Quality improvement report

The aim of quality improvement reports is to answer the following questions:

- (1) What was trying to be accomplished?
- (2) What makes a change an improvement?
- (3) What was the mechanism for change?
- (4) What lessons have been learnt?
- (5) What are the next steps?

Management of sickness absence: a quality improvement study from Slovenia

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Abstract

Problem

- A need to improve the communication system between general practitioners (GPs) and the national health insurance institute's (NHII) committee of experts for the referral and approval of sickness leave for patients.

Design

- A structured low cost quality improvement method for motivating GPs to change their current practice was developed.

Background and setting

- The study was done in Kranj health district in Slovenia. GPs and members of the committee of experts identified potential problems using a cause and effect diagram. The study period for baseline data collection was from November 1996 to December 1996, and the re-evaluation took place in May 1997.

All GPs in Kranj health district (n=78) took part. Data were collected on 443 patients referred by GPs to the NHII committee during the first phase of the study and 590 patients during the re-evaluation phase.

Key measures for improvement

- Reducing the number of cases reported by members of the committee of experts as causing problems after the intervention. Feedback to GPs about the success of the process.

Strategies for change

- A combination of methods was used: posted feedback, a guideline on record keeping, and a guideline, called AID (analysis of incidental deviations from expected service—in Slovene: analiza izjemnih dogodkov), on processing medical documentation.

Effects of change

- An overall drop was observed in the number of cases that caused problems (from 44% to 26%, $p<0.001$). The most common problem at baseline (19.4% of the problems) was the seventh most common at the re-evaluation, then contributing only 9.2% of total problems ($p=0.02$).

Lessons learnt

- The results support a quality improvement philosophy that empowers "owners" of the process to be the key resource in managing change, and they show the importance of the inner motivation of those involved. Despite working in a country undergoing transition, medical professionals were still willing to improve their performance. Nevertheless, structures and funding are needed to foster quality improvement initiatives and implement national policy on quality in health care.

General practitioners (GPs) in Slovenia are responsible for the management of sickness leave (box 1). They have full independence in assessing a patient's ability to work and in approving sickness leave for the first 30 days off work. The national health insurance institute (NHII) has responsibility for compensating the employer for sickness leave that exceeds 30 working days (box 2), and approval for sickness absence for more than 30 days is subject to assessment by the NHII committee of experts. A referral from the GP must be sent within 30 working days (from the first day of absence

from work because of sickness) to obtain approval by the committee, but problems may occur in communications between primary care and the committee of experts.^{1 2} Referrals to the committee are therefore an appropriate issue for quality improvement activities.

The aim of this project was to assess the quality of GPs' referrals to the committee of experts, and by posted feedback and guidelines on medical record keeping, to improve GPs' performance.

Several methods for quality improvement, whether used alone or in combination, have

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Accepted 22 June 1999

Slovenia is experiencing a transition in its healthcare system; the reforms began in 1992. New healthcare and insurance legislation was adopted, introducing many completely new features to the healthcare system. The main features are:

- Introduction of a health insurance system of payment
- Planning through negotiations between the medical and pharmaceutical chambers, the ministry of health, and the national health insurance agency
- Introduction of private practice
- Introduction of a system for providing patients with a personal GP.

The government and parliament have responsibility for planning coverage of health services from the NHII budget and the rate of contributions for compulsory health insurance. They also approve the plan for healthcare delivery and services. Based on legislation, the responsibility of the state is to prepare the network of healthcare institutions. The network comprises: public primary healthcare centres; private GPs and dentists; pharmacies; specialist services; and public hospitals. Three parties are involved in the negotiation of the healthcare delivery programme and the purchase of services at the national level. They are: the NHII (representing the main financier and healthcare users), the medical chamber and the association of health care institutions (representing the medical profession), and the Ministry of Health (representing the state).

NHII

As a third party, the NHII is responsible for the contractual financing of healthcare providers and direct reimbursement of some patients' expenses directly to patients. Primary health care is paid through a contract, based on a combination of capitation and fee for service systems. The fees cover approximately 50% of primary healthcare funding and include virtually all procedures (consultations, minor surgery, home visits, etc). The remaining funding is covered by capitation based on a list of registered patients. Hospitals are still paid by the number of days of stay.³

Box 1 The Slovenian healthcare system in transition

been shown to be effective.⁴⁻⁵ However, most are less suited to use across interfaces between organisations that may interact in a provider/customer relationship, and therefore a method named AID (analysis of incidental deviations from expected service (variations)—in Slovene: analiza izjemnih dogodkov) was developed. It consisted of a combination of methods including systematic monitoring of performance by the user, feedback to the provider of the service, and guidelines on selected topics. The method follows the steps of the quality cycle.⁶

