Visitatie of medical specialists: studies on its nature, scope and impact
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Practice comparison offers clues for improvement of practice management: visitatie obstetrics and gynaecology as an example

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Improving health care requires knowledge. An important part of this concerns professional knowledge: knowledge about human beings, knowledge of the human body and its functioning, and of diagnostic and therapeutic methods and techniques. Batalden and Stolz argue that, in addition, a different kind of knowledge is necessary to improve daily practice management in health care, so-called improvement knowledge. (1) This would enable health care providers to use their professional knowledge in such a way that more and faster improvements can be realised. Improvement knowledge consists of four elements: knowledge of variation, system knowledge, knowledge of (work and change) psychology, and theory of knowledge.

In this article, we show how the knowledge of variation, by means of practice comparisons, can contribute to the improvement of the quality of ob/gyn care. We base this on the results of the visitatie program of the Dutch Society of Obstetrics and Gynaecology (NVOG).

**Visitatie of non-teaching practices**

In 1993 and the first half of 1994, 18 visitaties were performed as part of the NVOG visitatie program for non-teaching practices. The aim of these visitaties or on-site visits is to arrive at a diagnosis of the quality of the ob/gyn practice management of a partnership and to formulate recommendations for improvement, based on this diagnosis. The visitaties of non-teaching practices are aimed at improving the quality of patient care. This is different from the visitaties of teaching sites, which focus on the quality of the specialty training. Another difference is that the teaching site visitaties may result in withdrawal of the teaching status; in contrast, there are no sanctions available to non-teaching visitaties. However, the Central College for licensure and registration of medical specialists recently decided that visitatie results will become one of the qualitative criteria for registration renewal of specialists. (2)

In diagnosing opportunities for improvement, the visitatie committee evaluates whether the conditions are sufficient to enable high quality care. To this end, the visitatie committee (usually three colleagues and a facilitator) spends an entire day interviewing everyone involved in ob/gyn care, such as the nursing staff, obstetricians, the medical director, pediatricians, urologists, anaesthesiologists, and referring general practitioners. The use of clinical guidelines, interdisciplinary and intradisciplinary collaboration, (repeat) referral policy, continuing medical education and (the method and results of) performance evaluation are discussed. The range of discussion topics makes clear that visitaties are not primarily focussed on patient care itself: a visitatie is not intended for making reliable statements regarding the quality of patient care at the level of individual doctor-patient relationships. (3) Patient care, however, is certainly part of the discussions with the
partnership, for instance in the sense of interpreting documentary materials supplied by the partnership prior to the visitatie. The (supplied) quantitative data of a practice to be visited can be charted by the NVVÖG prior to the visitatie, for the sake of comparison with other practices. The visitatie committee can use the ensuing inter-practice comparisons as starting point for an on-site discussion about quality improvement.

Practice comparisons: interpretation of variance

The visitaties of 18 ob/gyn practices, conducted as previously discussed, resulted in a large volume of quantitative data. If we compare the 18 clinics on the basis of these data (see the example in figure 1), we can draw one conclusion only: there is a large variation in practice management. There is a tendency to think about this variation in terms of ‘good’ and ‘bad’: a preferred norm is established (often by using, not always correctly, the mean) and the distance to one’s own situation is measured. The greater the distance, ‘the worse we are doing.’ However, it makes more sense to think of this variation not in terms of black and white but rather as the result of two types of causes: coincidental and special. (4) Physicians are trained to read and interpret variation; they are trained in studying patterns. Some patterns form a signal; they are indicative of the cause: for example, a temperature list will suggest certain infections. It is a medical skill to recognise whether a pattern is important or not, when a signal (a special cause) is seen or when ‘noise’ is detected (a coincidental cause).

It appears to be a not very difficult but useful new task for specialists to apply the knowledge that they acquired during their training and of which they also have experience as clinician or researcher to the field of quality care as well. This article challenges them to do so.

