



Organización
Panamericana
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Organización
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OFICINA REGIONAL PARA LAS Américas

SARInet

Red de Infecciones Respiratorias Agudas Graves

Selected indicators of Influenza Surveillance for Severity Assesment. Chile 2013-2014

SARInet

Departamento Epidemiología
DIPLAS- Subsecretaría de Salud Pública.
MINSAL

Instituto de Salud Pública



FLU and ORV surveillance indicators based on public health criteria

– Transmission

- ILI primary health care at public sector (APS)
 - Geographical distribution based, intensity
- Started in 2003, all year round weekly data
Rates and proportions

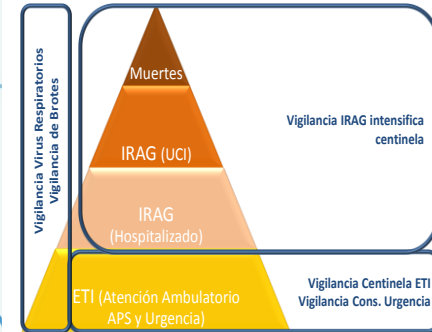
– Severity

- SARI admissions
- SARI case positives for Respiratory Viruses including influenza
- % of hospitalization,
- ICU admissions
- Letality rates

Started in 2011, complete data since 2012 all year round

– Impact

May be SARI ICU length of stay at hospitals.





Surveillance systems

•ILI

Atencion Primaria :

- 43 sentinel sites (APS) in the 15 regions of the country, 11% of population of the public sector under surveillance
- Case definition
- 28 of them: sample collection

Registration of ILI attentions at emergency rooms in hospitals

- All public hospitals of the 15 regions of the country:
- Syndromic surveillance No Lab confirmation:
 - Influenza (J09-J11)
 - Pneumonia (J12-J18)
- Age group analysis
- Since 2009

•SARI

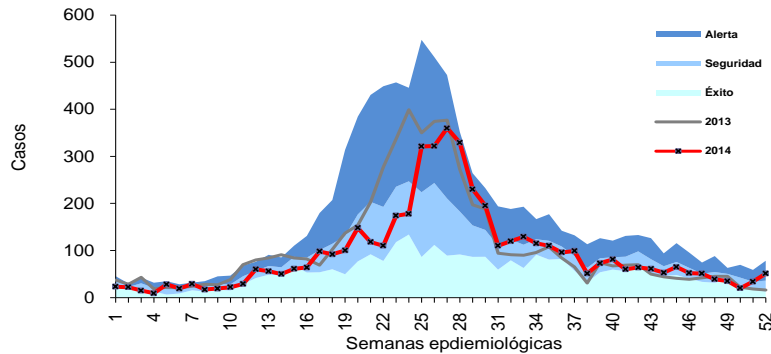
- 6 hospitals in 5 regions
- Case definition
- All cases tested for Respiratory Viruses



ILI in APS Transmission. Chile 2014

Gráfico 1

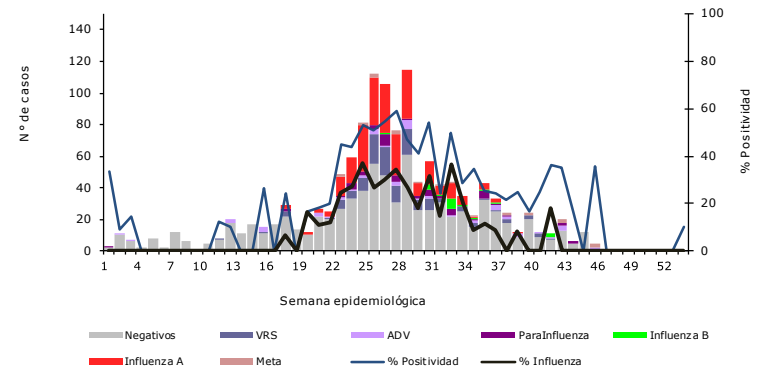
Canal endémico de Enfermedad Tipo Influenza según semana epidemiológica, 2007-2013*. Chile, 2014 (SE 1- 53)



