

Quality improvement in primary health care 1997-2001 for a high-risk urban population segment of problematic opiate users through expert-assisted quality circles for GPs, taking hepatitis C care as an example

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Brief description of context:

For the last ten years, the population segment of “problematic opiate users” in Vienna has been estimated at around 10,000 out of a total population of 1.6 million, but an actual number of 5,000 to 20,000 affected persons cannot be ruled out (Uhl and Seidler 2000). The “total life-time prevalence of problematic illicit drug use” is roughly estimated around 1% of the Austrian population. For a comparison, “total life-time prevalence of alcoholism” in Austria was estimated at around 10% (Uhl et al. 1999).

In 1987, legislation on substitution treatment was passed for the first time in Austria. It was the first version of the Decree on Oral Substitution Treatment for Drug Addicts (“Substitution Decree”). A specification in 1998 listed substitution therapy as one of the health-related measures indicated in the case of drug abuse. The issuing of legislative measures like the “Substitution Decree” falls under the authority of the Austrian Federal Ministry of Social Security and Generations (FMSG). On this general legal basis, different organisational structures were developed by the Austrian federal provinces. Most provinces opted for centralised structures. In Vienna, where the largest number of substitution patients are being treated, the initiative to improve ambulant care for such patients came from the municipal health authorities, the social health insurance administration, as well as the Vienna Medical Association. The involvement of GPs was preferred over hospital-based psychiatric treatment because of their professional interest in personal patient care and their familiarity with long-term treatment.

Substitution treatment in Austria is specially, but not exclusively, prescribed for pregnant women, patients with HIV and persons addicted to opiates for more than one year.

Treatment is to be carried out by doctors familiar with the problem of addiction. They may be psychiatrists (and neurologists) or other physicians with special experience or knowledge in the field of treating addicts. The patient's decision to stop using narcotics under illegal circumstances and to initiate medical treatment of his diseases leads him to a doctor. If the doctor decides that opiate substitution therapy is indicated, a treatment contract may be signed by the patient and the doctor. The substitution substances are generally available against presentation of a long-term narcotic drug prescription valid for a maximum period of one

month. The prescription is to be checked and signed by a public health officer. During the first stage of treatment, the patients must go to a pharmacy every day (except on week-ends) to take the substance there. The physicians must carry out regular examinations such as checks of the patient's state of health and urine analysis. The Federal Ministry for Social Security and Generations may be informed about the beginning and the end of substitution treatment by the supervising doctor if the patient gives his consent. The new Viennese setting of combined and multi-faceted interventions (Grol 2001) which is backed up by legislation, special funding and financial incentives (additional consultation fees paid by the social insurance) and evidence-based guidelines has been functioning since spring 1997. It includes GP participation in one continuous medical education (CME) starting workshop which lasts one day, as well as attendance of at least two expert-assisted quality circles each year, which may be characterised as highly interactive further training meetings. The attending and sometimes teaching experts are GPs, psychiatrists, psychotherapists and social workers specialising in this kind of health care. Up to the present, this quality improvement setting has been accepted by 191 GPs in Vienna who work on a contract basis with the social health insurance association. In the framework of this setting, a whole range of topics concerning numerous aspects of ambulant care in the opiate substitution programme have been discussed by the participating GPs.

Hepatitis C care is one topic out of many among the issues discussed. It is an important question, since about 80.3% (Gombas et al. 2000) of the respective population is infected by a hepatitis C virus necessitating constant disease monitoring for decades.

In Mai 2001, 3,270 patients were receiving ambulant care in Vienna (Table 1), equivalent to 69% of the opiate-substitution prescriptions issued by GPs per month (Table 2).

Table 1: Opiate substitution prescriptions in Mai 2001

Total number of prescriptions issued: 3,741	
General practitioners	69% (n=2584)
Specialists (psychiatrists)	16% (n=596)
Additional dispensing Facilities	15% (n=562)

Table 2: Prescribed substances

Prescribed substances	
Methadone	54.7 % (n=1787)
Oral morphine	35.8 % (n=1170)
Buprenorphine	8.5 % (n=278)
Others	1.0 % (n=35)

The legal framework for co-operation among GPs, psychiatrists, psychotherapists and social workers usually requires more frequent consultations of health professionals than is customary.

