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Background

Influenza-like illness (ILI) and Acute Respiratory Infections (ARI) remain a considerable health problem in Europe. Diagnoses are based on clinical signs and symptoms which are very well known by Family Doctors (FDs). The most common reasons patients give for seeking health care are presented in the form of symptoms and complaints and the International Classification of Primary Care (ICPC) advocates recording patients' Reasons for Encounter (RfE) as presented to the family doctors (FDs).

Research Question

What is the epidemiology of ILI and ARI syndromes in Italian family medicine? How do FDs manage ILI and ARI diagnosis and how do RfEs influence FDs interventions during winter season 2013/14?

Methods & Materials

Over a period of four months 8 FDs registered the patients' reason for encounters, the number and type of encounters, procedures adopted, ILI and ARI diagnoses, drugs prescriptions and referrals to other health care providers. FDs recorded details of their patients using electronic patients' records based on the International Classification of Primary Care Italian version, collecting data on all elements of the doctor-patient encounter for those diseases in an Episode of Care structure (EoC). The study took place in several urban and rural areas in Northern and Southern Italy

Results

Patients with suggestive symptoms for ILI and ARI were 1,536 (average age 48.1±18.7). The number of patient-doctor encounters was 1,715. RfEs and EoCs numbered respectively 3,800 and 1,536. The total number of interventions (ICPC components 2-6) was 2,929. Of them 45.3% were diagnostic and preventive procedures, 44.0% medications, 0.2% results, 9.6% administrative procedures and 0.7% referrals and other reasons for encounter.

Table 1. Characteristics of the population

Total population		ARI	ILI
Patients' number	1,536	848 (55.2%)	688 (44.8%)
Males	762 (49.6%)	405 (53.1%)	357 (46.9%)
Females	774 (50.4%)	443 (57.2%)	331 (42.8%)
Average age	48.1±18.7	51.2±19.5	44.4±16.9
Encounters+ Subenc.	1,715	947 (52.3%)	768 (44.7%)
Reason for Encounters	3,800	2,153 (56.7%)	1,647 (43.3%)
Vaccinations	267	201 (75.3%)	66 (24.7%)
Total ICPC Comp.	2,929	1,539 (52.5%)	1,390 (47.5%)
Diagnostic and prev.proc.	1,326	733(55.3%)	593(44.7%)
Medications	1,291	669 (51.8%)	622(48.2%)
Results	7	3(42.9%)	4(57.1%)
Administrative proc.	284	120(42.3%)	164(57.7%)
Referrals	21	13(61.9%)	8(38.1%)

Table 2. The Epidemiology of flu syndromes

Code	Label	n.	%
R80	Influenza	688	44.8
R74	Upper resp.inf.acute	328	21.4
R78	Acute bronchitis/bronchiolitis	168	10.9
R77	Acute laringitis/tracheitis	158	10.3
R76	Acute tonsillitis	128	8.3
R75	Sinusitis	29	1.9
H71	Otitis media	25	1.6
R81	Pneumonia	12	.8
Total		1.536	100

Figure 1. ILI and ARI distribution

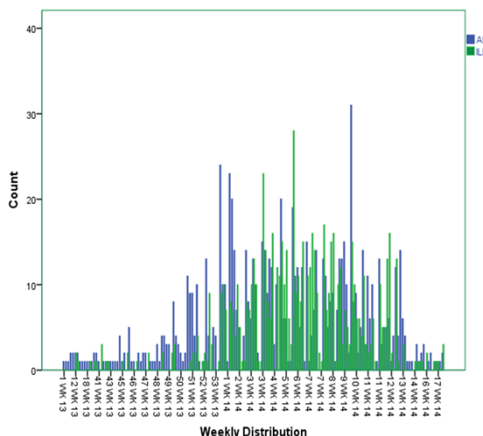


Table 3. Relationship between RfEs and interventions made by FDs

RfE	Label	C.2	%	C.3	%	C.4	%	C.5	%	C.6	%
A03	Fever	326	24.6	242	18.7	2	28.6	75	26.4	10	47.6
R05	Cough	281	21.2	307	23.8	3	42.9	84	29.6	2	9.5
R21	Throat symptom	173	13.0	91	7.0	0	0.0	30	10.6	3	14.3
R07	Chest pain	90	6.8	42	3.3	0	0.0	9	3.2	0	0.0
A02	Chills	63	4.8	28	2.2	0	0.0	1	.4	0	0.0
A01	Pain general	57	4.3	170	13.2	0	0.0	9	3.2	2	9.5
R62	Administrative	37	2.8	35	2.7	1	14.3	7	2.5	1	4.8
N01	Headache	35	2.6	12	.9	0	0.0	9	3.2	1	4.8
A04	Weakness/tiredness	27	2.0	5	.4	0	0.0	0	0.0	0	0.0
R50	Medications-pres.	23	1.7	5	.4	0	0.0	5	1.8	0	0.0
R23	Voice symptom/	20	1.5	22	1.7	0	0.0	9	3.2	1	4.8
R01	Pain respiratory syst.	19	1.4	13	1.0	0	0.0	4	1.4	0	0.0
R31	Medical exam.partial	14	1.1	1	.1	0	0.0	3	1.1	0	0.0
L18	Muscle pain	12	.9	10	.8	0	0.0	1	.4	0	0.0
R80	Influenza	11	.8	19	1.5	0	0.0	1	.4	1	4.8
R02	Shortness of breath	10	.8	34	2.6	0	0.0	4	1.4	0	0.0
R03	Wheezing	10	.8	26	2.0	0	0.0	3	1.1	0	0.0
R08	Nose symptom/comp	10	.8	2	.2	0	0.0	3	1.1	0	0.0
A62	Administrative proc.	9	.7	1	.1	0	0.0	0	0.0	0	0.0
R25	Sputum/phlegm abn.	8	.6	10	.8	0	0.0	5	1.8	0	0.0

Conclusions

The recording of patients' Reasons for Encounter allows FDs to completely document the management of ILI and ARI syndromes. ICPC offers an accessible and practical solution for recording all elements of the encounter such as reasons for encounter, procedures adopted and diagnosis made by the doctors, drugs prescriptions, surgery, home and phone consultations, referral to the specialists. The RfE is a core element of the process of making diagnosis and also influences interventions made by FDs during the winter flu season 2013-14.

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