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Review of HIV Testing Recommendations for HIV Indicator Conditions in Guidelines from Danish National Health Authorities and Medical Specialties

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BACKGROUND

Late diagnosis continues to be a challenge for the management of HIV in Europe. In Denmark 45.7% of new HIV diagnoses in 2016 were late presenters with CD4 cell counts below 350 cells per mm^3, including 25.9% with advanced HIV infection (CD4 <200 cells/mm^3) (1). National guidelines on HIV testing indicate that individuals in high risk of HIV should regularly and actively be offered a HIV test when in contact with the Danish Health System and recommend routine testing when people present with indicator conditions (ICs)(2). ICs occur with increased frequency in individuals infected with HIV due to shared transmission pathways or as a consequence of the HIV-related immune deficit.

OBJECTIVE

To examine to which extent Danish national guidelines and non-HIV specialty guidelines recommend HIV testing in 14 ICs.

METHODS

An online literature search for relevant national and specialty guidelines for 14 ICs was conducted through websites of the Danish health authorities and relevant medical societies. All identified guidelines were reviewed and classified into 3 categories (**table 1**). The association between recommendation to test for HIV and categorical variables (source of guideline and type of condition) and with year of publication were tested using Fischers' exact test and Mantel-Haenszel linear-by-linear chi square tests respectively.

RESULTS

A total of 77 relevant guidelines were identified; 47 national guidelines, 24 specialty society guidelines and 6 guidelines from the Danish Medicines Information. The association with HIV was discussed in 53 guidelines (69%) and HIV testing was recommended in 30 (39%). Not surprisingly a higher proportion of guidelines concerning malignant lymphoma and hepatitis C recommended HIV testing (92% and 83% respectively). Thirty-three percent of the guidelines for STIs did not mention HIV and only 33% recommended an HIV test. None of the guidelines concerning mononucleosis or associated symptoms recommended HIV testing, despite the similarities in symptoms with HIV sero-conversion. National guidelines were less likely to recommend HIV testing than specialist society guidelines (30% vs 67%, p = 0.03 (table 1)). There was no association observed between the year of publication and recommendation to test (p =0.578) (**figure 1**).

CONCLUSIONS

National health authorities were significantly less likely to recommend HIV testing for the 14 ICs compared with specialist society guidelines. National guidelines are considered an important source of clinical guidance for health care personnel and should represent the latest evidence based knowledge and promote interdisciplinarity ensuring integrated health care services for the individual. IC guided testing is an important strategy to ensure earlier diagnosis of HIV. By including HIV test recommendations in national guidelines for ICs a wider range of medical disciplines can be reached.

PERSPECTIVES

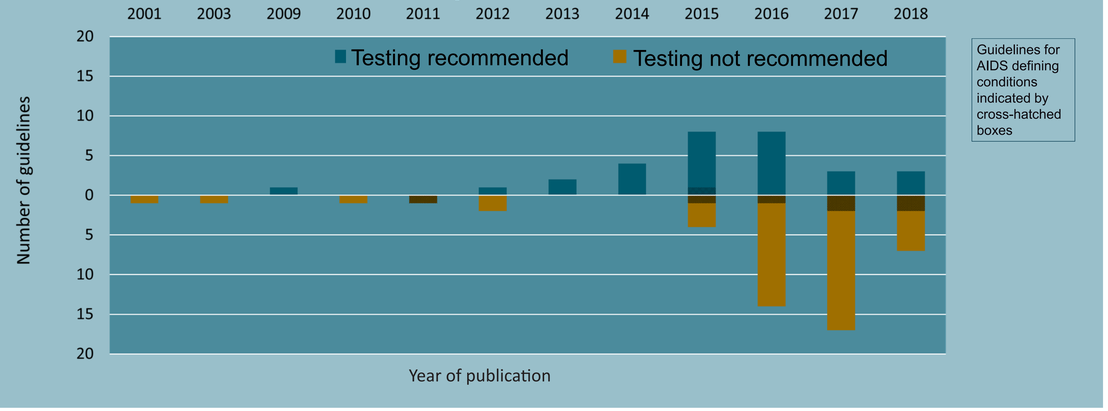
The method used in this review builds on work in the OptTEST project (3,4). It has been performed in the UK as well as in Spain, The Netherlands and Ireland and is currently being performed in Romania and Lithuania. The findings will be accumulated and described with the objective to provide an overview of country variations and support the standardization of HIV testing recommendations in specialty guidelines across Europe.

Table 1 Reporting of Association with HIV and Recommendation of HIV Testing Stratified by Type of Guideline

	Number of guidelines identified	% of total	HIV not mentioned	Association with HIV mentioned, test not recommended	Association with HIV mentioned + test recommended	p-value: between-group difference in HIV test recommendation	p-value: Test recommended vs. test not recommended
All guidelines	77	100%	24 (31%)	23 (30%)	30 (39%)		
Indicator conditions	69	90%	21 (30%)	19 (28%)	29 (42%)	0.2206	0.1399
AIDS defining conditions	8	10%	3 (38%)	4 (50%)	1 (13%)		
Source of guidelines:							
National guidelines *	47	61%	15 (32%)	18 (38%)	14 (30%)	0.032	0.0009
Specialty society guidelines	24	31%	5 (21%)	3 (13%)	16 (67%)		
Danish Medicines Information **	6	8%	4 (67%)	2 (33%)	0		
Guidelines for Indicator Conditions and AIDS Defining Conditions:							
Sexually transmitted diseases	12	16%	4 (33%)	4 (33%)	4 (33%)	<0.0001	0.0003
Hepatitis B - acute or chronic	5	6%	1 (20%)	2 (40%)	2 (40%)		
Hepatitis C - acute or chronic	6	8%	1 (17%)	0	5 (83%)		
Malignant Lymphoma	12	16%	0	1(8%)	11 (92%)		
Cervical Dysplasia	3	4%	2 (67%)	1 (33%)	0		
Cervical cancer	4	5%	3 (75%)	1 (25%)	0		
Anal dysplasia or anal cancer	3	4%	0	3 (100%)	0		
Unexplained lymphadenopathy	5	6%	2 (40%)	1 (20%)	2 (40%)		
Mononucleosis-like illness	7	9%	6 (86%)	1 (14%)	0		
Unexplained leukocytopenia and/or thrombocytopenia lasting > 4 weeks	7	9%	1 (14%)	3 (43%)	3 (43%)		
Herpes Zoster	5	6%	3 (60%)	0	2 (40%)		
Seborrheic dermatitis /exanthema	2	3%	0	2 (100%)	0		
Community aquired pneumonia	3	4%	1 (33%)	1 (33%)	1 (33%)		
Pneumocystis pneumonia	3	4%	0	3 (100%)	0		

*Sundhedsstyrelsen (sst.dk), Statens Serum Institut (ssi.dk), Sundhed.dk ** Medicin.dk

Figure 1 Recommendations for HIV Testing in Indicator Conditions and AIDS Defining Conditions Stratified by Year of Guidelines Publication



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1. HIV/AIDS surveillance in Europe 2017, 2016 data. ECDC & WHO Regional Office for Europe, 2017.
2. Anbefalinger om forebyggelse, diagnose og behandling af seksuelt overførbare infektioner. Danish Health Board, 2015.
3. Evaluation of HIV testing recommendations in specialty guidelines for the management of HIV indicator conditions. Lord E, Stockdale AJ, Maleck R et al. HIV Medicine2016.
4. OptTEST (http://www.opttest.eu/)

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