoIS

Cargo is now one-third of the typical airline business In the past air cargo was marginal at 10-15% revenues. Now 30-35%.

Global airline industry cargo and passenger revenues, USD billion



Source: IATA Economics Economic Performance of the Airline Industry, December 2020

Cargo has kept some long-haul services cash positive Strong cargo replaced loss of high yield passengers on some markets

Estimated economics of an average B777-300 operation on different route areas in Mar-Aug 2020, (USD '000s)





Revenues

Costs

Profit

Loss

Source: IATA Economics analysis based on data from SRS, DDS, ACMG, Cargo IS, IATA Statistics, Platts

Contacts

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COVID-19 Vaccine Distribution - COVAX Status Update

Mounir Bouazar COVID-19 Vaccine Global Logistics Lead UNICEF







COVID-19 vaccine delivery update \bigcirc

21 April 2021

COVAX Gavi 🚷 unicef 🚱 World Health

ACTaccelerator

CEPI

Total doses administered per 100 population

COVAX



SOURCE: WHO COVID-19 Dashboard at https://covid19.who.int/

Note: The designations employed and the presentation of these materials do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.



ADVOCACY ACTION – UNICEF Exec. Director Statement – 6 Apr 2021

"We need speed and simplicity to remove barriers to the acquisition, manufacture and distribution of COVID-19 vaccines globally"

Three urgent actions:

- Simplify Intellectual Property Rights (IPR) through voluntary and proactive licensing by IPR holders.
 UNICEF calls on governments to build on and increase recent manufacturing partnerships and supports proactive partnership and cooperation between manufacturers.
- End vaccine nationalism. Governments should remove direct and indirect export- and importcontrol measures that block, restrict or slow down exports of COVID-19 vaccines, ingredients and supplies
- Ensure equal access to vaccine supplies. Governments that have contracted to receive more 'future doses' than required to vaccinate their entire adult populations this year, should immediately loan, release or donate most or all excess contracted doses for 2021 to COVAX. Countries with a sufficient, current supply of manufactured doses should consider donating at least 5% of their available manufactured doses right away, and commit to making further contributions on a continued, rolling basis throughout the year, scaling up their contributions in line with rising supply.



Map:

unicef limplementation Overview





The information displayed reflects the status of deliveries based logistics information in a highly dynamic context and subject to change. This visual may not display the most recent data at all points.

Data last refreshed on : 20/04/2021



Map

Table

Table:

unicef limplementation Overview

Doses allocated, through May 251,625,450	Doses Ordered, cumu 119,656,570		released for shipmer cumulative 42,777,370	nt, Doses on shipr 253,		Doses Shipped, cumulative 40,787,140	Countries and territories, doses shipped 117
Region Select all	WHO Countries and territories	Doses Allocated	Doses Shipped, cumulative	Allocated doses ^ shipped, in %	Shipment pr	rogress d, per day ●Doses Shipped, cumulative	e
Americas	Andorra	26,400	26,400	100.00%			
 Eastern Mediterranean Europe South-East Asia Western Pacific 	Dominica	28,800	28,800	100.00%	50M		
	Nauru	7,200	7,200	100.00%	doses		
	Saint Kitts and Nevis	21,600	21,600	100.00%	ler of		
	Tuvalu	4,800	4,800	100.00%	Number		
WHO countries and territories	Jordan	477,750	290,400	60.78%			
	Antigua and Barbuda	40,800	24,000	58.82%	0M	Feb 2021 Mar 2021	Apr 2021
	Tonga	43,200	24,000	55.56%	Shipment arrival		
	Albania	143,400	79,200	55.23%			
AMC countries and territories	Grenada	45,600	24,000	52.63%	Supplier Overview		
All 🗸	Saint Vincent and the Grenadines	45,600	24,000	52.63%	Doses Ordered,	cumulative ODoses released for shipment	cumulative 🛑 Doses Shipped, cumulative
	Georgia	160,020	72,450	45.28%	100M	104.33M	
/endor Name	El Salvador	417,480	181,080	43.37%	dos		
All	West Bank and Gaza	308,400	133,440	43.27%	50M		
	Republic of Moldova	233,190	86,970	37.30%			
Material Number	Bermuda	26,400	9,600	36.36%		14.36M ₁	0.31M 0.96M 0.87M
	Rwanda	947,580	342,960	36.19%	0M · · · · ·		
	Total	251,625,450	40,787,140	16.21%		Serum Life Sciences AstraZene Ltd	ca AB Pfizer Overseas LLC