Fuente: Vigilancia Centinela ETI. EPIDEMIOLOGIA-MINSAL * Se excluye año 2009-2010 por corresponder a años epidémicos. SE 52 incluye información de SE 53

INTENSITY NOTIFICATION ILI/100.000 HAB.
LOW: < 14,6
MODERATE 14,6- 31,4
HIGH 31,5-103,4
VERY HIGH >130,4
Source: Depto Epidemiologia. MINSAL. Based in quartiles

Vigilancia Centinela Enfermedad Tipo Influenza. Casos estudiados por Inmunofluorescencia. Chile 2014 (SE 1-53)



Fuente: Vigilancia centinela ETI. EPIDEMIOLOGIA -MINSAL e ISP

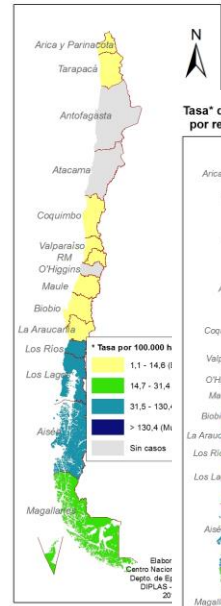
SE	23	24	25	26	27	28	29
Tasa ETI /100.000	11,8	12,1	21,5	21,4	24,0	21,8	15,4
Éxito (tasa)	8	9	6	7	6	6	6
Seguridad (tasa)	15	16	15	16	14	12	10
Alerta (tasa)	30	29	36	33	31	23	17

Fuente: Vigilancia ETI. Depto. De Epidemiología. Ministerio de Salud de Chile

- ILI seasonal increase, with a peak on EW 27 (early june) with values in the expected levels of the channel (seguridad) and later in time than in 2013.

- Maximum of positivity due to respiratory viruses in EW 28 (60%) and high levels of positivity between weeks 25-33 for Influenza A (40-23%)

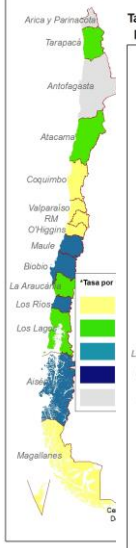
Geographical distribution of ALI in APS based on intensity. Chile 2014 (SE 22-33)



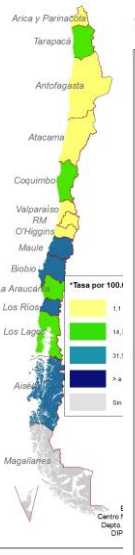
Tasa* de ETI en centros centinela por región. Chile, 2014 (SE 24).



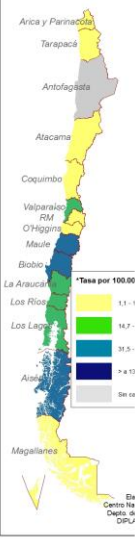
Tasa* de ETI en centros centinela por región. Chile, 2014 (SE 25).



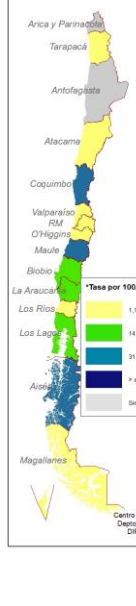
Tasa* de ETI en centros centinela por región. Chile, 2014 (SE 26).



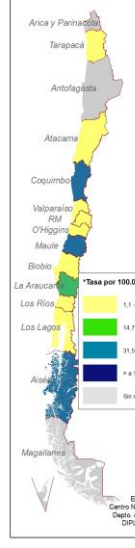
Tasa* de ETI en centros centinela por región. Chile, 2014 (SE 27).



Tasa* de ETI en centros centinela por región. Chile, 2014 (SE 28).



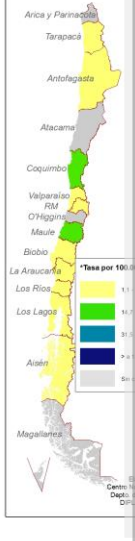
Tasa* de ETI en centros centinela por región. Chile, 2014 (SE 29).



