Online Guideline Development
Since 2009, the portal is offering tools and services for the development of clinical guidelines. It is not limited to a special workflow or organizational structure.

The focus of the portal is to improve medical research in quality, organization and cooperation by developing, expanding and providing efficient IT-infrastructures.

Clinical guidelines as evidence-based decision support have become more important in medical care. Their quality and medical value substantially depend on a systematic and transparent development methodology, which is very complex conventionally.

The guideline development portal supports the complete process for Internet-based development of clinical guidelines. It offers a communication platform for different sizes of author groups as well as extensive tools for an efficient development of the evidence-based or consensus-based guidelines.

### Sample Workflow

<table>
<thead>
<tr>
<th>GUIDELINE TOPIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Introduction</td>
</tr>
<tr>
<td>• Aim</td>
</tr>
<tr>
<td>• Patient group</td>
</tr>
<tr>
<td>• Coverage area</td>
</tr>
<tr>
<td>• Target user group</td>
</tr>
</tbody>
</table>

### EXTERNAL EVALUATION AND ADOPTION

- Pilot test
- External review
- Adoption
LITERATURE SEARCH
• Key questions
• Use of existing guidelines
• Systematic literature review

EVIDENCE
• Selection
• Assessment
• Evidence table

RECOMMENDATION AND CONSENSUS
• Formulation of recommendations
• Structured consensus online
• Consensus conference
Guideline overview

With the content tailored to guideline development you use a simple and straightforward navigation bar to select current news, timetable, jointly generated documents, tools for literature research and appraisal, ongoing online surveys and plenty more.

Members area

New appointments and your editing status of guideline documents in the guideline are viewable immediately at a glance and provide the information about the next steps.
Discussion of statements

Texts can be directly created in the working area of the portal and furthermore can be edited jointly with other participants. Therefore the portal offers an integrated text editor.

All modifications are immediately visible to other group members. Moreover, the participants can comment on the documents and directly discuss their contents. Text versions can be opened and compared with each other. Modifications are marked in colour and can be quickly identified.

<table>
<thead>
<tr>
<th>Version</th>
<th>Author</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hoffmann</td>
<td>29.01.2013</td>
</tr>
<tr>
<td>2</td>
<td>Müller</td>
<td>30.01.2013</td>
</tr>
<tr>
<td>3</td>
<td>Pfiffig</td>
<td>31.01.2013</td>
</tr>
<tr>
<td>4</td>
<td>Hoffmann</td>
<td>01.02.2013</td>
</tr>
<tr>
<td>5</td>
<td>Hoffmann</td>
<td>02.02.2013</td>
</tr>
</tbody>
</table>

Statement 1.3

Abdominal pain may be the initial symptom of Crohn’s disease. It is often accompanied by diarrhea, especially in those who have had surgery. The diarrhea may or may not be bloody.

Diarrhea CD Pohia at 2013-07-31 21:11
The nature of the diarrhea in Crohn’s disease depends on the part of the small intestine or colon involved. Ileitis typically results in large-volume, watery feces.

Reply

Diarrhea CD Pohia at 2013-07-31 21:11
The nature of the diarrhea in Crohn’s disease depends on the part of the small intestine or colon involved. Ileitis typically results in large-volume, watery feces.

Reply
**Administration of groups and participants**

The portal presents all information about the composition of guideline groups as well as all participants’ contact data and their roles within the development of the guideline. With a few clicks, the lists of groups and members can be called up.

A membership list identifies the most important participant contact information. Likewise it is also possible to contact the selected participant groups by using the email functions. A search function provides an easy way to find persons in the current guideline or all other guidelines with which the participant is involved.

**Literature management**

Easy import of results of investigation and fast preselection of literature on the basis of bibliographic data and abstracts in study groups. The research strategy is documented in the portal and can be accessed at any time for further details.
The administration of individual literature lists for study groups and thematics, as well as administration of key questions and assignment of relevant citations will be provided. In this case the portal supports the appraisal of applied literature with help of adapted evaluation forms (e.g. SIGN).

Subsequently to the appraisal of the literature a summary will be generated automatically. This will be displayed in form of an evidence table and predicts the quality of the studies.
By using online surveys, the efficiency and transparency of a guideline development can clearly be increased. In the portal, any number of rounds of Delphi surveys can be carried out and some complex consensus meetings can thus be dispensed with.

Each survey is performed by using individual created questionnaires. For every question, a colour-coded notice indicates if it is already completed or not yet answered, so open questions can be easily identified.

The CPG developers determine how the online voting should be organized. In most cases, single, non-repeated surveys will be used. But also repeated voting in the sense of the Delphi method are possible at any time. Usually, a voting has a duration of several weeks to give the participants enough time to answer all questions thoroughly.

To allow for an easy access the vital precondition is to be able to participate from any place in the world via Internet.

On the basis of dynamic lists, all participants can get information about their personal editing status. A reminder function presents the unanswered or incompletely answered questions.
Guideline coordinators and entitled participants can constantly observe the survey’s progress for questionnaires or for a single participant and take action when necessary. For example participants can be asked via e-mail to complete their input by using the reminder function.

For an objective assessment, all answers are anonymously stored and evaluated. Statistical evaluations of the questionnaires are dynamically generated and available during and after the survey. They provide detailed comments and information about the distribution of answers. Debatable points can be quickly and simply identified and edited in working groups.
Transparency and documentation

All content, like documents, discussion etc., provided during the guideline development process is stored on the platform. Making this information accessible for all participants increases the transparency of the development process significantly. However, access rights can be set individually as needed, i.e. to make documents only viewable for coordinators or one specific workgroup.

Finding everything stored on one place makes the documentation of the development process a lot easier. Some information are logged automatically, other can be stored manually on specially designed forms and everything can be exported to MS Word documents.

All content is archived on the platform and stays accessible for all participants after the end of the development process. When the next update of the guideline starts, new participants will get access to all the earlier guideline documents and discussions to review and learn from the last development process.

Administration of conflicts of interests

For an objective guideline work it is necessary to ensure that participants are not involved in multiple interests. This could influence the motivation to work on a guideline. Therefore, coordinators can evaluate submitted forms „conflicts of interests“.
Administrative Office

Leona Klemm
User Group – Med. Leitlinienentwicklung e. V. (registered association)
Hopfenstrasse 60
24103 Kiel / Germany
Tel: +49 431 597 5319
Fax: +49 431 597 3988
E-mail: l.klemm@cgs-usergroup.de

Technical Support

Torsten Karge
Charité – CBF, Medical Clinic for Gastroenterology
User Group - Med. Leitlinienentwicklung e. V.
Hindenburgdamm 30
12200 Berlin / Germany
Phone: +49 30 8445 3950
E-mail: t.karge@cgs-usergroup.de

Erik Wohlfarth
University Medical Center Schleswig-Holstein
User Group – Med. Leitlinienentwicklung e. V. (registered association)
Hopfenstrasse 60
24103 Kiel / Germany
Mobile: +49 1604478474
E-mail: e.wohlfarth@cgs-usergroup.de