Centre for Disease
Prevention and Control
Republic of Latvia

Surveillance of influenza and other acute respiratory infections of Latvia

Infectious Diseases Surveillance and Immunisation Unit
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ECDC meeting 12-14 June 2024

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Legislative requirements

- Surveillance and control of influenza are based on the Cabinet Regulations No 948 "Regulations Regarding Influenza Counter-epidemic Measures" adopted 21 November 2006*
- The Regulation regulates the following main areas
  - Monitoring
  - Virological investigation of ARI patients
  - Preparedness and response plans in health care institutions
- The responsibility for monitoring acute respiratory infections is assigned to the Center for Disease Prevention and Control of Latvia

* https://likumi.lv/ta/id/148626-noteikumi-par-gripas-pretepidemijas-pasakumiem

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Centre for Disease Prevention and Control of Latvia (CDPC)

- CDPC is an institution under the supervision of the Ministry of Health, the purpose of which is to strengthen the Latvian public health system, prevent diseases, including infectious diseases
- Functions of CDPC in the field of communicable diseases:
  - Case and outbreak registration and investigation
  - Organization of prevention and control measures
  - Surveillance, monitoring and data analysis
  - Threat detection, preparedness and response
  - Oversight of the immunization program
  - Recommendations, consultations, trainings
  - Education, health promotion
  - International cooperation (WHO, ECDC)
- CDPC has national and local (8) units

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Information sources for monitoring

Outpatient visits: primary health care outpatient facilities [42 primary health care physicians, 3,8% of population in monitoring cities]

Hospitalizations: network of hospitals, electronic reporting system SAIRIS [10 regional hospitals]

Virology data: National Reference Laboratory (RAKUS LIC)

Deaths associated with influenza:

- Immediate reporting [Any medical facility]
- National death database

Attendance at educational institutions: schools [30] and preschool institutions [33]

Immunization coverage: vaccination register (e-health)

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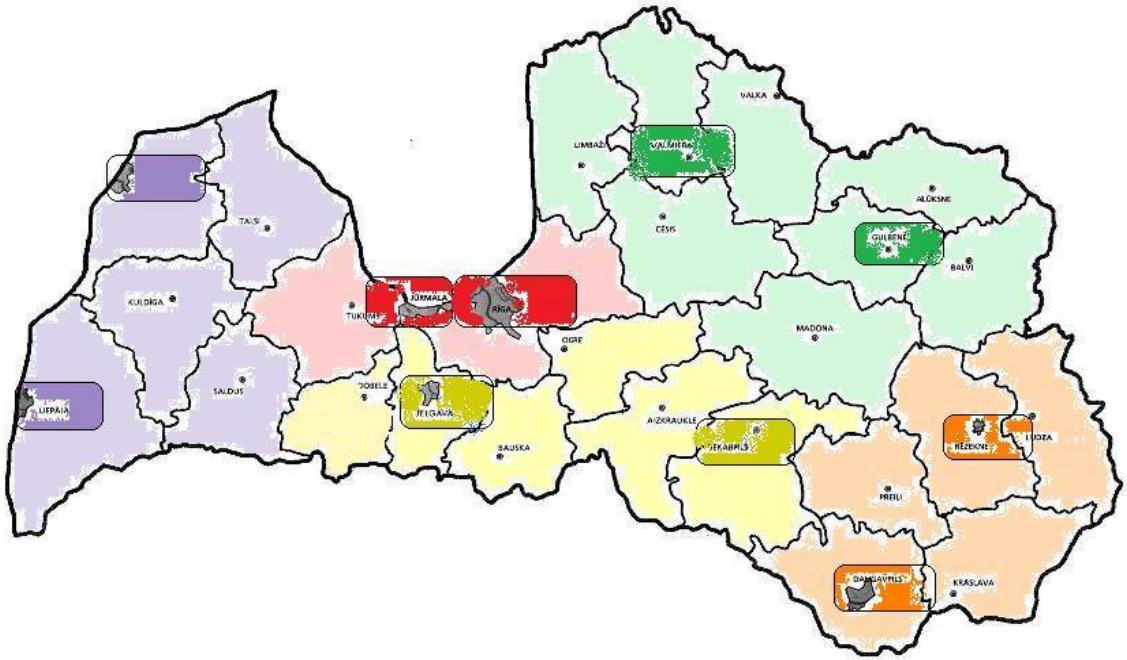
Time and geographical coverage of the monitoring

- Every year from week 40 (end of October) till week 20 (end of May)
- 10 biggest cities of Latvia: Daugavpils, Gulbene District, Jelgava, Jekabpils District, Jurmala, Liepaja, Rezekne, Riga, Valmiera District, Ventspils.