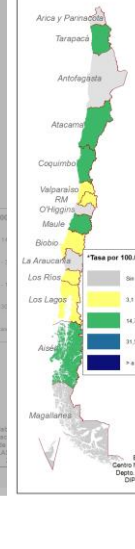
Tasa* de ETI en centros centinela por región. Chile, 2014 (SE 30).



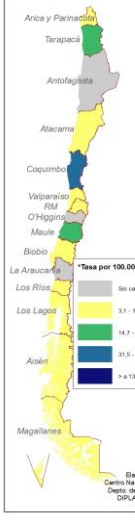
Tasa* de ETI en centros centinela por región. Chile, 2014 (SE 31).



Tasa* de ETI en centros centinela por región. Chile, 2014 (SE 32).



Tasa* de ETI en centros centinela por región. Chile, 2014 (SE 33).



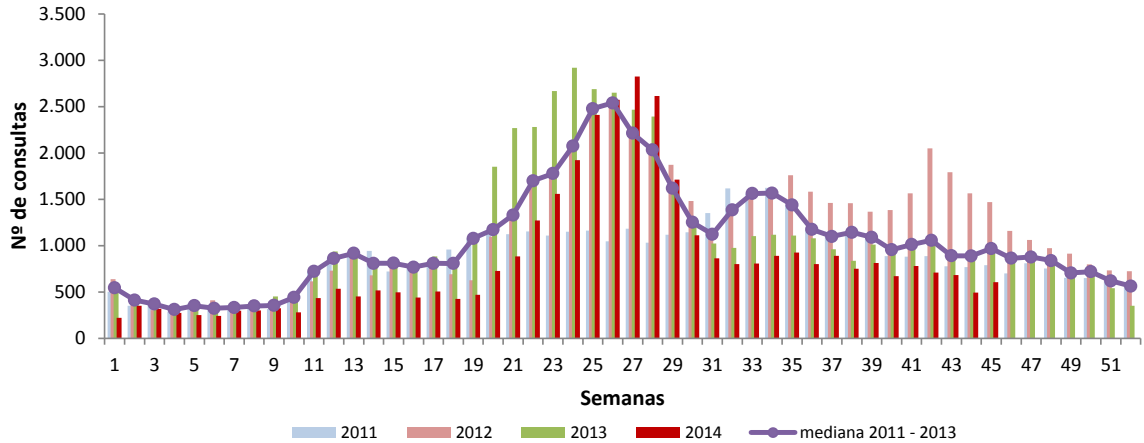
INTENSITY NOTIFICATION ILI/100.000 HAB.
LOW: < 14,6
MODERATE 14,6- 31,4
HIGH 31,5-103,4
VERY HIGH >130,4
Source: Depto Epidemiologia. MINSAL. Based in quartiles, graded

Seasonal increase of ILI from souther regions at the end of may (EW 22) , increase in the central zone with peak on EW 26 and 27 , and finally in the north (from EW 28 onwards)



ILI Presentation in Emergency Room Visits. Chile 2014

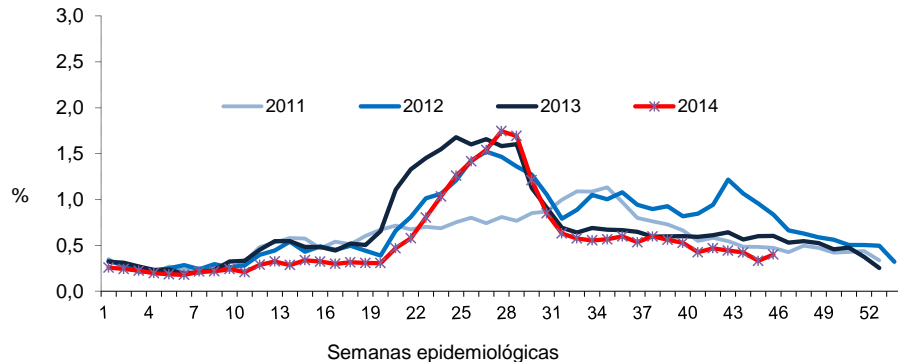
Nº de consultas de urgencia Hospitalaria por Enfermedad Tipo
Influenza. Chile 2011-2013 y 2014 (SE 1-45)