The information displayed reflects the status of deliveries based logistics information in a highly dynamic context and subject to change. This visual may not display the most recent data at all points. Data last refreshed on : 20/04/2021

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Table

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Logistics industry contribution to UNICEF/COVAX efforts

Secure the necessary logistics capacity for Covid-19 vaccines as well as existing vaccine shipments

> Giving priority to Covid-19 vaccine and other vaccines and humanitarian supplies



unicef 25

Next steps and future engagement with airlines

- Tri-partite collaboration for planning preparedness activities with the COVAX logistics control tower:
- Capacity
- Services availability
- Flights information sharing
- Specialized targeted solutions
- Airlines to express interest in supporting UNICEF/PAHO through engagement on logistics preparedness or partnerships / In kind donations
- Commercial engagement will continue to be managed through our global 3PLs





Thank You

How Air Cargo Responded to the Covid-19 Vaccines Global Distribution

Jaisey Yip Cargo & Logistics Development Changi Airport





How air cargo responded to the Covid-19 vaccines global distribution



WE CONNECT PHARMA

At the beginning, there was an unprecedent level of urgency and uncertainties in the pharma world impacting logistics

- 1. Fast-track development of Covid-19 vaccines
 - 4x acceleration than any preceding vaccines
- 2. Many vaccine manufacturers in the race
 - Over 250 vaccines¹ in development
- 3. Many types of vaccines in the race
 - 10 different vaccine platforms¹

- Limited time for logistics players to strategize, invest, deploy adequate infrastructure and develop required skills and processes
- Long list of unknowns: packaging, containers (active or passive), use of dryice or not, transportation and handling conditions etc.
- Little information on manufacturing production and schedule, so no possibility to identify and prepare the trade lanes and air capacity



PHARMA WE CONNECT AERO

WE CONNECT PHARMA

Yet, the global Covid-19 vaccine distribution mission demands air cargo to deliver in the highest degree of *Speed*, *Security*, *Reliability* and *Transparency*





WE CONNECT PHARMA

The air cargo industry had a jittery start when preparing for the first Covid-19 vaccines approval



Project Sunrays, a joint initiative launched by TIACA and Pharma.Aero

 Create transparency between pharma shippers and air cargo professionals Deliver useful guidelines for the airfreight industry to get ready to handle, store, transport and deliver future Covid-19 vaccines



A joint steering group composed by Board members from TIACA and Pharma. Aero

WE CONNECT PHARMA

With information availability over time, the air cargo industry felt more prepared with Covid-19 vaccines handling and transportation



WE CONNECT PHARMA

19 vaccines

Effective distribution requires open communication and strong collaboration across the air cargo supply chain



Source: Project Sunrays Air Freight Readiness Survey

WE CONNECT PHARMA



Several air cargo communities have since established joint task forces as a way to strengthen collaboration at local level


In the task force formation, air cargo communities highlighted and underscored five key imperatives



Clear local air cargo community objectives



Equal importance with global collaboration



Recognition that the first vaccines are just the beginning



Inclusive organized structure



Build collaboration and trust



WE CONNECT PHARMA

Majority of our members, which have started handling Covid-19 vaccine shipments, are already part of an internal and local air cargo community task force



Source: Pharma.Aero's Member Survey April 2021 (based on respondents which have handled actual Covid-19 vaccine shipments)





Action plans and measures implemented by air cargo stakeholders



- Assign parking bays close to cargo terminals
- Expedited custom clearance procedures
 - Streamlined handling processes across entire air cargo community



- Security risk assessment for Covid-19 vaccine shipments
- Auxiliary police deployed for apron transportation Police escort from airport to warehouse

- Cold chain ca environment
 Unique comm
 - Cold chain capacity mapping across airport environment
 - Unique commodity code for Covid-19 vaccines and COVAX shipments
 - Conduct operational drills and test shipments
 - Institute a Covid-19-tailored SOP guideline detailing all new and existing procedures relevant to vaccine handling, followed by validation of the airport community and issuance of Covid-19 readiness label to compliant stakeholders
 - Introduction of temperature-controlled preclearance area for Covid-19 vaccines
 - New dry ice limitations based on different sublimation rates