Outline of problem:

Although the feedback received in general was surprisingly favourable, an evaluation of the overall quality improvement actually achieved through the new setting of this particular QI project seemed to be necessary.

General practitioners in Vienna extended their competence as physicians substantially; how much enabling support did they receive by attending expert assisted quality circles?

The intention of our study was to investigate the impact of quality-circle participation on quality improvement of primary health care in terms of changes of doctors' attitudes towards patients, on doctors' awareness of patients' health problems and to find out about their knowledge of criteria helping GPs to deal with the complaints at hand. Furthermore, case development and treatment decisions were to be reviewed.

Key measures for improvement:

For this purpose, hepatitis C care was chosen to serve as an "indicator diagnosis". In 1997, hepatitis C treatment was not a very important topic of primary health care in Vienna. The medical records of different GPs contained very few remarks on this complaint. One GP's records, for example, contained remarks on hepatitis C in 14 cases during 1993-1996, while for 1997-2001 the respective number rose to 143 in the same practitioner's records. Thus, the awareness of Viennese GPs of hepatitis C was rather low before 1997, but it increased substantially in subsequent years.

We designed a semi structured questionnaire for telephone interviews with family physicians who used to be attending the expert assisted quality circles to estimate the quality of their work in terms of

- Number of years of experience with opiate substitution therapy
- General attitudes towards drug dependend patients
- Their experience with screening, monitoring and treating patients for hepatitis C
- Their criteria of clinical decisions respective hepatitis C case management
- Their sources of information on hepatitis C
- Their judgement about cooperations with specialised outpatients departments, public health officers, pharmacists and other partners
- Their general satisfaction with CME respective hepatitis C care.

Process of gathering information:

Out of the list of 191 regular participants in expert-assisted quality circles, 30 GPs were randomly selected for ten-minute semi-structured telephone interviews. Between November and December 2001, a total of 29 interviews with Viennese GPs were conducted and analysed by a social scientist. For the statistical analysis, the median of the relevant data was calculated and checked by t-test regarding significance.

Analysis and interpretation

The GPs had carried out substitution therapy for periods ranging from 1 to 17 years. The average was 5.74 years, with a difference between male and female GPs: for male GPs, the duration was about 4.7 years, while for female GPs it was slightly more than eight years (see Table 3).

The answers to the question why GPs prescribe substitution therapy covered a wide spectrum of different motivations or attitudes: they ranged from the simple statement that "there are patients who need or want it" and that "those patients were the same as all others" to ethical or medical grounds for choosing this therapy and even to legal or general social considerations. So, all doctors performed excellently in terms of attitude.

Also, there was awareness of the problems involved in hepatitis C infection and the GPs knew about the periods of activity and inactivity of the disease. The screening parameters showed this was part of the GPs' actual knowledge already. Nevertheless, differences among doctors were observed regarding application of their knowledge in the daily routine decisions in their surgeries.

Table 3: Average number of years on substitution therapy, of persons in therapy, of HCV-tested persons and of HCV-infected persons

	Total (male/ female)	Male	Female
Average number of years on substitution therapy	5.7	4.7	8.1
Average number of persons on substitution therapy (2001)	11.0	12.0	8.8
Average number of HCV-tested persons	8.5	9.4	6.5
Average number of HCV-infected persons	5.6	5.7	5.3

With 12 persons per male GP, the average number of patients on substitution therapy is nearly one-third higher in the case of male GPs than in the case of female GPs. Also, the number of persons tested on HCV by male GPs was substantially higher than those tested by female GPs. However, the difference between male and female GPs becomes much smaller if one considers the average number of infected persons per GP: there are 5.7 infected patients per male GP and 5.3 per female GP.

A crucial question in our investigation was whether or not patients are automatically tested for hepatitis C. There are large differences between the two groups who have or do not have those tests performed automatically (the reasons why they are not performed will be discussed below).

