

DEVELOPING RESEARCH AND PRACTICE

Improving the quality of health care: using international collaboration to inform guideline programmes by founding the Guidelines International Network (G-I-N)*

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Clinical practice guidelines are regarded as powerful tools to achieve effective health care. Although many countries have built up experience in the development, appraisal, and implementation of guidelines, until recently there has been no established forum for collaboration at an international level. As a result, in different countries seeking similar goals and using similar strategies, efforts have been unnecessarily duplicated and opportunities for harmonisation lost because of the lack of a supporting organisational framework. This triggered a proposal in 2001 for an international guidelines network built on existing partnerships. A baseline survey confirmed a strong demand for such an entity. A multinational group of guideline experts initiated the development of a non-profit organisation aimed at promotion of systematic guideline development and implementation. The Guidelines International Network (G-I-N) was founded in November 2002. One year later the Network released the International Guideline Library, a searchable database which now contains more than 2000 guideline resources including published guidelines, guidelines under development, "guidelines for guidelines", training materials, and patient information tools. By June 2004, 52 organisations from 27 countries had joined the network including institutions from Oceania, North America, and Europe, and WHO. This paper describes the process that led to the foundation of the G-I-N, its characteristics, prime activities, and ideas on future projects and collaboration.

of clinical practice guidelines at professional, organizational, regional, and national levels.^{7–9} National institutions, experts, and healthcare providers specialise in the guideline field and participate in supranational networks. However, no established forum for communication on an international level existed until recently. Thus, in different countries seeking similar goals and using similar strategies, efforts have been unnecessarily duplicated. As a consequence, financial and structural resources risk being wasted and activities may be managed in a suboptimal way. Active cooperation between national and international guideline organizations could yield substantial synergies and even savings. This could occur with the exchange of existing guidelines, systematic reviews and evidence reports, by joint development of methodology, collaboration in literature searches for revision of guidelines, and organizing joint peer review of draft guidelines.¹⁰

Against this background the establishment of an international guidelines network was proposed in 2001 and occurred one year later, building on existing partnerships. In this paper we describe the background, goals, and first achievements of the Guidelines International Network ("G-I-N").

TOWARDS INTERNATIONAL COLLABORATION

Since the early 1990s many countries have established guideline development programmes. This has not ended concern about guideline quality, as methods of development differed across the programmes.^{11–15} In Europe this has resulted in the Recommendation of the Council of Europe on Guidelines Methodology,¹⁶ in a generic methodology for guideline appraisal (AGREE instrument),¹⁷ and in efforts to adapt international methodology for regional guidelines systematically.^{18–21} On the American continent the US-National Guideline Clearinghouse was established (www.guideline.gov)²² and a taxonomy for reporting guidelines has been proposed.²³ In Australia and New Zealand, as well as in Asia and Africa, activities aimed at the use of good CPGs are funded²⁴ or in development.²⁵

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Clinical practice guidelines are seen as powerful tools to achieve effective and efficient care.¹ Many consider that they bridge the gap between the growing stream of research findings and actual clinical practice.^{2,3} Both clinical practice guidelines (CPGs) and health technology assessments (HTAs) support the drive toward evidence based decision making, and both have their origin in concerns about the quality of care, inequalities in care provision, and increasing healthcare costs.^{4–6}

Many countries have built up experience in the development, appraisal, and implementation

Box 1 Quality domains of the AGREE instrument

- Scope and purpose
- Stakeholder involvement
- Rigour of development
- Clarity and presentation
- Applicability
- Editorial independence

Effective collaboration in evidence based health care requires that the methodological principles are common. The AGREE Collaboration developed a core tool for guideline evaluation (box 1) and provided a platform for discussion that revealed an increased international consensus and willingness to work together.⁷

In two research projects funded by the European Union, the AGREE Collaboration demonstrated an increasing harmonisation of the methodologies used by guideline agencies and programs around the world and provided a forum for guideline developers, researchers, and implementers to meet and share ideas.⁷

Following completion of the first AGREE project in March 2001, participants recommended that an international forum for organisations and individuals working with guidelines should be established. Several AGREE participants also worked in HTA where international networking has supported development for two decades.²⁶ To complement this, one aim of the second AGREE project was to establish an international network of excellence for the research and implementation of guidelines. A multinational group of guideline experts agreed with the initiative and consented (1) to evaluate the level of interest in systematic networking and bring the results for discussion in an open forum; and, based on this assessment, (2) to decide whether to establish an international guidelines network covering the production, implementation, and evaluation of guidelines.