**Figure 1** Number of deliveries per gynaecologist per year in 18 surveyed non-teaching practices (A-S), 1993/1994
**Variance in practice management with regard to abdominal or vaginal hysterectomies**

Table 1 depicts practice management with regard to abdominal and vaginal hysterectomies for the 18 OB/GYN practices that underwent visitations. The table shows a large variance in the practice management of the 18 practices. Within a period of one year, a total of 1776 abdominal and 959 vaginal hysterectomies was performed by all 18 practices combined. The range is wide: one clinic performed only 1 vaginal uterus extirpation, whereas the practice with the highest number of vaginal hysterectomies performed 139 uterus extirpations in the same year. The numbers for abdominal hysterectomies are 13 and 211 per practice respectively.

On average, gynaecologists at the 18 visited practices performed 12 vaginal and 24 abdominal hysterectomies in the year of the measurement; depending on the practice, however, the numbers varied from 0 to 35 vaginal and from 7 to 44 abdominal hysterectomies per gynaecologist per year. Part of this variation can, of course, be corrected for by standardising the adherence areas of the practices (because the larger the adherent population, the more hysterectomies can be expected to be carried out, in absolute numbers). But even if the adherent population of all practices is standardised at 50,000 people, then a range of a minimum number of 18 and a maximum number of 72 abdominal hysterectomies per partnership per year can still be determined (calculated for 14 partnerships). Furthermore, an interesting feature in the table is the proportion of abdominal versus vaginal uterus extirpations; at one clinic, 33% were carried out abdominally, whereas at another, 99%.

**Table 1** Practice performance in 18 surveyed non-teaching specialist groups of gynaecologists with respect to abdominal and vaginal hysterectomies; year numbers

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Average numbers (extremes); SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>abdominal hysterectomie</td>
<td>1776</td>
<td>99 (13-211); 44,9</td>
</tr>
<tr>
<td>• percentage of total number of hysterectomies</td>
<td>66 (33-99); 19,1</td>
<td></td>
</tr>
<tr>
<td>• per gynaecologist</td>
<td>24 (7-44); 8,8</td>
<td></td>
</tr>
<tr>
<td>• standardized for adherent population*§</td>
<td>563</td>
<td>40 (18-72); 13,3</td>
</tr>
<tr>
<td>vaginal hysterectomie</td>
<td>959</td>
<td>53 (1-139); 42</td>
</tr>
<tr>
<td>• per gynaecologist</td>
<td>12 (0,3-35); 8,2</td>
<td></td>
</tr>
</tbody>
</table>

* Adherent population of 50,000 people
§ Calculated over 14 specialist groups
**Relation between variation and quality improvement**

The question is how knowledge of variation in gynaecological practice management can be applied towards improving health care. To that end, we need to know the cause of the observed variation.

Previously, it has been suggested that variation is the result of two types of causes, coincidental and special. Figure 2 shows that, on the basis of statistical analysis, it can be stated with a confidence interval of 95% that for the non-marked numbers, the variation cannot be ascribed to coincidence. This implies that, for 13 out of the 18 practices, the variation therefore needs to be explained by a 'special' cause. Variation with a special cause requires action: initially, identifying that cause. One cannot decide whether further action is desirable or necessary until this cause is known.

**Figure 2** Percentage abdominal hysterectomies on total number of hysterectomies per year in 18 surveyed non-teaching practices (A-S), 1993/1994. The marked numbers are based on variance which can be ascribed \( p=0.05 \) to coincidence.

![Bar chart showing percentage abdominal hysterectomies per year in 18 surveyed non-teaching practices.](image)

Basically, there are two categories of special causes of variation in practice management: the patient populations may not be comparable and the management may differ from practice to practice.