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Outpatient visits (1)

Monitoring indicator		Age									
		0 - 4		5 - 14		15 - 64		65 un >		Total	
A	B	abs.	int.	abs.	int	abs.	int	abs.	int	abs.	int
Number of visits to the doctor, incl.	1	x	x	x	x	x	x	x	x	0	#DIV/0!
ARI	2	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!
Influenza	3	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!
Covid-19	4	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	
pneumonia	5	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!
Number of stationed, incl. :	6	x	x	x	x	x	x	x	x	0	x
Influenza	7	0	x	0	x	0	x	0	x	0	x
pneumonia caused by	8	0	x	0	x	0	x	0	x	0	x
Covid - 19	9	0		0		0		0		0	
Number of children in schools involved in monitoring	10	x	x	x	x	x	x	x	x	19381	x
of them attended on Thursday	11	x	x	x	x	x	x	x	x	0	0,0
Number of children in preschool institutions involved in monitoring	12	x	x	x	x	x	x	x	x	5678	x
of them attended on Thursday	13	x	x	x	x	x	x	x	x	0	0,0

- Regions enter data into Power Bi
- Data collected about 10 cities in total

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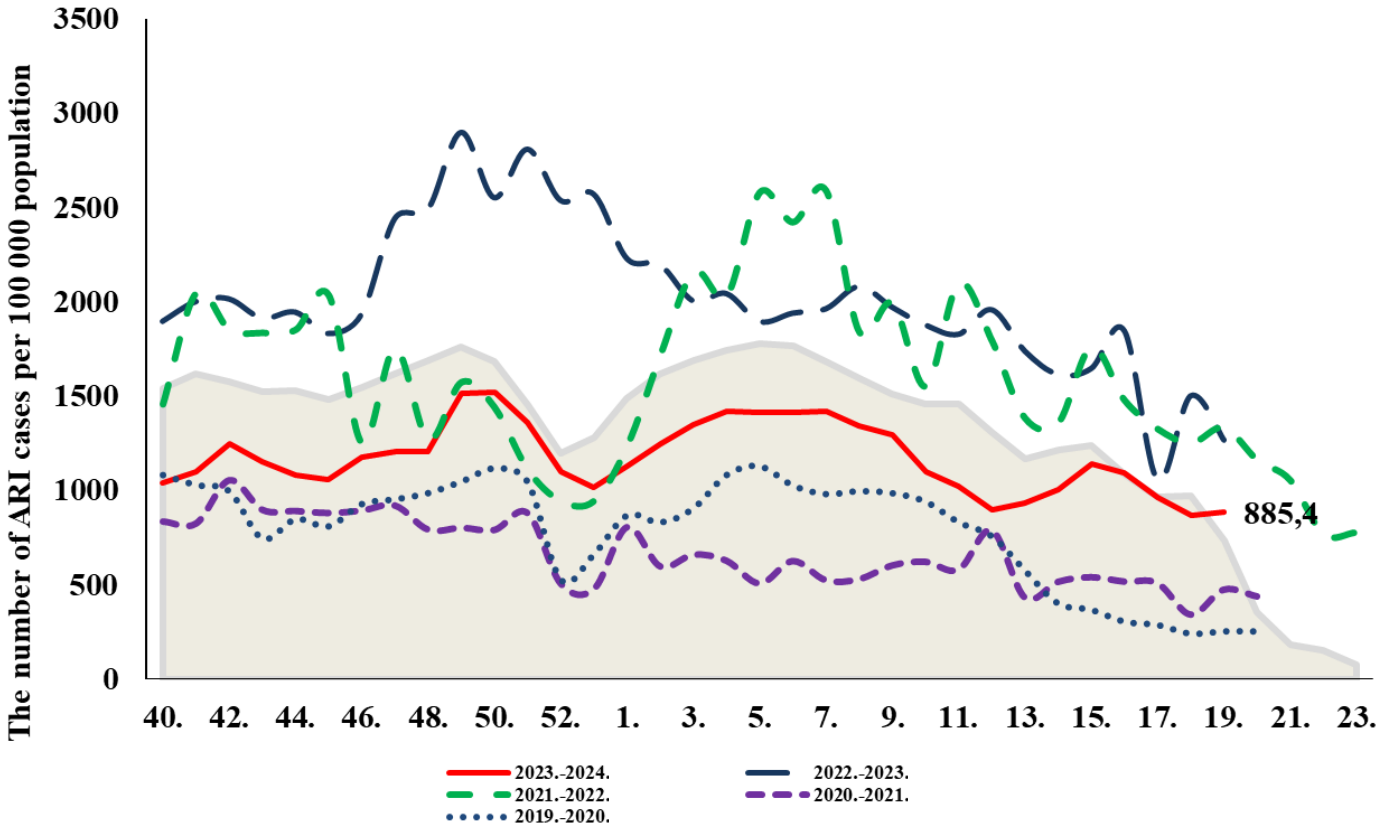
Outpatient visits (2)