THE G-I-N INITIATIVE AND SURVEY

The foundation of the Network was initiated by a multinational steering group and coordinated by staff of the Scottish Intercollegiate Guidelines Network (SIGN; www.sign.ac.uk) and the German Agency for Quality in Medicine (AQuMed; www.aqzq.de). The steering group involved leaders from European, American and Oceanian guideline development organisations (www.g-i-n.net) who had established working relationships from the AGREE project (www.agree-collaboration.org).

A structured questionnaire was issued in spring 2002 by email to all known national organisations (n = 88, 32 countries including WHO) working in the field of guideline production, appraisal, implementation and/or research. The questions addressed different issues (domains) and projects of interest for the proposed network, including information sharing, research on guideline development, research on implementability, research on implementation, education/promoting best evidence, collaboration between network members, outreach of the network, membership, structure, funding, activities, and name of the network.²⁷ Each item was scored on a 4-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree).¹⁷ The mean scores were calculated and items sorted by scores within each domain. Only domains and projects with a mean score higher than 2.9 were considered relevant.

The questionnaire was answered by 36 organisations (41% response rate) from 17 countries (Australia, Canada,

Denmark, Finland, France, Georgia, Germany, Great Britain, Iceland, Ireland, Lithuania, Netherlands, Portugal, Serbia, Spain, Sweden, USA) and WHO. All responders agreed with the idea of establishing a worldwide guideline forum. There was a broad consensus on issues and projects of the proposed network (table 1), and on its structure and organization (table 2).

The results of the survey were discussed in summer 2002 during an international symposium which was arranged before an HTA congress and attended by 200 experts from 30 countries.²⁸ Based on the survey results and the discussion, the steering group prepared a position paper outlining goals, structures, and key points of an international guidelines network for action and acceptance as a new organisational entity.²⁹

FOUNDATION, MEMBERSHIP AND ACTIVITIES OF THE NETWORK

In November 2002 the steering committee consented to the main objectives, areas of interest, and possible working agenda for the network (box 2) and founded the forum under the name of "Guidelines International Network (G-I-N)". Information about the network and invitations to join the Network as founder members were issued to over 100 organisations in 34 countries. The Network was formally constituted as a Scottish Guarantee Company and recognised as a Scottish charity in February 2003. The logo of the Network is shown in fig 1.

Table 1 Recommended issues and projects for an international guidelines network (only recommendations with mean scores >2.9 are shown)

Recommended issues and projects	Mean scores*
Information sharing (7/7 possible answers)	
Database of existing guidelines†	3.6
Library of guideline methodologies, tools, templates†	3.6
Database of implementation tools	3.5
Database of guideline reviews/comparisons	3.5
Database of background documentation†	3.5
Database of audit tools	3.4
Database of patient guidelines†	3.2
Research on guideline development	
Guideline updating, patient involvement, consensus/search methods	3.3–3.5
Research on guideline implementability	
Implementation tools, audit criteria, cost effectiveness, care pathways	3.0–3.7
Research on guideline implementation	
Strategies, links to education, incentives, barriers, health policy issues	3.3–3.6
Education on guidelines methodology (3/3 possible answers)	
Promoting AGREE criteria for guideline development†	3.8
Promoting AGREE instrument for guideline appraisal†	3.7
Promoting use of clearinghouses etc to avoid duplication	3.6
Collaboration between network members (3/3 possible answers)	
Prospective sharing of evidence review work	3.8
Sharing implementation and audit tools	3.7
Use and/or updating of CPG/evidence reviews by other members†	3.5
Outreach of new or prospective member (3/3 possible answers)	
Sharing evidence reviews with other programmes†	3.6
Advising on adaptation of existing guidelines†	3.3
Facilitating development of new programmes	3.1

*Mean Likert score: 4 = strongly agree, 1 = strongly disagree.

†Characteristics and activities of the current Guidelines International Network G-I-N (June 2004).

Table 2 Recommended structures and organisation of an international guidelines network (only recommendations with mean scores of >2.9 are shown)

Structures and organisation	Mean scores*
Recommended membership of the network (8/12 possible answers)	
Guideline developing organisations†	4.0
Guideline appraising organisations†	3.8
International organisations (e.g. European societies)†	3.6
Specialist societies, associations	3.3
Health professional bodies (e.g. Colleges)	3.2
Healthcare provider organisations†	3.2
Patient/consumer organisations	3.2
Government bodies†	3.1
Recommended structures of the network (5/8 possible answers)	
Non-for-profit organisation†	3.8
Executive Committee†	3.3
Confederate†	3.2
Board†	3.2
Secretariat (permanent)†	3.2
Recommended funding of the network (3/5 possible answers)	
Research grants	3.6
Other grants (non commercial)	3.4
Membership fee†	3.0
Recommended activities of the network (4/4 possible answers)	
Website†	4.0
Regular meetings (e.g. annual workshop/congresses)†	3.8
Database(s)	3.6
Publications (e.g. journal)	3.1
Recommended elements of the network's name (3/9 possible answers)	
Guidelines†	3.9
International†	3.6
Network†	3.6

*Mean Likert score: 4 = strongly agree, 1 = strongly disagree.

