Clinical preventive measures for adults in general practice:
A comparative study of the Canadian, French and US recommendations

J Gelly[1,2,3], X Duval [2,3]

(1) Univ Paris Diderot, Sorbonne Paris Cité, Département de Médecine Générale, F-75018 Paris, France
(2) Univ Paris Diderot, Sorbonne Paris Cité, UMR 738, F-75018 Paris, France
(3) INSERM, UMR 738, F-75018 Paris, France

INTRODUCTION

Health promotion and disease prevention are among the tasks of general practitioners. The French recommendations about preventive services are for instance scattered within practice guidelines issued by the French National Authority for Health [1] or numerous other evidence-based guidelines, making them not easily accessible in practice. Some other national agency (the Canadian Task Force on Preventive Health Care, CTFPHC, since 1979 [3,4] or the United States Preventive Services Task Force, USPSTF, since 1983 [5]) has developed evidence-based clinical practice guidelines recommending which preventive services should be implemented into periodic health examination of asymptomatic adult in order to prevent morbidity and mortality.

HYPOTHESIS: The lack of consensus within the whole body of recommendations limits the implementation of preventive measures for asymptomatic adults in primary care settings.

OBJECTIVES: To compare USPSTF's, CTFPHC's, and recommendation from French guidelines related to preventive measures for asymptomatic adults.

METHODS

Data collection

Hand searching in three countries websites: practice guidelines published by the French National Authority for Health [1] (if none, we completed our research by querying the catalogue and index of French-language medical sites [2]) ; the latest recommendations from the new CTFPHC website [4] and the last version of the Canadian Guide to Clinical Preventive Health Care published by the Public Health Agency of Canada [3] ; and the USPSTF's Guide to Clinical Preventive Services [5]. For each of them we listed their grade, date of publication, and agency for the French recommendations. Websites and databases were consulted for the last time on August 22, 2011.

INCLUSION CRITERIA: The latest up-to-date recommendations available for primary and secondary prevention in asymptomatic adults, in each country.

NON-INCLUSION CRITERIA: Pregnancy and its follow-up, immunization, long-term disease or injury (tertiary prevention).

→ 231 subsets of recommendations (Canada: 156 ; France: 123 ; US: 148).

Subsets of recommendation

To maximize the level of agreement, we split any recommendation according to target population (gender, age and risk level) and pathology area. We determined equivalences between the different classifications. Considering the absence of French grade that specifically recommend to exclude a preventive service, negatively worded recommendations have been reviewed as such (*). We used also an alternative encoding considering "Professional consensus" as an indeterminate grade (i.e., grade "0": no recommendation or insufficient evidence). [Figure 1] We defined a level of agreement between countries according to a specific subset. [Figure 2]

Statistical analyses

We described categorical variables with number and percentages, and continuous variables with medians and ranges (minimum-maximum). For each subset, we assigned a "mean equivalent grade of recommendation" among three modalities resulting from the average of the three countries' grade: "To implement" if]+1;+3], "Uncertainty" if [-1;+1] and "Not to implement" if [-3;-1[. The determinants of major disagreement (versus strong agreement or minor disagreement) were analyzed performing a Fisher's exact test.

Figure 1: Equivalence between grade definitions, with initial (C1) and alternative encoding (C2)

C1	C2	CTFPHC (> Aug 2003)	CTFPHC (< Aug 2003)	French guidelines	USPSTF (> May 2007)	USPSTF (< May 2007)
+ 3	+ 3	A	A	A	A	A
+ 2	+ 2	B	B	B C	B	B
+ 1				Professional consensus		
0		C		No consensus		C
	0	I	C		I	I
- 1				Professional consensus (to exclude)*		
- 2	-2	D	D	C (to exclude)* B (to exclude)*	C	
- 3	- 3	E	E	A (to exclude)*	D	D

Figure 2: Definition of the level of agreement between countries according to a specific subset

Comparison impossible	This subset is issued by only one of the three countries
Strong Agreement (A)	Related grades are strictly identical between the three countries or between only two of them if the third is missing
Minor disagreement (d)	Related grades are not identical, but all of them include (or exclude) this subset and the gap between them never exceeds one level
Major disagreement (D)	There are conflicting grades that include and exclude this subset or at least one gap between grades exceeds one level

REFERENCES :
[1] French National Authority for Health PHA of C. Recommandations de bonne pratique. [Online]
[2] Sakji S, Thirion B, Dahamna B, Darmoni SJ. [Searching French institutional health information sources: catalogue and index of French-language medical sites (CISMeF)]. Presse Med. 2009 oct;38(10):1443-1450.
[3] Government of Canada PHA of C. The Canadian Guide to Clinical Preventive Health Care - Public Health Agency of Canada. [Online]
[4] Canadian Task Force. Canadian Task Force on Preventive Health Care. [Online]
[5] Agency for Healthcare Research and Quality, Rockville, MD. Guide to Clinical Preventive Services, 2010-2011: Recommendations of the U.S. Preventive Services Task Force. AHRQ Publication No. 10-05145, August 2010.