- Pre-shipment notifications
- Visibility on availability and cost of dry-ice
- Track and trace from airport to airport, increased data metrics, piece-level tracking
- A community data-sharing solution to offer full transparency of all pharma shipments

Source: Project Sunrays Second White Paper and Pharma.Aero's Member Survey April 2021 WE CONNECT PHARMA



Some of our members have made new investments on cold chain infrastructure and capabilities









Cold Rooms

Airside Staging Area

Cool Dollies

Temperature loggers and Data-sharing Platforms

Source: Pharma.Aero's Member Survey April 2021

WE CONNECT PHARMA



Current risks and observations



- Volatile delivery schedule
- Lack of full visibility on packaging, dry ice requirements, shelf life of packaging
- Ad-hoc adjustments to flight schedules
- Collaboration amongst industry stakeholders could still improve





Following Project Sunrays, Pharma.Aero and TIACA will be jointly rolling out a regular industry newsletter



WE CONNECT PHARMA



'A Chain Is Only as Strong as Its Weakest Link'

Thank you

WE CONNECT PHARMA



Proactive Efforts in Fulfilling the Mission of Quick Vaccine Distribution

Jennifer Haigh Head of Specialty Products, Americas United Cargo





Proactive efforts in fulfilling the mission of quick vaccine distribution

Jennifer L Haigh Head of Specialty Products, Americas United Cargo





COVID-19 impact for an airline

- Worst case scenario based upon 9/11
- Passenger demand fell by almost 100%
- Many talented employees were furloughed across the industry, while led to issues with staffing and hours of operation
- Remain compliant with complex regulatory framework
- Unpredictability
- Distancing; not prepared
- Cost focus (high fixed costs)
- Built a "skeleton" schedule/network from scratch
- Increased supply chain cost





United's international service changed drastically with COVID-19 shutdowns We reduced service in late March from 5,000 flights per day to only 6 international destinations last April



Cargo keeps the supply chain moving

Ensures frontline health works have the supplies they need

Cold chain processes transport pharma, medicines and vaccines Maintains the flow of all goods to mitigate impact to commerce and trade



COVID Vaccine Readiness Task Force

Vision statement & responsibilities

- Developed an all-encompassing plan for COVID-19 vaccine air cargo transport
- Created structures & processes
- Remained fully aligned, crossdivisional effort to maintain safe operations and provide humanitarian support
- Created a strategy to ensure other life-saving flows were not affected





COVID Vaccine Readiness Task force

Started as a team withing Cargo, but quickly expanded across several teams at United



A cohesive cross-functional effort to ensure safe and timely carriage of vaccines

- CRITICAL PATH increase of dry ice for use on cargo charters in Q42020
 - Engineering reports
 - Inter-airline discussions
 - Policies and procedure reviews
 - Dangerous Goods review
 - Regulator discussions
 - Focused on specific aircraft type
 - Collaboration between shipper and packaging company is key





2 SHCs available for COVID-19 related shipments

- COVID-19 SHC codes were created to ensure visibility across all United divisions
 - Cargo, Airport Ops, Flight Ops, Contact Centers...a joint team effort!
- SHC codes give shipments higher boarding priority

SHC Code	Type of Shipment	Boarding Priority
CVD	COVID-19 vaccines	Highest
CV2	COVID-19 support materials such as test kits, PPE, etc.	High



Remember: CV2 and traditional pharma shipments are important too!

While all the attention is focused on CVD vaccines now, CV2 shipments are also critically important to fighting the pandemic and saving lives. World Africa Americas Asia Australia China Europe India Middle East United Kingdom

■ LIVE TV Edition ∨

Brazil plunges into crisis as a second wave and deadly new variant overwhelm hospitals

Pharma

Eli Lilly COVID-19 antibody combo aces study, cutting hospitalizations and deaths by a whopping 87%

- While vaccinations are increasing in the US, most people in the rest of the world will not have any access to COVID vaccines until the summer or fall
- Until the vaccines come, they must also fight new versions of COVID such as the Brazil variant, which is more deadly and contagious
- CV2 shipments are medicines that can fight variants and save lives! Treat them with care.