†Characteristics and activities of the current Guidelines International Network G-I-N (June 2004).

The membership is open to organisations and individuals involved in developing, disseminating, implementing, or evaluating clinical practice guidelines or otherwise active in the field of clinical practice guidelines. The eligible organisations are non-profit distributing bodies that work in accordance with international standards for CPGs and are transparent about their sources of funding.

Between December 2002 and March 2003 a total of 37 organisations agreed to become founder members of G-I-N and paid an inception subscription in addition to an annual fee to fund the Network's start up costs. By June 2004, 52 organisations from 27 countries had joined the Network including institutions from Oceania, North America, and Europe, and WHO (box 3).

In the first year the activities of the Network focused on establishing the legal and organisational framework, acquiring



Figure 1 Logo of G-I-N.

Box 2 Objectives and aims of the Guidelines International Network (G-I-N)

The objective of the Network is to protect the health of the general public by seeking to improve the quality of health care. Its aims are:

- To promote the systematic development, dissemination, implementation and evaluation of clinical practice guidelines.
- To promote international collaboration in guideline activities to avoid duplication of effort and to facilitate information sharing, education and knowledge transfer.
- To improve and, as appropriate, to harmonise methodologies for systematic guideline development, dissemination, implementation and evaluation.
- To identify priorities for and to support research relating to clinical practice guidelines and to facilitate the implementation of research findings into practice relative to the Object.
- To build links between relevant international organizations so as to improve coordination with clinical practice guidelines and other healthcare quality initiatives.
- To maintain a database of information of and relating to member organisations, their work programs, methodologies and background documentation.
- To prepare and organise, promote and implement training courses, exhibitions, lectures, seminars, conferences, events and workshops and to prepare, produce, edit, publish, exhibit and distribute articles.

members, presenting G-I-N at international conferences, and developing the website.

In line with the survey results, the website is the key tool supporting the Network's activities and communication. The cornerstone of the website is a searchable database where members can search for published and planned guidelines and related documents (such as evidence tables, search strategies, patient information). The development tools and training materials are open to the public. By May 2004 more than 2200 items of information about guidelines and their development had been uploaded by G-I-N members.

FUTURE PLANS

Over the next 3 years the Guidelines International Network intends to work with its members on developing methodology for guideline development, adaptation and implementation as well as updating and exchanging search strategies and evidence tables to underpin the guidelines.

Since the inception of the Network, members have been actively looking for ways to share the information stored on the website. These include the identification of shared priorities for guideline development topics (for example, screening and risk assessment of cardiovascular disease), the use of existing guidelines for local adaptation,³⁰ and the establishment of a standard architecture to facilitate the sharing and implementation of guidelines.³¹ The work is carried out by different task forces consisting of 4-6 active members. The Network also arranges at least one annual meeting to bring the guideline community together for discussion and review of cutting edge topics related to guideline development and implementation.

Box 3 Membership of the Guidelines International Network, June 2004

Australia

- Joanna Briggs Institute for Evidence Based Nursing & Midwifery
- NHMSC: National Health and Medical Research Council
- NICS: National Institute of Clinical Studies

Austria

- Austrian Association for Quality in Healthcare

Belgium

- CEBAM: Belgian Center for Evidence based Medicine
- WVVH: Flemish College of General Practitioners

Canada

- PEBC: Program in Evidence-based Care, Cancer Care Ontario

Denmark

- DACEHTA: Danish Center for Evaluation and HTA

Estonia

- Haigekassa: Estonian Health Insurance Fund

Finland

- DUODECIM: Finnish Medical Society Duodecim
- FINOHTA: Finnish Office for HTA FINOHTA

France

- ANAES: French National Agency for Accreditation and Evaluation in Healthcare
- FNCLCC: National Federation of Cancer Research Centres

Germany

- AEKB: Berlin Chamber of Physicians
- AEZQ/AQuMed: Agency for Quality in Medicine
- AWMF: German Association of Scientific Medical Societies
- BQS: German Federal Institute for Quality Assurance
- GBA: German Joint Federal Committee

Iceland

- Directorate for Health Iceland

Ireland

- RCSI: Royal College of Surgeons in Ireland

Italy

- ASR: Regional Health Agency Emilia-Romagna
- GIMBE: Italian Evidence-Based Medicine Group

