Preventive services recommendations for adults in primary care settings: Agreement between Canada, France and US – A systematic review

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INTRODUCTION

Health promotion and disease prevention have become integral components of primary care. General practitioners hold a strategic position in delivering preventive services.

Several countries have developed evidence-based recommendations for periodic health examinations: the Canadian Task Force on Preventive Health Care (CTFPHC, since 1979)[1,2]; the United States Preventive Services Task Force (USPSTF, since 1983)[3]. The French recommendations about preventive services are scattered within practice guidelines issued by the French National Authority for Health[4] or numerous other evidence-based guidelines, making them not easily accessible in practice.

For each recommendation, the grading system used to recommend a particular action or not depends on the quality of available evidence concerning a preventive service for a given target population, assessing its benefits and harms to health outcomes.

Implementation of evidence-based guidelines in clinical practice is a critical issue. Absence of a reminder system, reimbursement, time, awareness or outcome expectancy – contribute to adherence barriers. Prior to overcoming organizational barriers, a better consensus between national agencies could improve adherence to clinical practice guidelines in primary care settings.

OBJECTIVES: To analyze the level of agreement between recommendations on preventive services developed by three countries. To assess the determinants of strong agreement.

METHODS

Search strategy

Systematic review of websites: CTFPHC's recommendations[1] or, if lacking, the latest version of the Canadian Guide to Clinical Preventive Health Care[2]; USPSTF's recommendations from the USPSTF's Guide to Clinical Preventive Services[3]; recommendations published by the French National Authority for Health[4], or, if lacking, by querying the catalogue and index of French-language medical sites[5]. We reviewed websites and databases for the last time on November 3, 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).

Data extraction

We performed a splitting of the recommendations as needed to allow one-to-one comparisons between countries, on three successive levels: "topics of recommendation" (e.g. breast cancer); "preventive services" (e.g. screening for breast cancer by mammography); target population as defined by gender, age and risk level for disease occurrence. We defined the final products of splitting as a "targeted recommendation".

To allow a comparison between countries for a targeted recommendation, we determined equivalences between these different grading systems. Considering the absence of a French grade that specifically recommends excluding a given preventive service, negatively worded recommendations were reviewed as such*.

Figure 1: Definition of an equivalent grade taking into account the successive grading systems

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

We defined a level of agreement between countries according to a targeted recommendation.

Figure 2: Definition of the level of agreement between countries

Strong Agreement (A)	The related equivalent grades of recommendation were strictly identical among the three advising countries, or between two of them when only two countries advised on a particular targeted recommendation
Major disagreement (D)	At least one country recommended a preventive service whereas another did not (or vice versa), or if the gap between equivalent grades of recommendation was greater than or equal to two
Intermediate agreement (I)	All other cases allowing comparison between at least two countries

Statistical analysis

For each targeted recommendation, we assigned a "proposal for clinical practice" among three modalities resulting from the average of the three countries' equivalent grades of recommendation: "To implement" if [+1;+2], "Uncertain" if]-1;+1[and "Not to implement" if [-2;-1].

We analyzed the determinants of strong agreement (vs. intermediate agreement or major disagreement) for all targeted recommendations that allowed at least a two-country comparison: 1) Fisher's exact test; 2) Logistic regression model (backward selection starting from variables with $p \leq 0.20$ in univariate analysis).

RESULTS

Among 250 recommendations targeting a given population, 84 (34%) issued by a single country could not be compared, 111 (44%) allowed either a two-country comparison and (55 (22%) allowed a three-country comparison [Table 1: partial results].

Table 1: Level of agreement between Canadian, French, US targeted recommendations (p : Fisher's exact test)

	Number of targeted reommendations				
	COMPARISON BETWEEN AT LEAST TWO COUNTRIES				NO COMPARISON POSSIBLE (n')
	n	STRONG AGREEMENT	INTERMEDIATE AGREEMENT	MAJOR DISAGREEMENT	
OVERALL LEVEL OF AGREEMENT					
	166	43 (26%)	82 (49%)	41 (25%)	84
SPECIFIC LEVEL OF AGREEMENT ACCORDING TO					
Sequence of steps of medical consultation: p = 0.01					
History taking, phys. exam	19	10 (53%)	6 (32%)	3 (16%)	14
Counseling	37	12 (32%)	23 (62%)	2 (5%)	29
Techniques and procedures	98	20 (20%)	47 (48%)	31 (32%)	34
Intervention	12	1 (8%)	6 (50%)	5 (42%)	7
Gender of the target population: p = 0.04					
Only for men	30	5 (17%)	18 (60%)	7 (23%)	10
Only for women	52	9 (17%)	26 (50%)	17 (33%)	21
For both gender	84	29 (35%)	38 (45%)	17 (20%)	53
Age of the target population: p= 0.08					
Individuals ≥ 50 years	48	7 (15%)	22 (46%)	19 (40%)	11
Individuals < 50 years	21	5 (24%)	11 (52%)	5 (24%)	5
Other age limits	97	31 (32%)	49 (51%)	17 (18%)	68
Risk level for disease occurrence: p = 0.009					
General population	120	24 (20%)	62 (52%)	34 (28%)	66
High-risk population	46	19 (41%)	20 (43%)	7 (15%)	18

43 out of 166 (26%) "targeted recommendations" were in strong agreement (strictly identical grades between advising countries). Twenty-five of these 43 resulted in a proposal to implement in clinical practice, two others not to implement in clinical practice and 16 were uncertain. Strong agreement was more frequent for recommendations concerning history taking and physical exam (odds ratio (OR) = 11.3, 95%CI: 1.6-241.2; p = 0.04) than for those concerning interventions, and for recommendations concerning a high-risk population than for those concerning the general population (OR = 3.1, 95%CI: 1.4-7.0; p = 0.006). Agreement did not differ either according to time range between recommendations' publication or according to originating country.

DISCUSSION

Recommendations on preventive services for adults showed a low level of agreement across these three countries. Our findings could guide the examination and collection of risk factors in primary care settings, and encourage guidelines producers to take into account separately evidence and local specificities. Harmonization on methodology and international collaborations could enhance agreement and the implementation of trustworthy guidelines in primary care settings.

REFERENCES: [1] Government of Canada PHA of C. The Canadian Guide to Clinical Preventive Health Care - Public Health Agency of Canada. [2] Canadian Task Force. Canadian Task Force on Preventive Health Care. [3] 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. [4] French National Authority for Health PHA of C. Recommandations de bonne pratique. [5] 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.