Fuente: Registro Atenciones Urgencia DEIS/DIPLAS/MINSAL

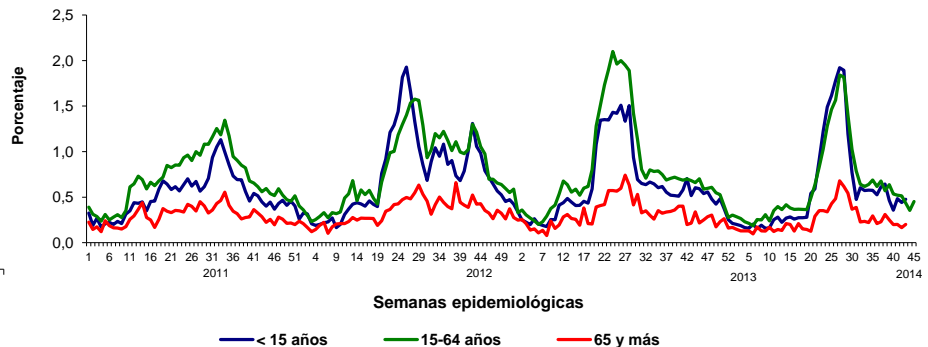
- ILI seasonal increase with a peak in Early July, with values similar to expected levels (median 2011-2013).
- Discrete displacement of peak regarding to expected number of consultations.
- 2014: Increase in age groups less than 15 years old, 2% of consultations in EW 27.

Proporción de Consultas de Urgencia Hospitalaria por ETI.
Chile 2011-2014 (SE 1-45)



Fuente: Registro Atenciones Urgencia DEIS/DIPLAS/MINSAL

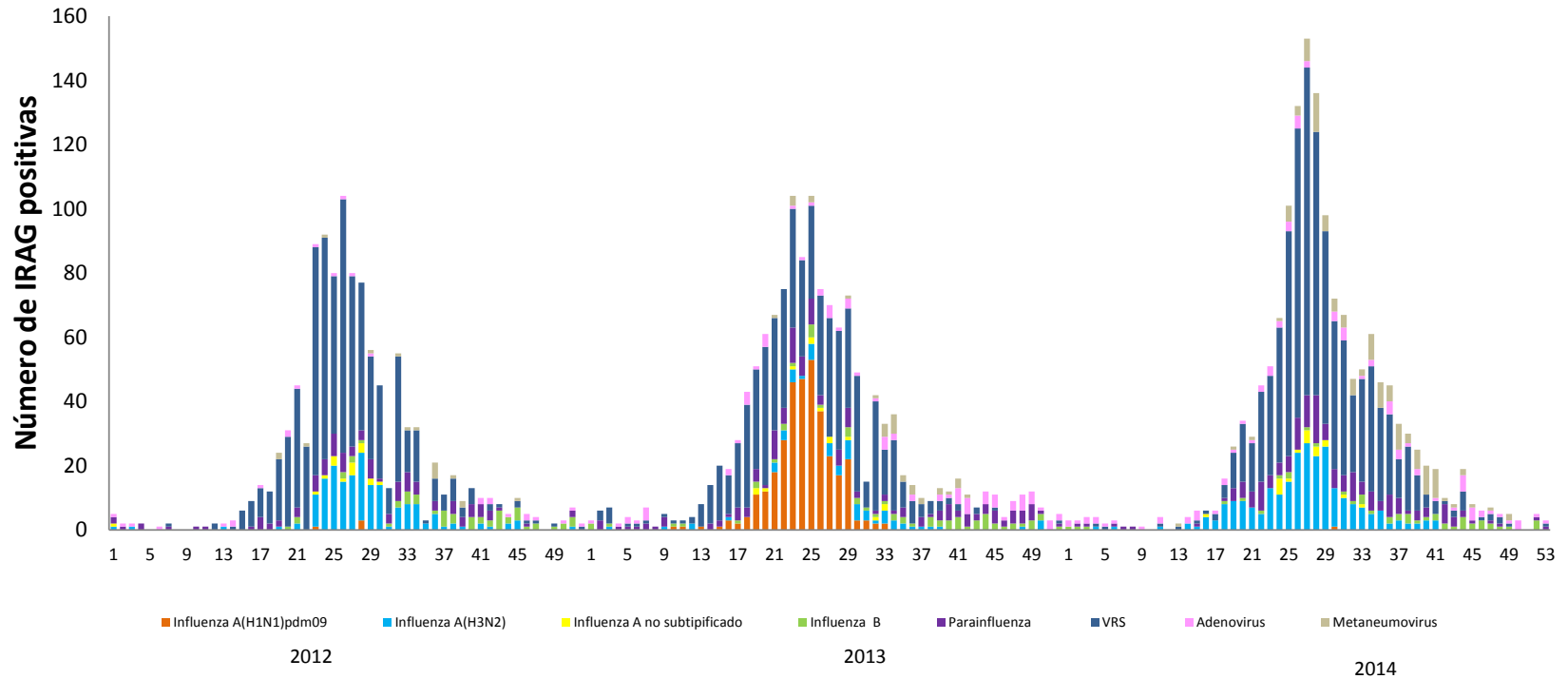
Porcentaje de consultas de urgencia hospitalarias por Enfermedad Tipo Influenza,
según grupos de edad. Chile, 2011-2014 (SE 1 - 45).





