General Introduction into Best Practice Guidelines

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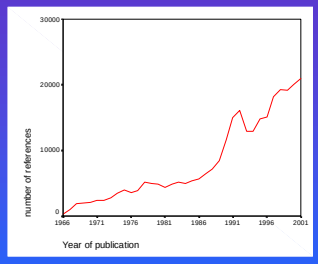
- What are CPG's?
- Who wants CPG's when and why?

Systematically developed *statements* to *assist practitioner* and *patient decisions* about *appropriate* health care for *specific* clinical *circumstances.*

IOM 1992



A number of references in MEDLINE according to year of publications using MESH term "guidelines or practice guidelines"

Three generations of practice guidelines

- based on consensus conferences
- based on EBM
- based on EBM and CEA

Reasons for CPP development

- professional *(professionalization)*
- manager *(planning and control)*
- financier *(efficiency, cost control)*
- government *(accountability, priority setting regulated markets)*
- patient / citizen *(empowerment, transparency, consumer choice)*

Inside guidelines: comparative analysis of recommendations and evidence in diabetes guidelines from 13 countries

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Table 1. Basic characteristics of selected guidelines

	Country (ID code)	Organisation responsible for guideline development	Title in English	Year of publication
1.	Denmark (DK)	Danish College of General Practitioners	Non insulin demanding diabetes – NIDDM. A practical guidance for therapists	1998
2.	England (EN)	East London Clinical Guidelines Project. Department of General Practice and Primary Care	Clinical guidelines for the management of diabetes in East London	1996
3.	Finland (FI)	Finnish Diabetes league	Type II diabetes clinical guideline	1994
4.	France	Agence Nationale d'Accréditation et d'Evaluation en Santé (ANAES)	a. Strategy for monitoring of type 2 diabetics, excluding monitoring of complications	1999
			b. Strategy for management of type 2 diabetics, excluding management of complications	2000
5.	Italy (IT)	Italian Society for Diabetology	Diabetes mellitus. Practical guide for diagnosis and treatment	1997
6.	The Netherlands (NL1)	Dutch Institute for Healthcare Improvement CBO	Guidelines diabetic nephropathy and cardiovascular diseases with diabetes mellitus	1998
7.	The Netherlands (NL2)	Dutch College of General Practitioners	NHG-guideline diabetes mellitus	1999
8.	Scotland (SC)	Scottish Intercollegiate Guidelines Network (SIGN)	Management of diabetic cardiovascular disease	1997
9.	Spain (SP)	Catalan Society of Primary Care	Guideline on treatment of diabetes mellitus type 2 in primary care	1998
10.	Switzerland (SW)	University Hospital of Geneva	Detection of diabetes mellitus. Guidelines for the outpatient's clinic	1998
11.	Australia (AU)	NSW (New South Wales) Health Department	Improving diabetes care and outcomes. Principles of care and guidelines for the clinical management of diabetes mellitus	1998
12.	New Zealand (NZ)	New Zealand Guidelines Group	Guidelines for the management of core aspects of diabetes care.	1999
13.	Canada (CA)	Canadian Medical Association	Clinical practice guidelines for the management of diabetes in Canada	1998
14.	USA (US1)	American Diabetes Association	Standards of medical care for patients with diabetes mellitus	2000
15.	USA (US2)	Institute for Clinical System Improvements	Management of Type 2 diabetes mellitus	2000

Box 2. Essentials in management of diabetes mellitus type 2

1. *General principles*
   - diet, weight control
   - exercise
   - smoking cessation
   - education
2. *Treatment of hyperglycemia*
   - target levels glucose and HbA_{1c}
   - oral drugs
   - insulin
3. *Treatment of cardiovascular risk*
   - target levels blood pressure and lipids
   - drug treatment raised blood pressure
   - use of cardiovascular risk tables
   - preventive use of aspirin
4. *Monitoring*
   - blood pressure
   - blood and urinary investigations
   - self-monitoring

Box 3. Shared recommendations for management of Type Two diabetes mellitus

Diet: all diabetics should be offered dietary advice. A desirable diet should be low in sugar, fat content and overall calories

Weight control: overweight/obese patients should be offered weight management

Exercise: exercise (in combination with diet) is an essential part of the management

Smoking: diabetic patients should stop smoking to reduce cardiovascular risk

Education: education of patients is desirable to promote good diabetic control

Hyperglycemia: poor glycemic control should be tackled using diet alone, oral medication, and insulin progressively, unless acutely unwell.

Glycemic monitoring: HbAic is suitable for long-term monitoring

Blood pressure: screening and treatment of raised blood pressure is recommended

Renal disease: screening and treatment of microalbuminuria is recommended

Hyperlipidemia: screening and treatment of hyperlipidemia is recommended

Self-monitoring: if on insulin, self monitoring of blood glucose is recommended

Box 4. Recommendations with 'minor' variation

BMI used to define obesity: Range 25 - 30.

