

Croatian experience with launching COVID-19 vaccination

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Croatian Institute of Public Health

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Presentation outline

- Date of launching vaccination campaign
- Priority groups vaccinated
- Vaccine delivery system
- Immunization recording and reporting modality
- Cold chain and vaccine management
- Cumulative number of doses administered
- Monitoring of AEFIs
- Challenges experienced so far and found solutions
- Advice to countries who plan vaccination in nearest future

Date of launching vaccination campaign

- 27 December 2020, start of vaccination campaign at EU level – 9750 doses per country. A lot of media coverage



U Hrvatskoj počelo cijepljenje protiv COVID-19:
Prioritet su najugroženije i najizloženije osobe

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07. SIEČNJA 2021. U 11:33 | 74 KOMENTARA | 8500 PRIKAZA



Cijepili se hrvatski ministri i poslali poruku povjerenja u znanost i medicinu



Priority groups vaccinated

- 1. priority: LTCF residents (N=31.459) and staff (N=12.000), HCWs (N=73.435)
- 2. priority: Senior citizens
 - 80+ (N=218.935)
 - 75-79 (N=132.833)
 - 70-74 (N=195.664)
 - 65-69 (N=214.499)
- 3. priority: persons with high-risk chronic illnesses (N=455.530)
- 4. everyone else

Priority groups vaccinated

- **1. priority: LTCF residents (N=31.459) and staff (N=12.000), HCWs (N=73.435)**
- **+ displaced persons and relief workers due to earthquake in affected county (N~50.000)**
- 2. priority: Senior citizens
 - 80+ (N=218.935)
 - 75-79 (N=132.833)
 - 70-74 (N=195.664)
 - 65-69 (N=214.499)
- 3. priority: persons with high-risk chronic illnesses (N=455.530)
- 4. everyone else

Vaccine delivery system

- LTCF residents and staff - in LTCFs by nurses and doctors responsible for the LTCF
- HCWs – at workplace (hospitals, community health centers) by themselves
- Senior citizens – at GPs, at vaccination points, or at home by mobile teams (pharmacies? under discussion)
- Persons with high-risk chronic illnesses – at GPs, at vaccination points, or at home by mobile teams (some already being vaccinated in healthcare facilities – transplant candidates, hemodialysis patients) (pharmacies? under discussion)
- Everyone else - at GPs, at vaccination points, or at workplace by occupational medicine specialists (pharmacies? under discussion)

Vaccine delivery system

- **LTCF residents and staff - in LTCFs by nurses and doctors responsible for the LTCF**
- **HCWs – at workplace (hospitals, community health centers) by themselves**
- **Relief workers and residents, earthquake – mobile teams**
- Senior citizens – at GPs, at vaccination points, or at home by mobile teams (pharmacies? under discussion)
- Persons with high-risk chronic illnesses – at GPs, at vaccination points, or at home by mobile teams (**some already being vaccinated in healthcare facilities – transplant candidates, hemodialysis patients**) (pharmacies? under discussion)
- Everyone else - at GPs, at vaccination points, or at workplace by occupational medicine specialists (pharmacies? under discussion)

Immunization recording and reporting – to national level

- Recording:
 - Existing IT solutions in GPs, hospitals, Institute of Public Health
 - Centralized electronic immunization registry, not tested/piloted properly, urgently implemented

- Reporting:
 - Telephone and email on daily basis - aggregate reports in excel tables
 - Centralized electronic immunization registry – completeness problems: on 15 January morning 30.617 entries, at the same time 45.710 vaccinations reported in aggregate tables

Immunization recording and reporting – to national level

- To EMA – biweekly
 - By age group, gender, pregnancy status
- To ECDC – twice per week
 - By age group, HCWs, LTCFs
- To WHO? – please, try to fit into one of the already existing reporting requirements

- Anything more detailed than cumulative numbers can be provided only by the electronic immunization registry – completeness?