**Differences among populations.** Factors that are of importance in the choice for either abdominal or vaginal uterus extirpation in the population of patients that need to undergo a hysterectomy are, for example, the nature and severity of the disorder, the age of the patients and the likelihood of complications. We may assume that, if the composition of the concerned population of women varies strongly among the 18 practices, this explains at least part of the variation in figure 2. No solid conclusions can be drawn on the basis of the data that were collected during the visitations. However, it is highly unlikely that the
observed variation would disappear completely, if the data were to be corrected for the composition of the patient population. It is therefore probable that the variation in practice management with regard to the carrying out of abdominal and vaginal hysterectomies can partly be explained by differences in policy.

* Differences in policy. Policy differences offer partnerships opportunities for reflection and perhaps also starting points for improvement. The latter is the case if there are indications that one policy is better than another. A policy difference, however, does not necessarily imply that one policy is better than the other. Here, the designation ‘policy’ is used very broadly, as ‘the way in which and the surroundings within which the gynaecologist shapes the activities’. This, therefore, includes indication assessment, as well as taking continuing education, the presence or absence of protocols for diagnostic and therapeutic activities, supervision of residents (not-in-training) and so forth.

The performance of the partnerships is characterised by intensive mutual collaboration and feedback. The combination of training (including continuing education), personal experience and the personality of the various partners will, in practice, colour this collaboration and feedback and lead to reasonably constant indication assessment, specific to this partnership. For that reason, there will rarely be any sudden annual variations in the numbers of carried out procedures. Different partnerships will produce different numbers (also fairly constant for the partnership) as a result of the combination of background, education, experience and so forth, unique to them.

Comparisons among practices may be able to chart the current differences in cooperation and, possibly, voids within Dutch gynaecology partnerships. After analysis of the possible special causes, the comparisons may lead to less variation in practice management.

We emphasise that we do not argue that the mean should also be the norm. A visitatie committee will, therefore, not be able to pass negative judgement on the quality of the care provided by that partnership on the basis of an outlier value; such an outlier, though, is a reason for the visitatie committee to inquire after, for instance, the indication protocol for either abdominal or vaginal hysterectomy and to verify if this indication protocol matches what the profession considers to be appropriate. The NVOG attempts to hold a mirror to its members about their practice management, in this development phase of the visitatie program, among other things by comparison with other practices.

The ‘mirror’ offered in figure 2 provides partnerships with insight into their practice management with respect to hysterectomies and may be a reason for the gynaecologists concerned to pay more attention to it. Some of the non-marked practices will have to reflect on the question why they carry out more than 70% of the hysterectomies abdominally. Does the indication perhaps need to be revised? Are all members of the partnership sufficiently trained in both techniques? Are the necessary facilities available and how important is the gynaecologist’s preference in the policy choice between abdominal of vaginal? A (future) explanation may, for example, be that vaginal hysterectomies are carried out less frequently because laser ablations or endometrium destructions in menorrhagia cases are applied by means of a different method.

But other practices are also requested to scrutinise their own actions. In addition, they may pose the question whether their practice management meets their own (quality) standards.
One can also ask how the numbers of practices H and P should be interpreted (see figure 2). Can they perhaps play a role in the process of benchmarking (i.e. comparison of [processes in] the practice concerned with other, comparable [processes in] practices with more desirable results)? In short, figure 2 evokes more questions than it answers - which is exactly its function.