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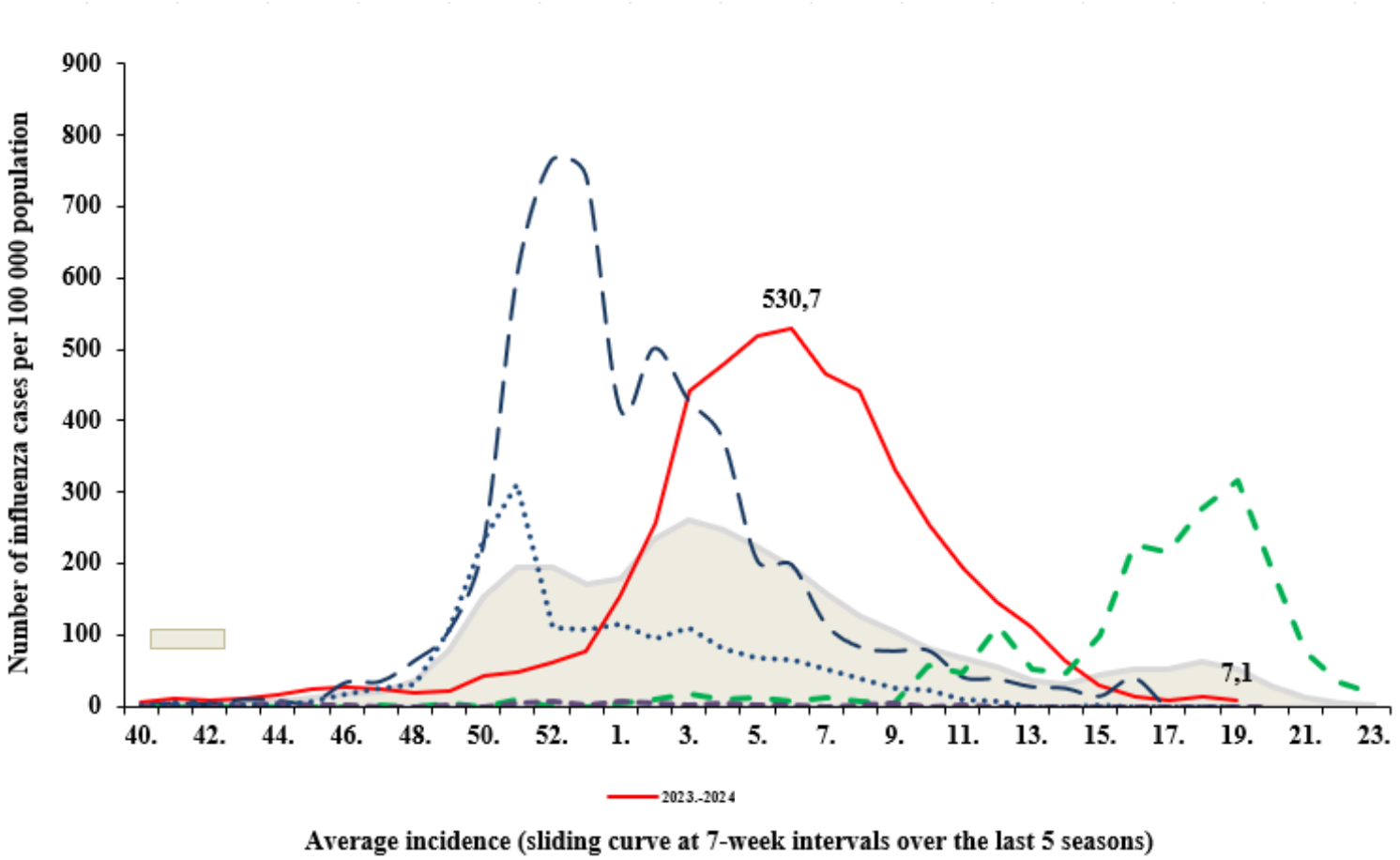
Outpatient visits (3)



