

Next steps

Continuous data collection includes the number of vitamin B12 tests, the number and rate of appropriate use of Gastrin tests, the number of Schilling tests, and the number of gastroscopies performed where pernicious anaemia was the indication. For the moment no further active intervention will take place. Data will be collected periodically with performance feedback to the primary care physicians compared with average performance in the district. Interventions will be planned for physicians with poor performance on the quality indicators.

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10**"Netaudit": an original Italian online tool for research and quality improvement in general practice**

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Abstract

Brief description of context. There are limited opportunities for scientific research and many problems in carrying out quality improvement (QI) initiatives in Italian general practice. A national confederation of small groups of Italian GPs has created a virtual network called "Netaudit". QI activity in the form of audits related to daily activity in GP practice is undertaken by each group and supported by a Coordinator.

Outline of the problem. The aim of "Netaudit" is to promote QI and research in General Practice by means of audit based activity using electronic medical records and conducted through use of the Internet by virtual small groups of general practitioners.

Key measures for improvement. "Netaudit" is an instrument for professional growth. Clinical work based on output from these audit quality circles enables GPs to provide good clinical care for their patients.

Process of gathering information. Every three months an audit idea is launched through the email lists by a group of GPs or by a single GP. Literature reviews aimed at defining shared audit protocols, with patient inclusion and exclusion criteria, accepted quality criteria, indicators and standards mainly drawn from EBM literature is then added to the discussion. Data is extracted from electronic patient records according to the audit's protocol and transferred onto questionnaires using freeware software.

Analysis and interpretation. All the data are collected and statistically analysed. The results are then published in a quality journal, allowing GPs to compare their medical behaviour and performance with those of their colleagues and with ideal standardised quality requirements.

Strategy for change. All the procedures involved in the creation of the audit protocol on the net, from the choice of the topic, to the evaluation of the results, use the collective feedback in the journal to encourage individual change processes.

Effects of the change. Five main audit projects have been proposed and completed. "Netaudit" records the performance level and makes recommendations for change.

Next steps. "Netaudit" spreads the culture of research and quality and allows a powerful research and QI methodology to be established and tested. GPs become prominent, active participants who suggest topics, draw up protocols, lead audit and research. The subsequent sharing and discussion of results improves the adherence to "good clinical practice".

Brief description of context

There are no General Practice (GP) University Departments in Italy. Therefore there are limited opportunities for scientific research and many problems in carrying out quality improvement (QI) initiatives. However, an increasing number of General Practitioners (GPs) are oriented towards research and audit. In the past research and QI initiatives were seen as areas far removed from the pragmatic heart of Italian General Practice; now thanks to developments in the computing and internet fields, research and QI are considered very important in keeping GPs up to date. In order to progress further this new initiative has to come up with solutions to meet the needs of predominantly single-handed GPs particularly in relation to time and resources.

A confederation of small-integrated groups of Italian GPs has created a virtual network called "Netaudit". QI activity in the form of audits related to daily activity in GP practice is undertaken by each group and supported by a Coordinator. The data used in the audit is drawn from the medical records of all the GPs involved. At present "Netaudit" has 120 GP members and 18 Coordinators, geographically distributed throughout Italy. Each GP must agree to partake in at least one "Netaudit" research project per year.

"Netaudit" was officially launched in February 2001 thanks to the initiative of Franco Del Zotti and Ezio Brizio who created two "emotional" stimuli: a slogan "Netaudit: A simple way toward Research and Audit only for GPs in less than 3 hours" and a logo considered a mixture of renaissance and "post-modern" (see the homepage at <http://www.netaudit.org>)

Outline of the problem

Each GP is required to spend no more than 2-3 hours downloading the data from his PC in order to participate in the project, yet the number of "Netaudit" members allows a large amount of data to be collected. To maintain confidentiality, direct automatic data transmission from personal records does not take place. Data remains anonymous and is recorded on a universal form generated by free-ware software. The main requirement for admittance to the "Netaudit" project is to have at least 400 patients, 70% of whom must have a computerised patient record file. There are no limitations regarding the type of software employed in the practice except that all members must use computerised records where simple statistical queries can be inserted.

The aim of "Netaudit" is to promote QI and Research in GP by means of:

- An orientation tool for research in the field of quality, explaining medical audit and its methodology (an Audit web-book with new chapters added monthly).
- A clearly defined methodology for virtual working groups, with two discussion boards: one for the Coordinators and one for all the other participating GPs. These boards allow the suggestion and discussion of new ideas by means of horizontal research among peers, who can share the results of literature reviews and the final protocols. On conclusion, the chosen electronic form is filled in

- and attached to the file area expressly reserved on the net for this purpose.
- A methodology for the development and assessment of new proposals for audit topics. (Both groups and single-handed GPs can present proposals).
- A methodology for the publication of results usually in the Quality and Qualities in General Practice (QQ) journal. (This bilingual journal, in Italian and English, aims to publish research related to a quantitative assessment of the quality of GPs work, with a special emphasis on the publication of qualitative studies, which represent the true wealth of General Practice) An English language version of the journal can be viewed on line at www.rivistaqq.it.

Successful implementation requires:

- a) Competent technical Co-ordinators;
- b) Organisational competence by the Coordinators of the 18 groups;
- c) Web tutorials on Personal Computers (PC), specific internet capabilities (e-mail attachment, use of zip files, etc.), freeware software (Epidata) for questionnaires or for specific research protocols, data collection and analysis;
- d) A website: <http://www.netaudit.org>
- e) A closed email list for all Coordinators (neaudit@yahoogroups.com)
- f) A closed email list for all members (nataudit@yahoogroups.com);
- g) The creation of periodic online events (chatroom; teleconference, etc.);
- h) The availability of technical assistance for all those who wish to present "Netaudit" research data at Italian and European congresses [SIMG (Italian Society of General Practice), SIQAS-VRQ (Italian Society for the Quality of Health Care - Quality Assurance), etc; EGPRN, EQuIP, WONCA].