Number of SARI cases in Sentinel Hospitals Chile 2012-2014

Casos de IRAG según virus respiratorios y semana epidemiológica
Hospitales centinela IRAG, Chile 2012-2014 (SE 1-53)



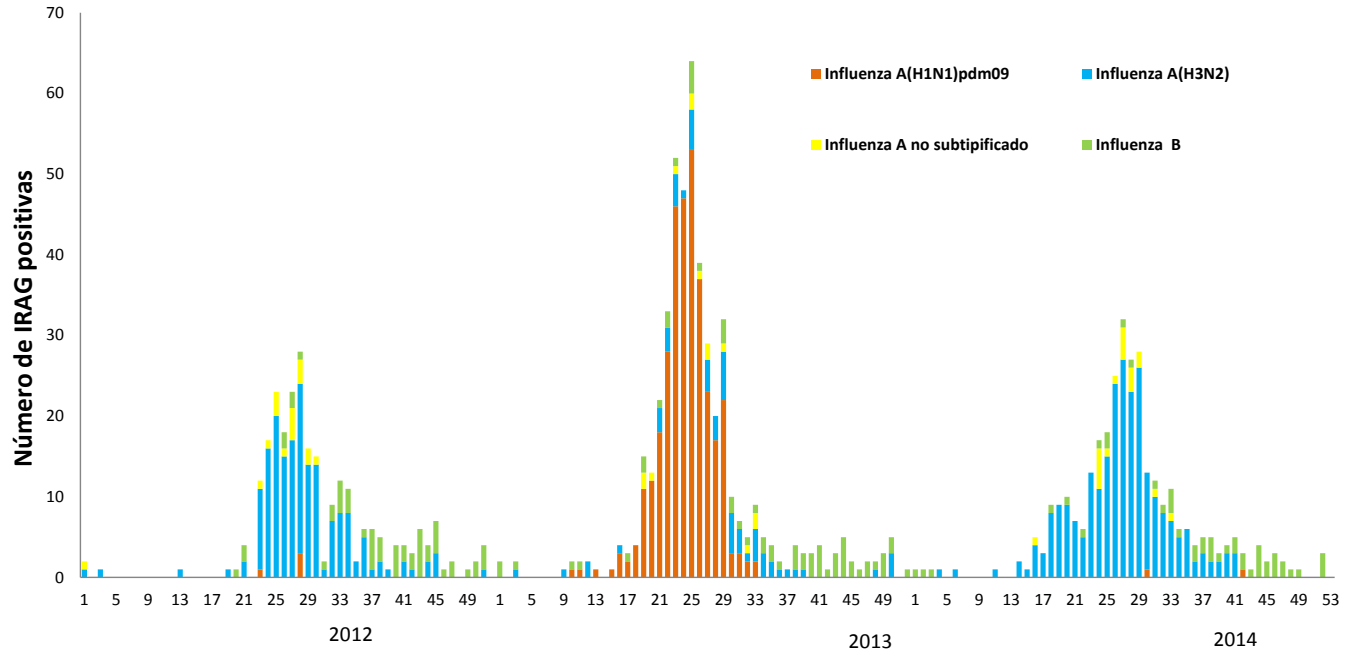
Fuente: Vigilancia Intensificada IRAG. Dpto. Epidemiología, DIPLAS-MINSAL