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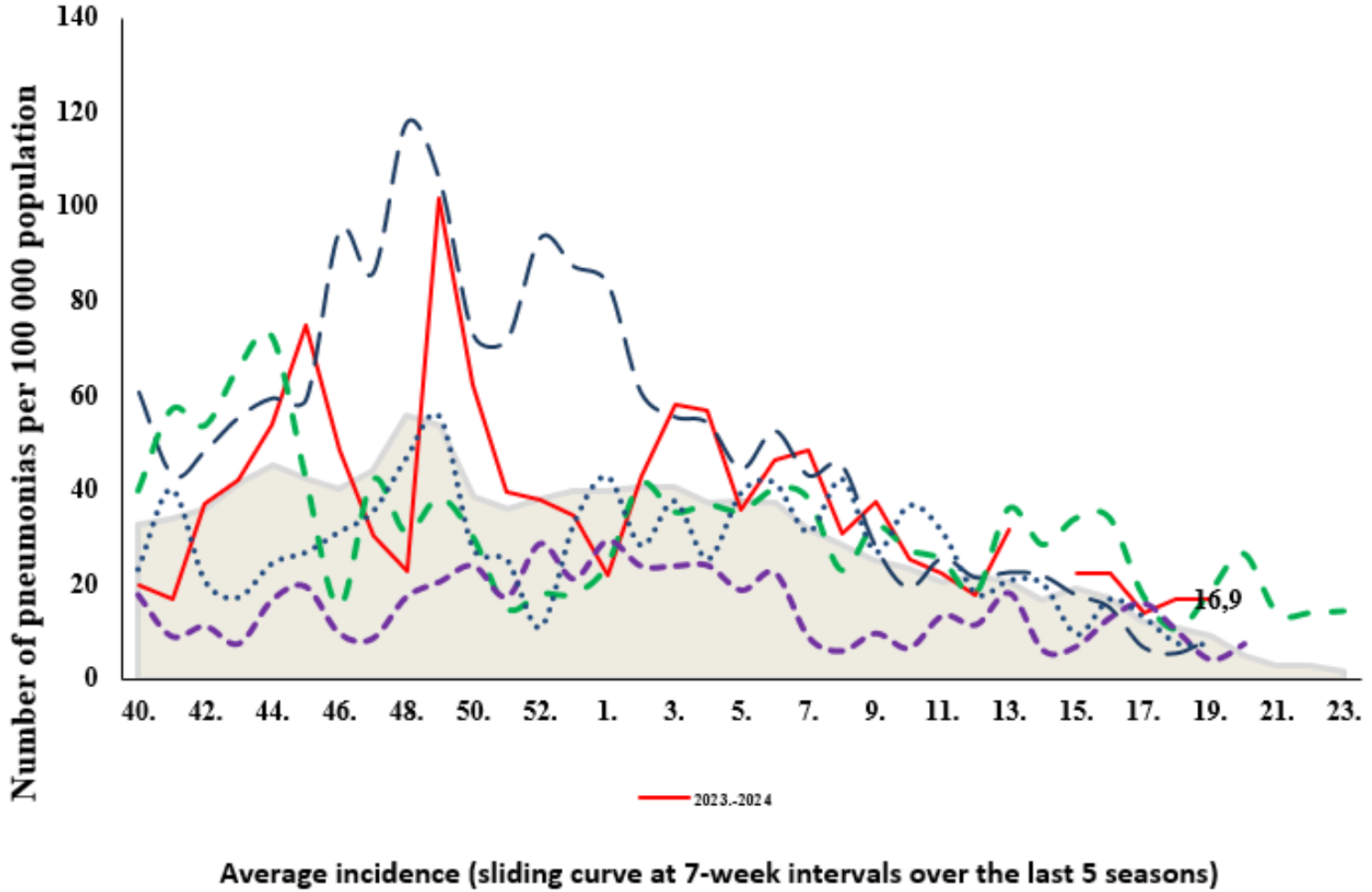
Outpatient visits (4)



Average incidence (sliding curve at 7-week intervals over the last 5 seasons)

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Hospitalizations (1)

SAIRIS - Resource information system of inpatient treatment facilities;

- Total hospitalized patients (during the previous week) by age groups;
- Total hospitalized ARI patients (during the previous week) by age groups;
- SARI patients hospitalized in ICU (during the previous week) by age groups;
- Deaths from ARI;
- Tested ARI patients for influenza, SARS-CoV-2, RSV by age groups;
- Testing for confirmed influenza in ARI patients (all age groups) - Influenza A untyped, Influenza B (lineage not established)

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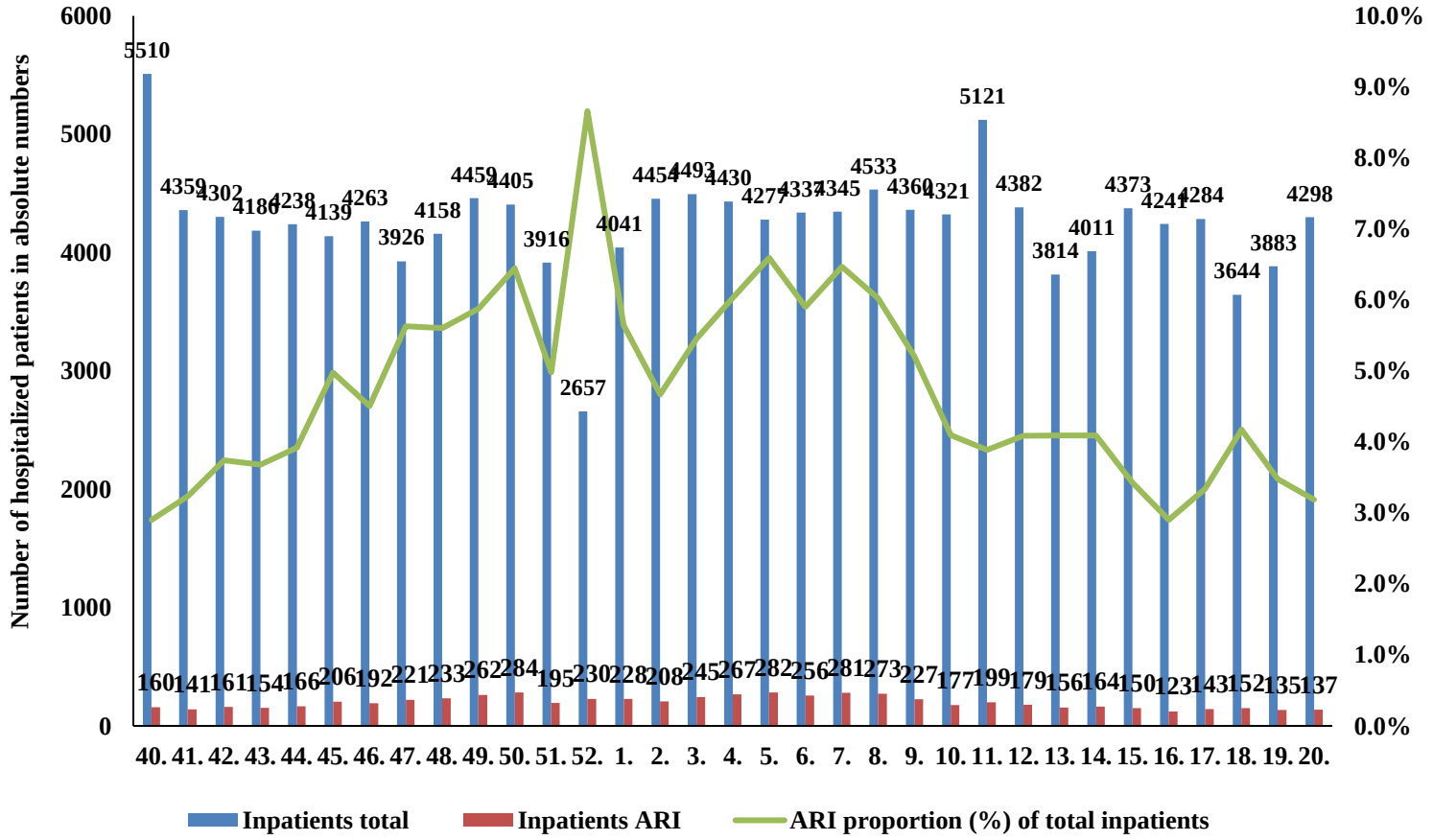
Hospitalizations (2)