Key measures for improvement

Netaudit is an instrument for professional growth, dealing with the commonest elements of daily practice: socially important chronic diseases such as diabetes, asthma, hypertension and cardiovascular risk factors, hormone replacement therapy, etc. Clinical work based on output from these audit quality circles will enable GPs to provide good clinical care for their patients.

However a few patients may criticise their GPs and the quality of their professional abilities. There is insufficient quality assessment of GPs work in Italy and where it exists, it is mainly focused on the number of prescriptions dispensed and in expenses incurred. Personal self-assessment is rare. Through the "social game" of group emulation, "Netaudit" promotes the diffusion of concepts and tools capable of improving health resources (using principles of Evidence Based Medicine (EBM)) and meeting social expectations. The active involvement of patients' representatives in "Netaudit" could open up new perspectives: e.g. reducing long waiting lists to meet GPs, and improving the secretarial and nursing work, etc.

Process of gathering information

Every three months an audit idea is launched through the email lists by a group of

GPs or by a single GP. One could imagine "Netaudit" as a transparent aquarium where it is possible to follow different protocol ideas (fish) even when these are going (swimming) in different directions.

Protocol ideas (or fish) are nourished with on line comments and suggestions, discussions and debates. Literature reviews aimed at defining shared audit protocols, with patient inclusion and exclusion criteria, accepted quality criteria, indicators and standards mainly drawn from EBM literature are then added to the discussion. The Group Assistants (statistics experts) and the technical Coordinators, using the audit protocol, help GPs in the simple extraction and Structured Query Language (SQL) of the data.

When the electronic form is ready, participating GPs can fill in their performance data as requested by the audit's protocol. This last step is a transfer onto "ad hoc" questionnaires using "Epidata" (www.epidata.dk). (Fig. 1)

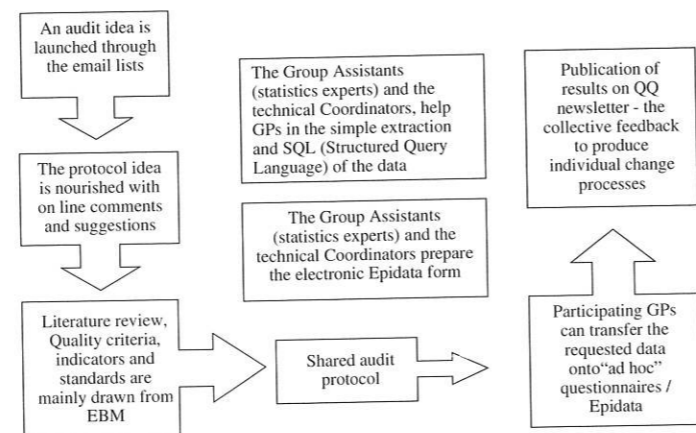


Figure 1. Steps in 'Net-audit'.

Analysis and interpretation

When all the data are collected and statistically analysed, a clear picture of the actual level of performance on the specific topic under review in all the GP groups emerges. The subsequent publication of the results in the QQ journal provides a perfect means for GPs to understand the problem and its evaluation. The recommendations based on literature review, EBM or on guidelines are underlined, the data and the statistics are explained, thus allowing GPs to compare their medical behaviour and performance with those of their colleagues and with ideal standardised quality requirements.

Strategy for change

Netaudit is a completely voluntary quality tool without any formal, bureaucratic or public controls. All the procedures involved in the creation of the audit protocol

on the net, from the choice of the topic, to the evaluation of the results, use the collective feedback in the QQ journal to encourage individual change processes.

Effects of the change

So far, five main audit projects have been proposed and completed: NetMETFO (Audit on obese type II diabetic patients and on the use of Metformin), NetASA (Audit on Aspirin treatment in patients with history of myocardial infarction), NetASMA (on asthma therapy), NetINSU (insulin and type II diabetes), RAMISTAT (use of ace-inhibitors and statins in patients with high cardiovascular risk). Some examples of outcomes from this data are as follows:

- NetMETFO suggested that GPs frequently do not take factors such as weight and eating habits of their diabetic patients into consideration when managing their condition. The use of metformin is still very low (23%), considering that contraindications are present in only 11% of cases.
- NetASA demonstrated that the use of low dose aspirin after acute myocardial infarction was correct (95% of patients) and the recommendations made were to maintain the suggested and achieved standards;
- RAMISTAT confirmed that prescribing of statins and ace-inhibitors (ramipril) did not follow the recommendations of the HOPE and HPS trials.
- NetASMA showed that adherence to recommendations for the use of first line drugs (steroids) was good, but that the use of long-acting β_2 -agonists was higher than expected even in patients suffering from mild asthma.

These audits demonstrate that this quality tool is highly efficient in involving a considerable number of GPs in QI initiatives. "Netaudit" records the performance level and makes recommendations for change.

Next steps

The social interaction involved in "Netaudit" represents a key element in its success as it overcomes the boredom and the difficulties of self-audit offering the prize of the ability to continue in the interaction.

"Netaudit" is a tool that makes original and powerful use of the capacity offered by computing systems for data collection by GPs; the increasing use of the Internet in daily practice and by the availability of freeware software systems for statistics and calculations (Epi-info and Epidata). "Netaudit" spreads the culture of research and quality, allowing a powerful research and QI methodology to be established and tested. GPs become prominent, active participants who suggest topics, draw up protocols, lead audit and research. The subsequent sharing and discussion of results improves the adherence to "good clinical practice".

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