Fuente; Vigilancia Intensificada IRA Grave. Dpto. Epidemiología, MINSAL



Severity Number of Influenza positive SARI cases in Sentinel Hospitals. Chile 2012-2014

Casos de IRAG según virus influenza y subtipo por semana epidemiológica
Hospitales centinela IRAG , Chile 2012-2014 (SE 1-53)



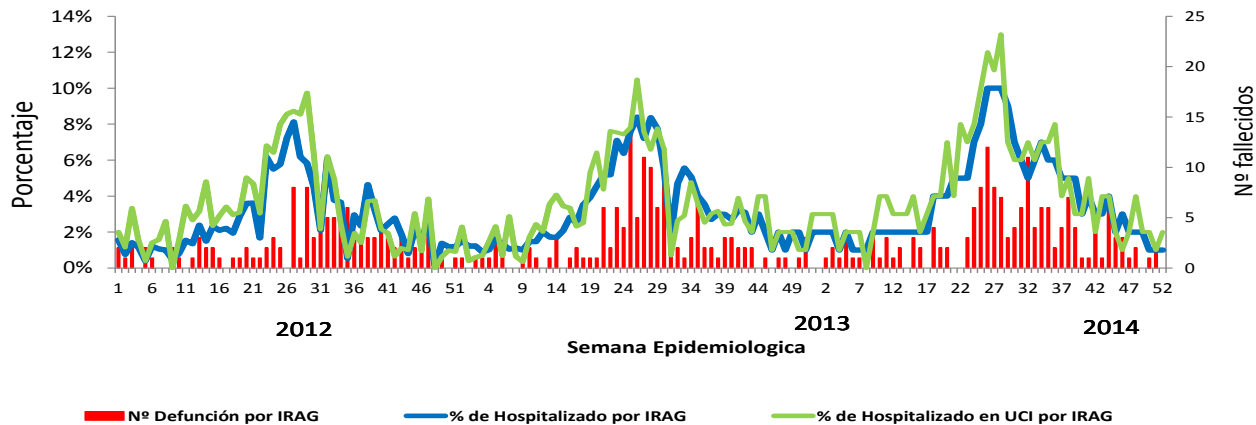
Fuente: Vigilancia Intensificada IRAG. Dpto. Epidemiología. DIPLAS-MINSAL

Year (cases EW 1-53)	Epi week (max number of cases) and %	Influenza A (H1N1)pdm09	Influenza A(H3N2)	Unsubtyped Influenza A	Influenza B
2014 (321)	27 (32) 18%	1%	78%	6%	15%
2013 (473)	25 (64) 35%	75%	12%	3%	10%
2012 (247)	28 (28) 20%	2%	69%	7%	22%



Severity: Percentage of Hospitalizations, ICU admission and deaths. SARI Sentinel Hospitals. Chile 2012-2014

Gráfico 8
Porcentaje de hospitalizados, ingreso a UCI y número de fallecidos por IRAG según SE en Hospitales Centinela. Chile, 2012 - 2014 (*).