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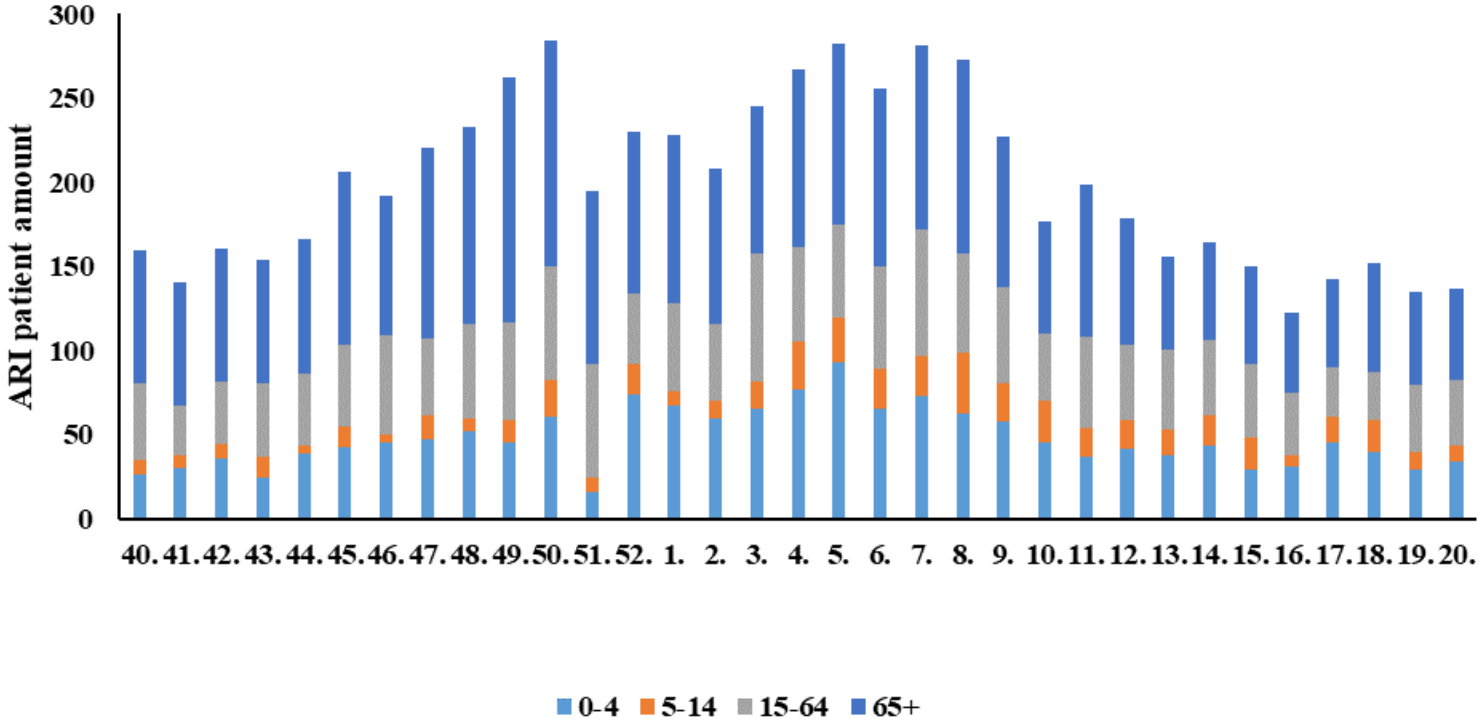
Hospitalizations (3)



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Virology data (1)

- Reference laboratory review of investigations relevant to epidemiological surveillance and early warning.