Outline of problem

In Slovenia, GPs are responsible for assessing and managing employee sickness leave, but leave greater than 30 days must be approved by

The national healthcare system in Slovenia can be described as a combination of the Beveridge and Bismarck models. The Bismarck insurance model of financing health care is used, but for political reasons there is only one insurance company in Slovenia—the NHII. The task of controlling the healthcare budget in Slovenia is left to the NHII. The main source of the NHII budget consists of compulsory health insurance, which is partly derived from a percentage deduction from the wages of employees and other personal incomes, and in part comes directly from employers. Every inhabitant of Slovenia is insured through his employment status, or unemployed through local communities. Compulsory health insurance covers over 80% of all healthcare costs. Through the purchase of voluntary insurance copayment, the remaining healthcare costs and additional services provided to the customer above the basic level can be assured.³

In this system employees have the right to receive payment from employers when on sickness leave. For the first 30 days, the responsibility for payment lies with the employer. The personal GP has authority to assess the patient's ability to work and issue the sickness leave for the first 30 days off work. The NHII is responsible for compensating the employer for sickness leave exceeding 30 working days.

Box 2 The Slovenian NHII

the NHII committee of experts. Often communication breaks down between the two groups which results in delays in processing claims. The aim was to identify a method of improving this process.

At the time of the study, there were 78 GPs in the Kranj health district, working in six primary healthcare centres. Discussions were held with the GPs at the regular internal meetings of the health centres, and with members of the NHII's committee of experts to identify their perceptions of possible causes for problems in the sickness leave approval process. Four sources of problems were identified, with a subset of more frequent causes. To define them in more detail, we drew a cause and effect diagram of possible problems in the sickness leave approval process (fig1). Audit has often only a limited impact on the identified problems and their organisational causes unless formal quality improvement measures are also undertaken. The calling of individual patients to be seen by the NHII's committee of experts is often related to the problems in the GPs' referral process. Consequently, it was this referral process that was chosen for quality improvement procedures in this project.

Design

DATA COLLECTION

No data were routinely collected about the problems in the referral process. A structured form for data entry was used therefore to collect information about the following problems:

Figure 1 Cause effect diagram of possible problems in the sickness leave approval process.

- No investigation results available
- Discharge letters or other documentation not available
- Data on the patient's employment not available
- Provisional absence plan not given
- More than seven days delay in referral
- Description of health status at the time of referral not included in the record
- Description of health status at the beginning of sickness leave not included
- The GP could manage the sickness leave process without referral
- Inappropriate record keeping
- Unclear first date of absence
- No data on current treatment of the patient
- Reason for sickness leave not clearly defined.

The project was conducted in two phases. From November 1996 to December 1996 we collected baseline data on the problems encountered in the sickness leave approval process in the Kranj health district. All the cases in the approval process in the study period were included. One of the members of the committee was responsible for entering the nature of the problem (when one was identified) in the structured data collection form. Three committee experts were involved and they used identical criteria throughout the project.

Figure 2 Pareto chart showing the problems experienced by the committee of experts approving sickness leave absence over 30 days that can be improved by GPs before the intervention. A total of 196 ($n=443$; 44%) cases showed some deviation from the expected practice. Bars are shown in descending order showing percentages of identified problems. Line chart shows cumulative frequency. 1=no investigation results, discharge letters or other documentation lacking, 2=missing data on the actual job, 3=missing absence plan, 4=more than 7 days delay in referral, 5=lacking description of health status at the time of referral, 6=GP could manage sickness leave process alone, 7=inadequate record keeping, 8=lacking description of health status at the beginning of sickness leave, 9=unclear first date of absence, 10=no data on actual treatment of the patient, 11=reason for sickness leave is not clear.

Figure 3 Pareto chart of the problems experienced by the committee of experts approving sickness leave absence over 30 days after the intervention and implementation of change. A total of 152 ($n=590$; 26%) cases still showed some deviation from the expected practice. Bars are in descending order showing percentages of identified problems. Line chart shows cumulative frequency. 1=no investigation results, discharge letters or other documentation lacking, 2=missing data on the actual job, 3=missing absence plan, 4=more than seven days delay in referral, 5=lacking description of health status at the time of referral, 6=GP could manage sickness leave process alone, 7=inadequate record keeping, 8=lacking description of health status at the beginning of sickness leave, 9=unclear first date of absence, 10=no data on actual treatment of the patient, 11=reason for sickness leave is not clear. The arrow shows the first cause for problems on the baseline measurement, now in seventh place.