Antibody 'cocktails' effective against SARS-CoV-2 variants



Looking forward



Key lessons learned

- Cooperation within the entire airline is key.
- Be(come) an agile and flexible organization.
- We are not all "in the same boat", but we are all in the same storm.
- Airlines & forwarders seem to be prepared for vaccine movements
- Discussion between the airlines, forwarders and pharma companies are key
- Every vaccine shipment keep on require a lot of attention and dedication.
- Communication with all stakeholders is crucial (GHA's, airports and regulators play a big role for the entire industry)
- The airline industry will bounce back! (Although it will be a long & painful process)





Keeping the global supply chain moving Since March 19, 2020, United has moved...



937M+ Ibs. of cargo moved on both passenger and cargo-only flights



11,900+ cargo-only flights operated worldwide 146M+ Ibs. of critical medical shipments moved overall

> 628M+ Ibs. of cargo moved on cargo-only flights alone



4M+ lbs. of military shipments moved overall The airline industry will only return to "normal" once we reach herd immunity. We have an obligation to support this effort as quickly and efficiently as possible!

As an industry, we must work together to keep these vaccines moving and do our part to bring this crisis to an end.





Thank you!



Panel and Q&A

Please use the Q&A box and send to "Everyone"



Andrea Gruber Head, Special Cargo Moderator

Manu JACOBS

Managing Director Specialty Products, United Cargo

Jaisey YIP Cargo & Logistics Development, Changi Airport

Mounir BOUAZAR COVID-19 Vaccine Global Logistics Lead, UNICEF

Eddy WEYGAERTS Transportation Manager, **Pfizer**

Terence SELL Global Pharma Product Manager, Air Logistics, **K&N**



Wrap up & Closing Remarks







Lessons Learned since the first vaccine roll out



- Capacity
- Regulatory
- Infrastructure
- Public- Private Partnership
- Communication
- Collaboration
- Sustainability
- Focus on quality
- Security



Industry Call To Action

- Sharing information Global Collaboration
 - Plan Prepare Perform
 - Engage and communicate with partners/suppliers on scale up projects and initiatives to support COVID-19 vaccines distribution or humanitarian aid
 - Accessible on <u>iata.org/cargo</u>
- Capabilities & infrastructure industry platform – ONE Source
 - Visibility of facilities with validated information
 - Demonstrate competencies in handling expertise
 - Showcase adherence to quality standards
 - OneSource accessible <u>here</u>



Guidance for Vaccine and Pharmaceutical Logistics and Distribution Set of considerations and awareness on large scale handlin transport and distribution of vaccines, pharmaceutical. If e science

Edition 4 – 30 March 2021





Industry Readiness and Preparedness





Additional Outreach & Resources

THREE-PART WEBINAR SERIES : TRANSPORT OF VACCINES AND LIFE SCIENCE PRODUCTS BY AIR CARGO

Webinar 1: Readiness for vaccine and life science products transportation - 21 October 2020

Webinar 2: Global distribution and the flow of vaccines throughout the supply chain - 24 November 2020

Webinar 3: Key learnings in the aftermath of the vaccine distribution effort and paving the way for the future – 21 April 2021

VISIT iata.org/events/webinars/

Action Cargo: COVID-19 💦 🤞 🖶



Enabling global trade

Airlines transport over 52 million metric tons of goods a year, representing more than 35% of global trade by value but less than 1% of world trade by volume. That is equivalent to \$6.8 trillion worth of goods annually, or \$18.6 billion worth of goods every day. Find out more interesting air cargo facts (pdf)

VISIT iata.org/cargo

Transportation of COVID-19 Vaccine



Air cargo plays a key role in the distribution of vaccines through well-established temperature-sensitive distribution systems, using cutting-edge technology and procedures.

This capability will prove crucial to the quick and efficient transport of COVID-19 vaccines once available. This will naturally require careful planning by every segment in the entire cargo supply chain to ensure full preparedness when vaccines for COVID-19 are approved and ready for distribution.

Supporting the industry

IATA offers solutions and services to support cold chain capacity and resources for the anticipated scale of transporting and distributing COVID-19 vaccines.

CERTIFICATION PUBLICATION TRAINING WEBINARS ONESOURCE CONTACT US

VISIT iata.org/vaccine-transport

Thank you

- Please visit iata.org/vaccine-transport to register for the upcoming webinars
- Please visit iata.org/cargo for all COVID-19 resources

For further information, contact us at cargo@iata.org