- RNA of influenza A viruses, RNA of influenza B viruses, Respiratory syncytial virus RNA/Ag, Parainfluenza viruses, Adenoviruses, Bocaviruses, Human metapneumovirus, enteroviruses, coronoviruses, rhinoviruses;

- Typing of influenza viruses;

- Mycoplasma pneumoniae, Streptococcus pneumoniae, Haemophilius influenzae, Chlamydia pneumoniae.

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Deaths associated with influenza (1)

- Reporting form

2.pielikums
Ministru kabineta
2006.gada 21.novembra
noteikumiem Nr.948

(Pielikums MK 09.08.2011. noteikumu Nr.621 redakcijā)

Paziņojums par pacienta nāvi, kuram diagnosticēta gripa vai ir pamatotas aizdomas par inficēšanos ar gripas vīrusu

Ārstniecības iestādes nosaukums _____
Kods ☐☐☐☐☐☐☐☐
_____ ☐☐☐☐☐☐☐
(ārsta vārds, uzvārds, tālruņa numurs)

1. Pacienta vārds_____ uzvārds_____
2. Personas kods ☐☐☐☐☐-☐☐☐☐
3.Dzimums:
☐ sieviete
☐ vīrietis
4. Vecums ☐☐ (gadi); bērniem līdz 2 gadu vecumam ☐☐ (mēneši)
5. Faktiskā dzīvesvieta _____
6. Deklarētā dzīvesvieta _____
7. Saslimšanas datums ☐☐. ☐☐. ☐☐☐☐.
(dd/mm/gggg)
8. Vēršanās pēc medicīniskās palīdzības saistībā ar saslimšanu ☐☐. ☐☐. ☐☐☐☐.
(dd/mm/gggg)
8.1. pacients vērsās:
☐ pie ģimenes ārsta
☐ neatliekamajā medicīniskajā palīdzībā
☐ stacionārā iestādē
9. Stacionēšanās datums ☐☐. ☐☐. ☐☐☐☐.
(dd/mm/gggg)
9.1. stacionārās iestādes nosaukums _____
9.2. diagnoze, iestājoties stacionārā _____
10. Nāves iestāšanās datums ☐☐. ☐☐. ☐☐☐☐.
(dd/mm/gggg)
11. Paraugu ņemšanas datums laboratoriskai izmeklēšanai ☐☐. ☐☐. ☐☐☐☐.
(dd/mm/gggg)
11.1. testēšanas rezultāts _____
12. Blakus slimības:
☐ nav
☐ nav zināms
☐ ir (precizēt):

☐ sirds asinsvadu slimības _____
☐ elpošanas ceļu slimības _____
☐ cukura diabēts _____
☐ onkoloģiskas slimības _____
☐ imūnsupresija _____
☐ hroniskas aknu, nieru slimības _____
☐ nervu sistēmas slimības _____
☐ grūtniecība (nedēļas) _____
☐ adipozitāte

☐ cita _____
13. Riska faktori:
☐ smēķēšana
☐ alkohola lietošana
☐ fiziska vai psihiska pārslodze
14. Pretvīrusu zāļu lietošana:
☐ jā
☐ nē
☐ nav zināms
14.1. zāļu nosaukums _____
14.2. zāļu lietošanas uzsākšanas datums ☐☐. ☐☐. ☐☐☐☐.
(dd/mm/gggg)
15. Vakcinācijas statuss:
☐ vakcinēts pret gripu šajā sezonā
☐ nav vakcinēts
☐ nav zināms
16. Izsniegtās medicīniskās apliecības par nāves cēloni numurs _____
17. Papildu informācija _____

20__ .gada _____ Ārsts _____
(aizpildīšanas datums*) (paraksts, zīmogs*)

Piezīme. * Dokumenta rekvizītus "paraksts", "datums" un "zīmogs" neaizpilda, ja elektroniskais dokuments sagatavots atbilstoši normatīvajiem aktiem par elektronisko dokumentu noformēšanu.