Malaysia

- HTA Unit, Ministry of Health Malaysia

Moldova

- Moldovan Association of Perinatal Medicine

Netherlands

- ACCC: Dutch Association of Comprehensive Cancer Centres

- CBO: Dutch Institute for Healthcare Improvement
- KNGF: Royal Dutch Assoc. of Physiotherapy
- NHG: Dutch College of General Practitioners
- TRIMBOS Institute

New Zealand

- ACC: New Zealand Accident Compensation Corporation
- NZGG: New Zealand Guidelines Group

Norway

- Directorate for Health and Social Affairs

Poland

- PIEBM: Polish Institute for EbM

Portugal

- Institute for Quality in Healthcare

Romania

- CHPS: Center for Health Policies and Services

Slovenia

- Slovene Guidelines Group

Spain

- Josep Laporte Library Foundation, Barcelona
- OSTEBA: Basque Office for HTA
- REDEGUIAS: Spanish Network for Research on Guidelines

Sweden

- Socialstyrelsen: National Board of Health and Welfare

Switzerland

- CepiC: Clinical Epidemiology Center, Lausanne
- FMH: Swiss Medical Association

Turkey

- Ministry of Health: School of Public Health

UK

- CRD: Center for Reviews & Dissemination York
- NICE: National Institute for Clinical Excellence
- RCNI: Royal College of Nursing Institute
- SCHIN: Sowerby Centre for Health Informatics at Newcastle
- SIGN: Scottish Intercollegiate Guidelines Network

USA

- AHRQ: Agency for Healthcare Research & Quality
- NKF: National Kidney Foundation

International

- The AGREE Collaboration
- WHO: World Health Organisation

DISCUSSION

The proliferation of guidelines and concerns about their quality have led to the development of international collaboration between organisations and individuals active in the field of guidelines. The fast growth of the Guidelines International Network confirms that structured international partnership is needed.

It is important to note and learn from the challenges experienced in the first years of the Network. The diversity

Box 4 Content of the G-I-N Internet programme www.g-i-n.net (April 2004)

About GIN

- Organisation and management
- G-I-N activities
- Board of trustees
- Memorandum & Articles of Association
- G-I-N history

Guideline resources

- International Guideline Library (for members only)
- Development tools and resources
- Training materials
- Patient/consumer resources
- Guidelines from non-members
- Health topics collection

G-I-N members

- Links to websites of the G-I-N membership with search mode

News and activities

- Meeting/events diary
- Newsletter
- News from G-I-N members
- Collaboration: Workshop for G-I-N members (for members only)
- Training for members (for members only)
- Research (for members only)
- Notice board for members (for members only)

Related links

- Guidelines
- Evidence research
- Organisations
- Healthcare information
- Consumer resources
- Knowledge management in health care

Enquiries

- Enquiries: FAQ

Join G-I-N

- How to join, fees, benefit of membership

and cultural differences in guideline development programmes and their support have continued to present obstacles that are necessary to overcome. Many current and potential Network members are supported under different funding mechanisms, some more stable than others. Issues such as the role of industry in supporting guideline programmes are challenging, not only to the Network but to other international consortiums such as the Cochrane Collaboration and Health Technology Assessment International (HTAi). The Network has decidedly moved toward supporting developing organisations through training, partnerships and subsidised fees to conferences, to reduce the need for industry support. Language barriers continue to be a challenge but can be overcome. The lingua franca is English but resources are provided in multiple languages when possible. It is imperative that the true meaning or validity of a

Key messages

- There has been a strong demand for worldwide collaboration between national guideline programmes.
- In November 2002 the Guidelines International Network G-I-N was established as a charity, based on results of an international survey on the needs of guideline developers and users.
- G-I-N issues its International Guideline Library on www.g-i-n.net, enabling systematic search, comparison and dissemination of more than 2000 clinical practice guidelines from the G-I-N members (52 organisations from 27 countries in June 2004).
- The actual impact of G-I-N on improving the quality and use of clinical practice guidelines needs further assessment.

guideline or supporting document transcends translations, and care has been taken to ensure this.

Some Network members come from more mature programmes with long experience. The challenge of the Network is to provide a useful forum and resource for these more evolved programs. The Network Working Groups have met this challenge by convening around topic areas that are complex and ripe for investigation, harmonisation, or evaluation—for example, electronic architecture of guidelines, guideline adaptation, optimal issues in guideline updating, evidence grading. Finally, implementation of guidelines is a global issue. The Network recognises the importance of this crucial area and the work that needs to be done to increase the uptake and use of guidelines.³² This will be a continued focus of the Network for years to come.

In due course it will be important to evaluate the actual impact of the Network on programmes seeking to promote health care quality. Furthermore, links to other international activities and networks of evidence based medicine, continuous professional development and healthcare quality must be established and strengthened in order to guarantee sustainability of this initiative.

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