What is said about hysterectomies is also applicable to other data that were collected within the framework of the NVOG visitatie program. Graphic overviews of, for instance, the number of clinical admissions, the number of day cases, the number of new and the number of follow-up outpatients, the number of (trans)vaginal repair and (or) incontinence operations per year and the average adherent population per gynaecologist, without exception, indicate a large variation in practice management. Table 2 provides an overview.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Total number</th>
<th>Average number (extremes); SD</th>
<th>Number of surveyed practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>gynaecologists</td>
<td>74</td>
<td>4 (2-7); 1,2</td>
<td>18</td>
</tr>
<tr>
<td>adherent population ob/gyn (*1000)</td>
<td>1,901</td>
<td>136 (60-350); 77</td>
<td>14</td>
</tr>
<tr>
<td>adherent population per gynaecologist (*1000)</td>
<td>32 (20-64); 10,5</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Clinic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>total number of admissions</td>
<td>36,955</td>
<td>2.309 (456-4400); 1086,8</td>
<td>16</td>
</tr>
<tr>
<td>clinical admissions</td>
<td>27,860</td>
<td>1.857 (1228-3200); 549,5</td>
<td>15</td>
</tr>
<tr>
<td>admissions in day care</td>
<td>9,095</td>
<td>568 (318-1200); 227,6</td>
<td>16</td>
</tr>
<tr>
<td>admissions per gynaecologist</td>
<td>563 (114-864); 175,4</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>admissions per 10^6 adherent persons</td>
<td>14,027</td>
<td>1,002 (409-1409); 250,8</td>
<td>14</td>
</tr>
<tr>
<td>(trans)vaginal repair surgery per gynaecologist</td>
<td>15 (7-25); 5,5</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>incontinence surgery per gynaecologist</td>
<td>4 (0-18); 4,1</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Ambulatory care</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>new patients</td>
<td>64,935</td>
<td>3.608 (1141-6800); 1707,6</td>
<td>18</td>
</tr>
<tr>
<td>follow-up patients</td>
<td>197,378</td>
<td>10.965 (3320-21,117); 5195,5</td>
<td>18</td>
</tr>
<tr>
<td>new patients per 10^6 adherent persons</td>
<td>20,613</td>
<td>1,472 (468-2794); 593,5</td>
<td>14</td>
</tr>
<tr>
<td>follow-up patients per 10^6 adherent persons</td>
<td>61,333</td>
<td>4,380 (1361-7546); 1690,1</td>
<td>14</td>
</tr>
</tbody>
</table>
It should be noted that obstetrics, which traditionally works more with numbers, thanks to
the National Obstetrics Registration, has progressed much further than gynaecology in
offering insight into its own actions, by means of comparisons of results among the various,
comparable practices.

What all these quantitative data have in common is that they indicate ‘what’ has
happened, but provide no information as to the ‘how’ and ‘why’. The example of the
hysterectomies shows that x% were performed abdominally and y% vaginally. It does not
give any information about why a hysterectomy was carried out and how the operation
went. Have there been any complications? How long did the patient’s stay last? And so
forth. Currently, there is a strong emphasis on this type of process measurement (so-called
‘performance measurement’) in countries like the United States, Canada and Australia, also
within the framework of the various visitatie programs. It is expected that the Dutch visitatie
programs will also end up asking for attention to measurements of care (provision)
processes. After all, if it turns out that we are not satisfied with the results, we will have to
implement changes in the process.

**Compare with whom?**

Suppose that a partnership wants to know how many women with a caesarean section in
their medical history deliver vaginally. After measurement, it turns out that 20 out of 100
women who previously underwent a caesarean section, deliver vaginally the second time.
This 20% number has little significance if it is not compared with other numbers. If the
partnership compares the number with last year’s 15%, it may be pleased with the
accomplished improvement. If the 20% are contrasted against a mean of 75% in
comparable partnerships, it will rather be a reason to investigate why the number is so
much lower than in other partnerships. (5) It appears advisable to keep track of one’s own
practice management both in time and in comparison with other partnerships. The data
from the NVOG visitatie program provide the comparison with other partnerships. During
the visitaties, these data and the observations regarding possible developments in one’s
own practice are discussed (see table 2).

**Concluding remarks**

The quantitative data collected thanks to the NVOG visitatie program give insight into part
of the provided care. Thus, they offer visited gynaecologists starting points for thinking
about their own practice management and, possibly, improving it. The data, after all, show
that there are large differences in practice management. The differences may be partly
explainable by differences in the composition of the patient population, but it is more likely
that the cause is a different practice management. The task now set aside for (visited)
gynaecologists is to arrive at [a more systematic form of] improving the quality of the care
by studying the relationship between this practice management and the results of care.
REFERENCES