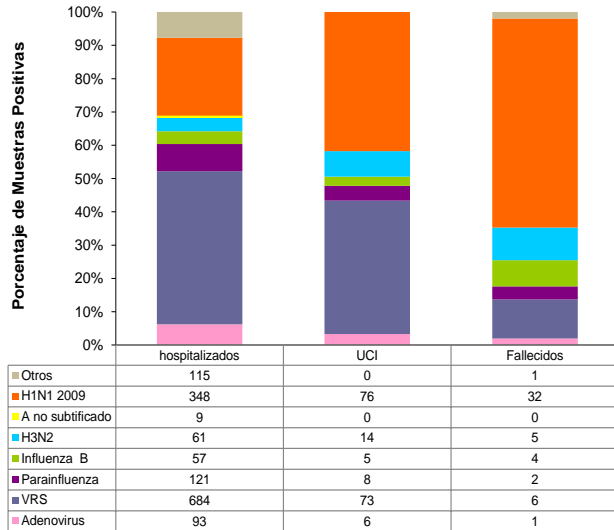
Fuente: Vigilancia Intensificada de IRAG. Dpto. Epidemiología/DIPLAS-MINSAL * Información preliminar

Indicador	2012 Maximun (SE 27)	2013 Maximum (SE 26)	2014 * Máximo (SE 28)
% SARI Hospitalization	8%	8%	10% (SE 26-27)
% ICU SARI admission	10%	10%	13% (SE 28)
% SARI deaths (n deaths)	9% (8)	15% (14)	13 % (12) (SE 26)



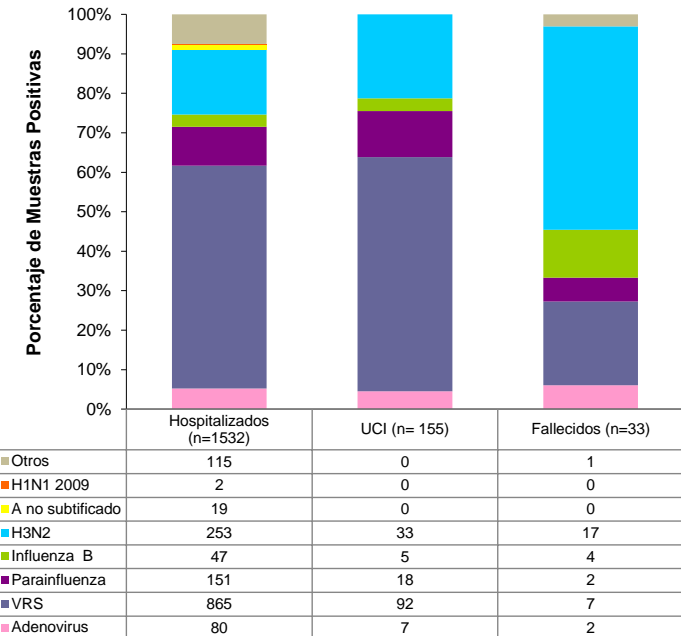
Severity: SARI cases number of ICU admissions and deaths for respiratory viroses. Chile 2013-2014

Distribución porcentual de virus respiratorios en vigilancia de IRAG según gravedad. Chile, 2013 (SE 1 a 52*).



2013	IA (H1N1) pdm09	IA H3N2	IB	VRS	Para influenza
SARI Total cases	348	61	57	684	121
ICU admissions	22%	23%	9%	11%	7%
Deaths (letality)	9%	8%	7%	0,9%	2%

Distribución porcentual de virus respiratorios en vigilancia de IRAG según gravedad. Chile, 2014 (SE 1-53).



2014	IA (H1N1) pdm09	IA H3N2	IB	VRS	Para influenza
SARI Total cases	1	253	47	865	152
ICU admissions	0	13%	10%	10%	12 %
Deaths (letality)	0	6,7%	8.5%	0,8%	1,3%



SUMMARY

TRANSMISSION

2013 ILI RATES MODERATE, WITHIN EXPECTED LEVELS,
INTENSITY MODERATE

2014 ILI RATES MODERATE, WITHIN EXPECTED LEVELS,
INTENSITY MODERATE.

SEVERITY

2013, HIGH SEVERITY BASED ON ICU ADMISSIONS, AND
HOSPITAL LETALITY. HIGHER NUMBER OF SARI DECEASED CASES.

2014, MODERATE SEVERITY BASED ON ICU ADMISSIONS.
INFLUENZA B WAS IMPORTANT.