RESULTS

For 88 of the 231 subsets of recommendations analyzed (38%), no comparison was feasible because these subsets were issued by only one of the three countries.

Only the results of the analyses using the original encoding (C1) are presented here. [Table 1]

Table 1: Overall and specific level of agreement between the Canadian, French and the US recommendations

	COMPARISON BETWEEN AT LEAST TWO COUNTRIES				COMPARISON IMPOSSIBLE (n')
	n	STRONG AGREEMENT	MINOR DISAGREEMENT	MAJOR DISAGREEMENT	
OVERALL LEVEL OF AGREEMENT					
	143	22 (15%)	46 (32%)	75 (52%)	88
SPECIFIC LEVEL OF AGREEMENT ACCORDING TO					
Clinical categories: p= 0.08 (A+d vs. D)					
Cancer	47	7 (15%)	12 (26%)	28 (60%)	27
Heart and vascular diseases	28	4 (14%)	7 (25%)	17 (61%)	13
Infectious diseases	19	3 (16%)	5 (26%)	11 (58%)	10
Injury, Mental Health	23	6 (26%)	11 (48%)	6 (26%)	22
Metab., Nutrit., Endocrine	13	1 (8%)	4 (31%)	8 (62%)	13
Miscellaneous	13	1 (8%)	7 (54%)	5 (38%)	3
Sequence of medical encounter: p = 0.06 (A+d vs. D)					
Medical history taking	8	2 (25%)	5 (62%)	1 (12%)	12
Physical examination	9	1 (11%)	3 (33%)	5 (56%)	6
Counseling	39	8 (21%)	14 (36%)	17 (44%)	23
Techniques and procedures	79	10 (13%)	23 (29%)	46 (58%)	36
Intervention	8	1 (12%)	1 (12%)	6 (75%)	11
Gender of the target population: p = 6.12 e-03 (A+d vs. D)					
For both sex	79	19 (24%)	28 (35%)	32 (41%)	64
Only for men	28	3 (11%)	7 (25%)	18 (64%)	5
Only for women	36	-	11 (31%)	25 (69%)	19
Age of the target population: p= 0.20 (A+d vs. D)					
For over and under 50	99	17 (17%)	35 (35%)	47 (47%)	73
Only for 49 years or under	12	1 (8%)	3 (25%)	8 (67%)	2
Only for 50 years or over	32	4 (12%)	8 (25%)	20 (62%)	13
Risk level of disease occurrence: p = 0.15 (A+d vs. D)					
General population	101	12 (12%)	32 (32%)	57 (56%)	70
High-risk population	39	7 (18%)	14 (36%)	18 (46%)	18
Very high-risk population	3	3 (100%)	-	-	0
Mean equivalent grade of recommendations: p = 3.53 e-03 (A+d vs. D)					
To implement	52	9 (17%)	23 (44%)	20 (38%)	28
Uncertainty	64	12 (19%)	18 (28%)	34 (53%)	41
Not to implement	27	1 (4%)	5 (19%)	21 (78%)	19
Maximum time between recommendations publication: p = 0.55 (A+d vs. D)					
Less than 5 years	35	8 (23%)	10 (29%)	17 (49%)	88
5 to 9 years	26	3 (12%)	12 (46%)	11 (42%)	
10 to 14 years	42	6 (14%)	11 (26%)	25 (60%)	
15 years or more	40	5 (12%)	13 (32%)	22 (55%)	
Mean time interval since recommendations publication: p = 0.08 (A+d vs. D)					
Less than 5 years	17	2 (12%)	10 (59%)	5 (29%)	22
5 to 9 years	91	13 (14%)	24 (26%)	54 (59%)	38
10 to 14 years	33	6 (18%)	12 (36%)	15 (45%)	2
15 years or more	2	1 (50%)	-	1 (50%)	26

DISCUSSION

Among the 231 recommendations analyzed, 143 were compared between at least 2 countries: 75 (52%) were in major disagreement, 46 (32%) in minor disagreement and 22 (15%) in strong agreement. The overall agreement of recommendations decreases significantly if they related specifically to one gender or if the mean equivalent grade was uncertain or against implementation. Further multivariate analyses are ongoing to evaluate the determinants of agreement. In a second step, we will determine the most consensual subsets of recommendations, and detail the reasons for discrepancies in case of major disagreement.