Key measures for improvement

Because the greatest problems were with record keeping—no investigation results, discharge, letters, or other documentation lacking; missing data; and missing absence plans. These were the areas where greatest improvement could be made.

Strategies for change

Guidelines about problem oriented medical record keeping⁷ and some technical aspects of communication between GPs and the committee were developed by the Society for Slovene Family Medicine (similar to the UK Royal College of General Practitioners) and sent to the GPs (posted feedback). The guidelines, together with a report of the findings of the first set of data, were sent to all GPs in the district. In addition, the results were presented orally. No other intervention for implementing change was used.

In the second phase, after a six month period following the implementation of guidelines, in May 1997, the second data collection was undertaken using the same method as in the baseline data collection. Statistical analysis was undertaken using Epi-Info.

Analysis of problem

In the first phase, 443 cases were referred to the committee of experts during the study period. In 196 (44%) cases, various “deviations” from expected practice caused problems to the committee (fig 2).

A Pareto chart showed that the greatest number of problems (19.4 %) was caused by the lack of investigation results, discharge letters, and other relevant documentation (fig 2). The first three causes (no investigation results, no discharge letters, other documentation lacking; missing information about the patient's job; and missing absence plan) contributed almost 50%

Figure 4 Relative frequency of problems at the beginning of the project (before; $n=443$) and after the implementation of change (after; $n=590$) showing the decrease of the magnitude of the number of referrals seen as a problem. 1=no investigation results, discharge letters or other documentation lacking, 2=missing data on the actual job, 3=missing absence plan, 4=more than 7 days delay in referral, 5=lacking description of health status at the time of referral, 6=GP could manage sickness leave process alone, 7=inadequate record keeping, 8=lacking description of health status at the beginning of sickness leave, 9=unclear first date of the absence, 10=no data on actual treatment of the patient, 11=the reason for sickness leave is not clear.

of the problem cases. This finding prompted the choice of intervention strategy, concentrating on medical record keeping.

Evaluation of change

In May 1997 we undertook the second data collection to assess whether the desired improvements in performance had occurred. A total of 590 referrals were made during this period, but problems were detected in only 159 (27%). The difference in the proportion of causes with problems was statistically significant ($p<0.001$). In addition to fewer total problems overall, there was also a change in the order of these problems. Figure 3 presents the distribution of the problems.

The most common problem at the baseline measurement (no investigation results, discharge letters or other documentation lacking), with 19.4%, fell to the seventh most common at the second data collection, contributing only 9.2% ($p=0.02$). Figure 4 shows the frequency of problems in relation to the total number of cases at the baseline measurement and after intervention.

Lessons learnt

In this study, the impact of a low cost quality intervention strategy on communication between the GPs and the committee of experts of the NHII was investigated. There were significant changes in the behaviour of GPs, suggesting that a combination of strategies (posted feedback to the providers and guidelines for selected topics) improved the quality of communication as indicated by the number and type of problems encountered by the committee of experts. The results show change in the desired direction in two ways: there was an overall drop in cases regarded by the members of committee as presenting problems. Also, the ranking of perceived problems changed. The most striking change was observed with the most common problem in the baseline measurement—GPs did not communicate all available discharge letters and other information on patients' clinical status.

Communication between GPs and the committee of experts resembles a provider-customer relationship in which problems are not usually amenable to managerial quality improvement strategies. In this environment, the AID method proved to be an effective tool. The results also confirm that a combination of quality improvement strategies can be effective in promoting change. Because the communication between GPs and the NHII committee of experts in our country resembles the interface between primary and secondary care, the methods may also be applicable across that interface. However, the study design and the specific topic do not allow the results to be generalised to other problems of communication across interfaces. The results do, however, shed some light on the quality of communication between provider and customer. Further work will help to understand the applicability of this approach to other quality improvement situations. The long term effects of this quality improvement process should be examined through periodic re-evaluation of referrals to the committee, and when necessary additional motivation strategies will be useful. We plan an annual re-evaluation with feedback to the providers to maintain change and improve practice towards better communication between GPs and the committee of experts. More complex strategies may be needed to achieve even better outcomes.

The results from this study support the quality improvement philosophy that empowers owners of the process, in this case GPs, to be the key resource in managing change. They show the importance of the inner motivation of all parties involved in the process. The change occurred without any other expensive motivating strategy. Informal comments from GPs indicated that feedback was acceptable to them, and they felt responsible to their patients for making the procedure easier. In the context of a country in transition, medical professionals remained willing to improve their practices. Nevertheless, the structures and funding to foster quality improvement initiatives and to implement national policy on quality in health care are needed.

The support of the committee of experts of the NHII in data collection and all GPs in Kranj Health Care District who took part in this study is acknowledged.

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