Cold chain and vaccine management

- Usual CCE in Croatia does not include -70 and -20 storage and transport capacities
- For Pfizer vaccine, -70 storage identified at national level: scientific institutes, one large hospital, microbiology dept at CIPH – subnational level and service provider level have five days to use the issued vaccine – frequent distributions, twice per week to all subnational stores who don't have -70 freezers.
- 9/20 subnational stores quickly purchased -70 freezers
- Vaccine transported by Pfizer directly to vaccine stores with -70 capacity
- From -70 storage, vaccine transported to lower levels in vaccine carriers and refrigerated up to five days
- +2 to +8 storage capacity not a problem, due to small volumes - multidose vials. Storage of needles, syringes and diluents a significant problem – stored at national reserves storage. Real bundling impossible.

Cold chain and vaccine management

- For Moderna vaccine, CIPH purchased -20 freezers for storage at central level (installed at outsourced national vaccine store)
- Distributed by refrigerated vehicles at -20 (owned by the outsourced national vaccine store)
- At subnational level, some -20 storage capacity exists (used for ice-packs in vaccine stores, in microbiology depts, hospitals....), sufficient for the small vaccine amounts we receive. Later, as amounts increase, two options: to purchase -20 freezers; or to order the amount of vaccine which can be used within 30 days (the vaccine can be stored at refrigerator temperature for 30 days)
- +2 to +8 storage capacity not a problem, due to small volumes - multidose vials. Storage of needles and syringes a significant problem – stored at national reserves storage. Real bundling impossible.

Cold chain and vaccine management

- Guidelines for vaccine management issued on a daily basis in different forms (materials provided by vaccine producers, PILs, SPCs, documents published by the NIPH, by the NRA, by the MoH), sent to all HCWs by different channels, published on web sites, communicated through the media...
- Only one vaccination error recorded so far (0,3 ml of undiluted Pfizer vaccine administered), the recipient is fine.
- When more different vaccines become available (AZ, J&J, Curevac...) and more vaccination providers get involved, possibility of vaccination errors and cold chain breaches will increase.

Cumulative number of doses administered

- As of Saturday evening, 17 January
- 52.650 doses of Pfizer vaccine received
- 3.600 doses of Moderna vaccine received
- 44.607 (84,7%) doses of Pfizer vaccine administered (first dose)
- 1.299 (36,1%) doses of Moderna vaccine administered (first dose)
(distributed three days ago)

Cumulative number of doses administered

- By priority groups (coverage %)
- HCWs: 22.016 (28,1%)
- LTCF residents and staff: (44,4%)
- Relief workers and residents, earthquake area: 3.749 (7,5%)
- Senior citizens not in LTCFs, persons with chronic conditions – not their turn yet – vaccination probably will begin in february

Monitoring of AEFIs

- Reporting of AEFIs to the NRA and/or CIPH mandatory for HCWs.
- Anyone can report to the NRA online, via email or my mail.

- As of Saturday, 110 reports received.
- 10 allergic reactions, one anaphylactic reaction.
- Three reports of facial palsy.

- Remaining reports are expected reactions.

- One death occurred in a LTCF resident day after vaccination, unrelated to vaccination.

Challenges experienced so far and found solutions

- Difficult to find isotonic saline in small packing on the market
 - Short time to procure needles and syringes
 - Short time to procure -70 and -20 freezers
 - Lack of dry storage
 - Unreliable information on allocations by producers
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- Solution for isotonic saline – procurement from abroad
 - Solution for lack of freezers – frequent distributions
 - Solution for dry storage volume – outsourcing storage to national reserves and use of civil protection services for transport of vaccines and consumables, distribution directly from the vendor to subnational level

Advice to countries who plan vaccination in nearest future

- Prepare additional CCE, ensure support from other sectors for transportation of vaccines and consumables
- Make sure to procure consumables and anti-shock treatment ASAP, ensure dry storage
- Ensure efficient recording and reporting of immunization, ideally a well functioning electronic immunization registry
- Ensure efficient AEFI reporting system - Prepare for communicating AEFIs – know the background rates of health events (especially deaths by age group) in order to know how often to expect temporally related events