https://www.spkc.gov.lv/lv/zinosanai-par-infekcijas-slimibu-gadijumiem

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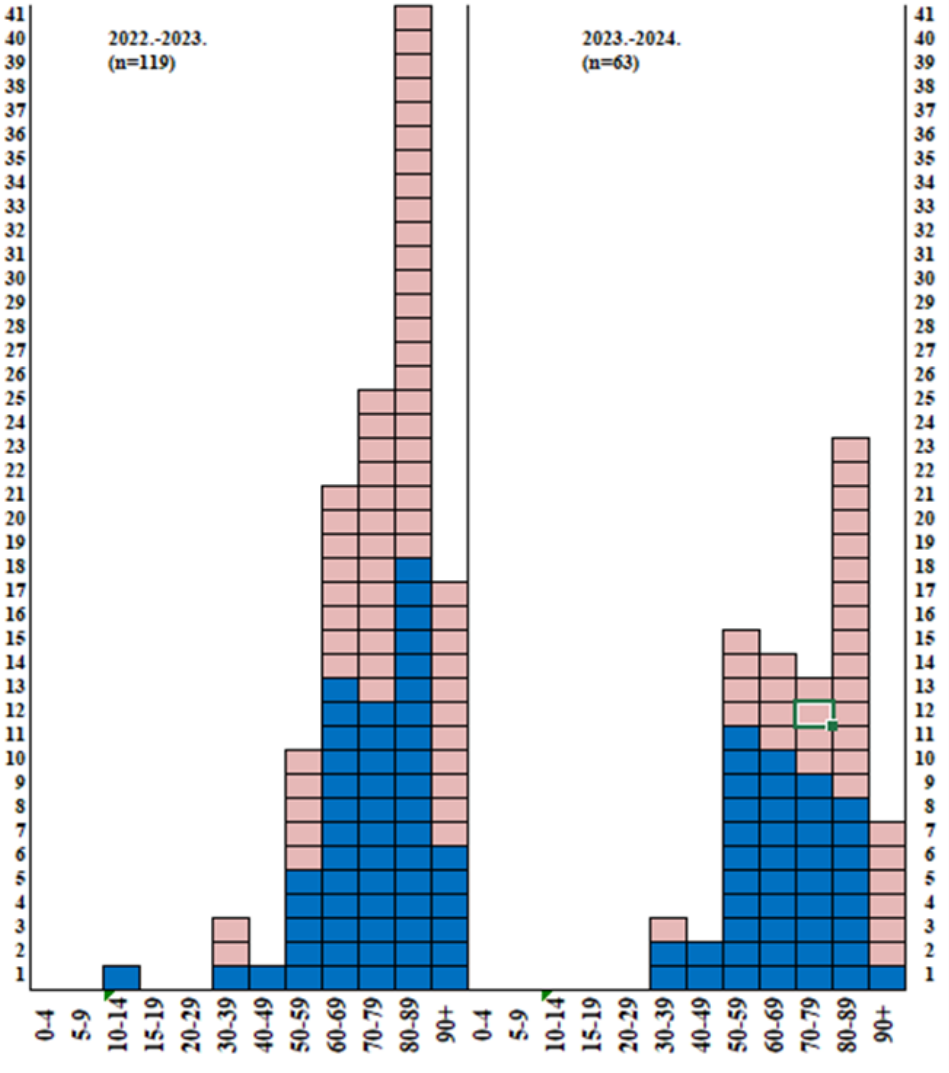
Deaths associated with influenza (2)



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Attendance at educational institutions

- 10 cities
- Every week, epidemiologists receive attendance data from educational institutions

Visiting general education institutions during the 2023-2024 epidemic season											
Monitoring cities / weeks	Percentage of visits from the number of registered students (%)										
	Daugavpils	Gulbenes novads	Jelgava	Jēkabpils	Jūrmala	Liepāja	Rēzekne	Rīga	Valmiera	Ventspils	Average
01.	Holidays										
02.	88,3	92,8	97,9	86,1	89,2	90,3	99,0	85,8	88,8	93,0	**89,2**
03.	87,7	83,3	98,2	87,7	87,1	87,7	88,2	85,4	92,1	88,5	**87,3**
04.	87,2	82,9	87,6	89,7	82,4	82,5	80,1	84,2	94,1	87,6	**85,8**
05.	85,0	88,6	82,6	87,9	82,9	82,8	74,9	83,1	82,5	85,3	**84,3**
06.	74,9	90,7	92,5	72,4	85,9	85,2	76,7	79,3	83,7	86,1	**81,4**
07.	84,2	88,2	94,8	97,5	83,3	82,8	85,3	80,1	74,0	89,8	**85,2**
08.	87,4	88,2	91,1	85,1	84,5	82,5	83,0	83,3	93,7	85,7	**85,4**
09.	88,1	88,2	91,1	85,1	86,9	85,1	77,9	84,6	91,3	83,4	**85,5**
10.	85,4	88,8	95,6	88,1	87,1	87,9	81,8	83,2	85,5	87,8	**86,0**
11.	Holidays										
12.	91,1	89,9	98,4	94,1	89,5	90,6	84,5	83,0	78,0	90,9	**88,1**
13.	88,2	87,7	96,3	91,8	88,5	89,0	83,3	86,1	91,4	90,3	**88,5**
14.	89,0	89,7	92,5	93,9	90,3	87,5	86,5	79,1	85,1	89,3	**86,1**
15.	89,4	89,9	97,6	93,7	91,8	87,1	87,2	86,0	94,9	89,5	**89,1**
16.	89,9	91,6	98,4	93,9	93,1	89,4	85,7	73,2	90,4	89,0	**84,9**
17.	91,2	89,0	97,2	94,5	90,5	90,2	79,9	87,6	91,6	90,2	**89,8**
18.	92,7	88,5	98,4	95,5	91,4	91,6	80,3	85,3	86,0	91,9	**89,6**
19.	92,3	93,2	97,6	96,1	90,4	91,5	83,0	89,3	96,5	93,5	**91,8**
20.	93,3	93,7	95,3	93,2	66,1	94,0	88,2	85,1	92,1	94,6	**89,2**
Compared to the previous week (±)	***1,0***	***0,5***	***-2,3***	***-2,9***	***-24,2***	***2,5***	***5,2***	***-4,2***	***-4,4***	***1,1***	***-2,7***