Target HbA_{1c} : Range 6.5 - 7,5%

Metformin as first choice oral treatment in obese

Addition of a second oral agent to maximum doses of an initial agent

Sulphonylureas or biguanides in patients of normal BMI

Use of ACE inhibitors in those with hypertension and renal disease

Aspirin use in secondary prevention of cardiovascular disease

Box 5. 'Major' variation between recommendations

Length of trial of diet and exercise before oral treatment: range 2 - 9 months

Use of alphaglucosidase inhibitors: widely varying indications for this medication

Combination of insulin and oral medication: widely varying combinations suggested. No consensus on the value or indications for combination treatment.

Target BP: range <130/85 - <160/90

First line medication for raised BP: no consensus on a first-line drug; wide choice given

Aspirin use as primary prevention in 'high risk': widely differing opinions on its value

Targets for lipid control: widely differing targets given (e.g. total cholesterol 4.5 - 6.5 mmol/l)

Frequency of monitoring: e.g. HbA_{1c} 1-4 /year

Self-monitoring of blood glucose: contradictory if controlled with diet or oral medication

Routine annual ECG: recommended or not

Table 2. Size of the guideline, number and linkage of references

ID Code	Number of pages	(estimated) WSPC*	Total number of references	References linked to recommendations
DK	19	10.3	0	NA
EN	36	24	40	yes
FI	55	36	1	no
FR	312 (151+161)	238 (115+123)	422	yes¶
IT	350	285	218	no
NL1	164	34.8	246	yes
NL2	18	13.7	190	yes
SC	21	12.5	77	yes¶
SP	85	39	95	yes
SW	3	2.0	2	no
AU	92	43.8	65	no
NZ	19	6.2	44	yes
CA	29	30.3	302	yes¶
US1	??	??	??	no
US2	52	26	67	yes¶

* WSPC = word standardised page count: total number of words divided by 400.
† complete (selected) bibliography ¶ including levels of evidence

Table 3. Shared references by number of citations.

ID code	Number of selected references	Number of shared references	% shared references	Weighted shared score (ranking)
EN	30	16	53.3	21.8 (4)
FR1/2	422	86	20.4	16.0 (10)
IT	83	26	31.3	15.2 (12)
NL1	127	54	42.5	18.8 (7)
NL2	132	59	44.7	20.6 (5)
SC	56	24	42.9	18.1 (8)
SP	73	29	39.7	15.5 (11)
AU	12	8	66.6	24.3 (3)
CA	158	73	46.2	19.6 (6)
NZ	25	14	56.0	33.5 (2)
US1	171	73	42.7	18.1 (8)
US2	57	36	63.2	35.3 (1)
total	*1346*	*498*	*37.0*	

Table 4. Countries of authors of citations (%)

ID Code	UK/ IR	FR	IT	NL	SP	CA	AU/ NZ	USA	Scan	Other	Multi-national	Un-known
EN	37	---	---	---	---	---	10	27	23	---	---	3
SC	39	4	---	2	---	---	2	23	23	5	---	2
FR1/2	11	11	4	3	---	4	2	38	11	11	1	4
IT	6	1	30	---	---	1	---	41	4	2	4	10
NL1	13	1	3	18	1	1	---	32	21	6	2	1
NL2	13	1	1	36	---	1	3	24	12	10	---	0
SP	11	1	---	1	11	---	3	51	11	7	1	3
CA	13	1	3	1	---	6	3	45	17	7	1	5
AU	17	8	---	---	---	---	8	67	---	---	---	0
NZ	40	---	---	---	---	---	16	16	12	16	---	0
US1	9	1	3	1	---	1	1	59	18	5	1	2
US2	14	2	---	---	2	2	2	63	7	5	2	2
total	*11.8*	*5.2*	*4.7*	*7.1*	*1.0*	*2.7*	*2.6*	*40.4*	*11.8*	*7.8*	*1.3*	*3.8*

Table 5. Coverage and evidence of three specific clinical areas in 14 diabetes guidelines

	number of guidelines			*number of citations*	
	area covered	supported with evidence	citations linked to recommendations	linked citations	shared citations
use of metformin	11	7	5	19	4
aspirin for secondary prevention	8	7	5	13	3 (5*)
self monitoring of blood glucose	9	7	5	20	1 (8†)

* including citations in review of Yudkin † including citations in review of Faas

Potential bias

- Selection workgroup members
- Selection central questions
- Conceptualizations of diseases
- Searching literature
- Judging literature
- Phrasing recommendations
- Guideline by-products (leaflets, review-criteria, indicators

The potential use of formalized EBM/CEA based statements for patient/physician decision making

- in bridging the research/practice gap *(is there a difference between efficacy and effectiveness?)*
- in clinical decision making *(personalizing the decision tree)*
- in structuring and monitoring clinical working processes *(from decision making to flow-charts and formalization of tasks and responsibilities)*
- in accountability *(do CPG's create trust?)*
- in priority setting *(can justice be done?)*

Topics to be addressed in national guideline development programs

- ownership
- evidence-base
- participation of different parties
- legal context
- link with local standards, audit, indicators and CME
- quality of guidelines (AGREE)
- international cooperation