Table 4: GPs who do or do not automatically test for HCV

	Screening Ø	No Screening Ø	Screening %	No Screening %
Years of administering substitution therapy	7.17	4.00		
No. of patients	9.53	20.64		
Patients, HCV tested	7.69	15.42	80.69	74.71
Patients, HCV infected	5.69	8.43	59.71	40.84
Antiviral therapy indicated	1.64	0.79	17.21	3.83
Receiving antiviral therapy	0.56	0.79	5.88	3.83
Treatment by GPs themselves	0.24	0.50	2.52	2.42

Table 4 reveals significant differences between the two groups. GPs who test their patients automatically on hepatitis C (Group 1) have usually administered substitution therapy for slightly more than 7 years, while the GPs who do not test automatically (Group 2) have only four years of practical experience with substitution therapy. GPs who test automatically are seeing only half the number of patients. More than 80% of Group 1 patients on substitution therapy are HCV tested, compared with 74.7% in Group 2. In Group 1, around 60 % of the patients on substitution therapy are found to be HCV-infected by their GP, compared with only 40% in Group 2. GPs who test automatically for HCV find that 17% of their substitution patients need antiviral therapy, compared with 3.8 % in the group of doctors who are not screening all their patients for hepatitis C. In Group 1, 5.9% of the patients receive antiviral therapy compared with 3.8% in Group 2. The percentage of Group 1 and Group 2 patients who are personally treated by their GPs with antiviral therapy is nearly the same in the two groups with 2.5%. With a probability of nearly 98%, there is a significant connection between automatic HCV testing and either the GPs' years of experience with substitution therapy, or GPs' number of patients on substitution therapy.

GPs who do not test patients on substitution therapy automatically express a wide range of reasons for not doing so. The reasons given include “I would like the test to be done, but the patients don’t go”, “testing only in suspicious cases”, "lack of time" and "simply having forgotten about it". GPs also said that more HCV testing takes place when the doctor-patient relationship appears to become more stable.

Table 5: Use of the polymerase chain reaction (PCR) test to detect HCV-RNA

	PCR Ø	No PCR Ø	PCR %	No PCR %
Years of prescribing substitution therapy	7.13	5,00		
No. of patients	13.80	10.90		
Patients, HCV tested	11.17	7.90	80.94	72.48
Patients, HCV infected	7.50	4.90	54.35	44.95
Antiviral therapy indicated	1.54	1,00	11.16	9.17
Receiving antiviral therapy	0.63	0.60	4.57	5.50
Treatment by GPs themselves	0.30	0.33	2.17	3.03

In the group of doctors using PCR, 80.94% of all patients on substitution therapy were tested for hepatitis C, compared with 72.48% in Group 2. GPs using PCR found 54.35% of their patients to be HCV-infected, while in the group of doctors not using PCR, it was only 44.95%. Antiviral therapy was found to be indicated for more than 11% of the patients in the group where PCR was used, while in the group without PCR testing it was 2 % less. In the group of GPs not using PCR, the number of patients receiving antiviral therapy and treatment by the GPs themselves was about 1% higher than in Group 1. But as the number of patients in the latter case was very small, the probability is high that this was just accidental.

In order to confirm their diagnosis, 21 GPs regularly use HCV-antibody tests. Four of the interviewed doctors are not used to this method. (This question was not put to four of the interviewed GPs). Ten GPs use both PCR and HCV-antibody tests.

With a probability of 73%, one can state that automatic hepatitis-C testing of patients influences the number of patients who receive antiviral therapy.

Ten GPs gave a clearly (or mildly) positive answer to the question whether they would be interested performing hepatitis C treatment in their own surgeries, while 14 gave the answer "no" (or "rather not"). The reasons for not wanting to do so are very similar to the arguments given regarding the next question.

Table 6: The importance of different sources of information on substitution therapy ¹

	Total Ø	Screen- ing Ø	No Screen- ing Ø	PCR Ø	No PCR Ø
Internists' medical journals and books	3.7	3.6	3.6	3.7	3.4
General medical practice journals and books	2.9	2.8	3.0	3.1	2.5
Congresses, lectures	2.3	2.2	2.9	2.1	2.8
Quality Circle on substitution therapy	1.4	1.1	1.9	1.2	1.5
Quality Circles on different topics	3.8	3.7	3.3	3.3	4.0
Internet	4.3	4.0	4.7	4.1	4.4
CD-ROMs, video tapes	4.7	4.6	4.9	4.7	4.5
Representatives of pharmaceutical firms	3.9	4.1	3.4	4.0	3.7

¹ The GPs were asked to evaluate the relative importance on a scale from 1 (very important) to 5 (not important).