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Immunization coverage

- In the autumn/winter season of 2023-2024, 94% of seniors (389 persons) who were treated in hospitals with a basic diagnosis of seasonal flu did not receive the seasonal flu vaccination

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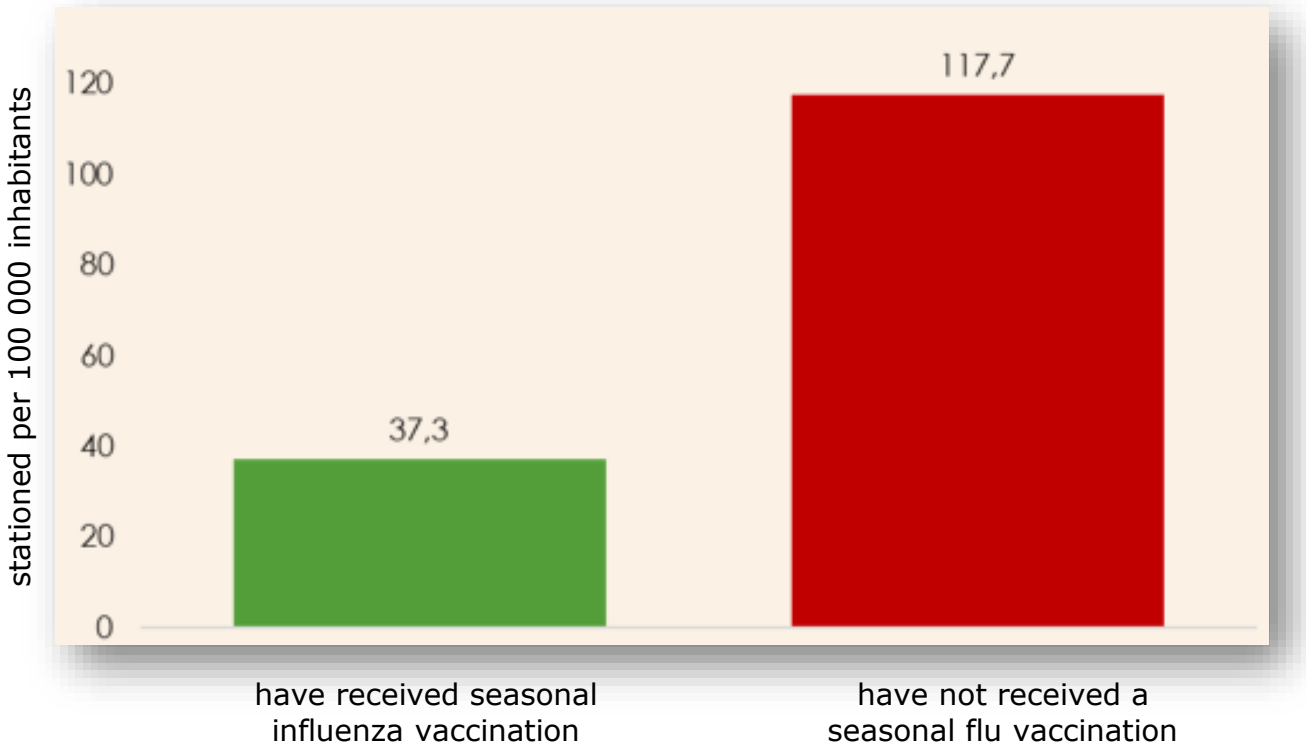
Immunization coverage

- In the 2023-2024 epidemic season, the risk of hospitalization due to influenza was 3.2 times higher for seniors who had not received the seasonal flu vaccination



Reporting and feedback

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https://www.spkc.gov.lv/lv/parskati-par-akutu-augsejo-elpcelu-infekciju-gripas-un-covid-19-izplatibu

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Challenges

- Lack of resources to support monitoring to
  - Motivate GPs to participate in sentinel surveillance: reporting data and collecting samples
    - It is difficult to involve GPs in monitoring
  - Ensure virological monitoring in the off-season
- Logistical problems of transporting samples at the National Reference Laboratory
- The need for further digitalization and integration with other databases

We would appreciate an in-depth assessment of the monitoring in Latvia and recommendations from an ECDC expert

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Thank you for attention!