Pilots are trained to fly aeroplanes, surgeons are trained to operate on patients, but who is trained to conduct epidemiological research? The first two statements are platitudes, the third is a question of genuine concern. Much, if not most, epidemiological research is done by colleagues with little or no formal training in epidemiology. This may be particularly true for Switzerland. Our country, thanks to Bernoulli, may have been ahead of modern epidemiology in the 18th century (Dietz & Heesterbeek 2000) but since then the road has been largely downhill, and neither clinical nor population-based epidemiological research have a strong tradition in Switzerland. Indeed, the poor quality of applied clinical research in Switzerland is a matter of current debate (Schweizerischer Wissenschafts- und Technologierat 2002). Against this background, recommendations on essential principles of good epidemiological practice (Altpeter et al. 2004), “written in good faith for the betterment of epidemiology in Switzerland” by the Epidemiology Group of the Swiss Society for Public Health are surely welcome. Or are they?

What audience, what purpose, what methodology?
Recommendations and guidelines are “systematically developed statements” and several bodies have formulated methods for developing scientifically sound guidelines (Shaneyfelt 1999). In this commentary we examine to what extent the EGEP guidelines follow guidelines on how to develop guidelines. Table 1 lists eight accepted methodological standards. These were developed in the context of clinical practice guidelines, but are equally helpful when examining methodological and reporting guidelines.

What is the purpose and intended audience of the EGEP guideline? We do not think that this is well defined at present. Should these recommendations mainly be used by researchers from other disciplines who lack training in epidemiology? In this case, recommendations that essentially consist of a check list (“describe, define, select, … publish”), with little explanation of the whys and why nots, or on the hows and how nots will be of limited use. For example, the recommendation to analyse the data “beginning with descriptive and proceeding to inferential statistics” and to “determine the possible confounders and effect modifiers” will be of little help to those not familiar with these terms. On the other hand, recommendations such as “define what kind of data are needed to answer the research question” or “plan for the needed time, money, and personnel” are stating the obvious. Other statements are ambiguous to any audience, for example “plan for an analysis

Table 1 Methodological standards on guideline development

<table>
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<tr>
<th>Standard</th>
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<tr>
<td>1. Purpose of the guideline is specified</td>
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<tr>
<td>2. Rationale and importance of the guideline are explained</td>
</tr>
<tr>
<td>3. The participants in the guideline development process and their areas of expertise are specified</td>
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<td>4. Intended audience or users of the guideline are specified</td>
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<td>5. Method of identifying scientific evidence is specified</td>
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<td>6. The evidence used is identified by citation and referenced</td>
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<td>7. The method by which the guideline underwent external review is specified</td>
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<tr>
<td>8. An expiry date or date of scheduled review is specified</td>
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</table>

Adapted from Shaneyfelt et al. (1999)
that can handle eventual anomalies in your data”. This state-
ment could easily be misunderstood and the EGEP recom-
modation might be inappropriate, depending on what exact-
ly is meant by “anomalous data”.
What can be learned from earlier initiatives? In the case of
the Consolidated standards on the reporting of clinical tri-
als (CONSORT) (Moher et al. 2001), the working group not
only published the result of its work (i.e., the guidelines),
but also an explanatory document (Altman et al. 2001) giving
the rationale, background information and relevant examples
for each item of the statement. This additional article aimed
to make the process of guidelines develop-
ment more transparent and helped to increase the accep-
tance of the proposed guidelines. The recent initiative to
develop standards of reporting in diagnostic research
(STARD) followed a similar strategy (Bossuyt et al. 2003a;
2003b). Unfortunately, the methods of guidelines develop-
ment are not explained in the case of EGEP. For instance, it
remains unclear how the items were selected and what
empirical evidence or theoretical considerations underpin
that selection.
In addition to a transparent methodological approach to
guideline development, it is essential to subject the draft rec-
ommendations to review by the epidemiological community,
including review by future users. Wide circulation among
opinion leaders and intended users, followed by revisions
taking comments into account, will improve quality, publi-
cise the effort and broaden ownership. This, and other com-
mentaries accompanying the publication of the EGEP rec-
ommendations can be seen as a form of peer review, but this
is post-hoc and therefore unsatisfactory.

What about implementation?
The development of recommendations should be linked to
a thoughtful implementation strategy – one of the most
consistent findings in research of health services is the gap
between evidence and practice (Grol & Grimshaw 2003).
Indeed, publishing the EGEP recommendations in an Eng-
lish-language specialist journal will have limited impact. If
the authors are serious about the “betterment of epidem-
iology in Switzerland” then considerable efforts will be
needed to explain, promote and implement the EGEP
guideline. These efforts should reach beyond the narrow
Swiss epidemiological community.
Setting up a dedicated website has been useful for dissemi-
nating reporting guidelines (see www.consort-statement.
org). Experience with clinical practice guidelines demon-
strates that changing professional behaviour is difficult, but
not impossible (Grimshaw et al. 2004). Various strategies
targeting obstacles at different levels are required, and
education needs to be interactive and continuous and
include discussion of the relevant evidence. Some barriers
to change will be associated with the organisation of the
research process, resources, leadership and the political
environment, and difficult to tackle in the short term.

Conclusions
The publication of recommendations for good epidemi-
ological practice is a welcome initiative. The current version
of this guideline should, however, be seen as a living docu-
ment, which will evolve over time in order to contribute to
improving epidemiological research in Switzerland.

Erik von Elm and Matthias Egger

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