Quality circles dealing with knowledge on substitution therapy influenced the participating GPs with respect to automatic hepatitis-C testing of their patients with a probability of 93 %. Asked whether they consider the currently available sources of information in this field to be sufficient, 22 GPs answered affirmatively and seven negatively (two gave no answer). Their reasons for considering the available sources of information as insufficient are almost evenly distributed among qualitative (information should be more practice-oriented), quantitative and legal aspects.

Table 7: The importance of different sources of information regarding hepatitis C ¹

	Total Ø	Screen- ing Ø	No Screen- ing Ø	PCR Ø	No PCR Ø
Internists' medical journals and books	2.5	2.7	2.5	2.7	2.7
General medical practice journals and books	2.8	2.8	2.7	2.9	2.4
Congresses, lectures	2.6	2.6	2.8	2.6	2.8
Quality Circle on substitution therapy	1.8	1.6	1.5	1.5	1.8
Quality Circles on different topics	3.9	3.8	3.2	3.7	3.7
Internet	4.4	4.1	4.8	4.3	4.3
CD-ROMs, video tapes	4.8	4.6	5.0	4.8	4.6
Representatives of pharmaceutical firms	4.0	4.0	3.8	4.1	3.7
Specialists' consensus statements	3.0	2.8	3.2	2.7	3.2
Guidelines	3.3	3.2	3.7	3.4	3.1

¹ The GPs were asked to evaluate the importance along a scale from 1 (very important) to 5 (not important).

The GPs' evaluation of CME with respect to improvement in knowledge on substitution therapy shows that only seven GPs were dissatisfied in general. Regarding hepatitis C, the GPs considered CME to be unsatisfactory by 14, stated by 13 GPs. More frequent coverage of that topic would be necessary to meet the needs of the interviewed GPs.

Table 8: Co-operation with other institutions¹

	Total Ø	Screening Ø	No Screening Ø	PCR Ø	No PCR Ø
Addiction outpatients care units	2.8	2.8	2.6	2.6	2.9
Public health officers	2.5	2.6	2.3	2.3	2.8
Pharmacies	2.2	2.3	2.0	2.0	2.5

¹ The GPs were asked to evaluate the importance along a scale from 1 (very important) to 5 (not important).

The quality of co-operation between addiction outpatients and health care units was judged to be at a relatively low level.

The average age of GPs in our study was 48.8 years. Male GPs, aged 49.8 years on average, were more than 3 years older than female GPs (average of 46.6 years). With a probability of 92%, age influences automatic testing for hepatitis C. On average, GPs were operating their surgeries since 1986; the average daily number of patients seen by male GPs was 42 patients, and 37.8 patients, respectively, in the case of female GPs.

Strategy of change

In Nov./Dec. 2001, 29 out of 191 regular participants in expert-assisted quality circles in Vienna aimed at quality improvement of primary health care affecting problematic opiate users through medical opiate substitution therapy were interviewed by telephone for their general attitudes, their criteria and their case development concerning hepatitis C care.

This evaluation process was seen as a necessary part of a comprehensive quality improvement project in Vienna. It should clarify the quality of health care the patients are actually receiving from their doctors.

Effects of change

The results of this evaluation process show clearly convincing high levels of performance regarding all dimensions (attitudes towards patients, awareness of patients' health problems, case development, treatment decisions) as a result of quality circle participation but reveal some deficiencies regarding "co-operation", which continues to reflect the general situation of the Austrian health care system. The participating GPs consider the exchange of information through participation in quality circles as fruitful for their daily work. The needs of doctors concerning QI and CME are served very well by quality circles. These results show clearly the enabling effects of quality circle participation of family physicians for their daily health care work even for highly endangered chronic ill patients.

General practitioners received substantial support by attending expert assisted quality circles on a regular base.

Next steps

The outcomes of this evaluation do not only justify all the efforts of the Viennese health care system in order to improve primary health care; they provide some encouragement for the continuation and multiplication of this kind of group work. And they show new chances for the engagement of family physicians dealing with new challenges in primary health care.

By now the Viennese expert assisted quality circles are opened up towards more interdisciplinary group sessions with pharmacists and other partners in primary health care to improve mutual understanding, respect and cooperation.

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