

SCIENTIFIC SUMMARY

TEN YEARS OF MULTIDISCIPLINARY TEAMS MEETINGS IN ONCOLOGY: CURRENT SITUATION AND PERSPECTIVES





Belgian Health Care Knowledge Centre

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■ FOREWORD

Until not so long ago, a cancer was treated either by surgery, by radiation therapy or by chemotherapy, but not by a combination of all three. Incredible as it may seem at the beginning of 2015, the doctors of the twentieth century have very belatedly adopted the practice to combine several therapeutic modalities. Today, no clinician is supposed to treat a cancer alone; it has become real teamwork. And the remarkable advances made over the last two decades are undoubtedly a result of this new multidisciplinary approach.

But as the scientific understanding of cancer becomes more complex, the team around the patient grows, with the inevitable downside that it gets more complicated to coordinate all actors. The answer to this increasing complexity was the creation of the multidisciplinary team (MDT) meetings in oncology. In our country, they are funded since 2003, and have especially taken off since the Cancer Plan in 2008, which highly recommended them for all cancer patients in all hospitals.

After ten years of practice, the question arises whether this system has met the initial expectations. This is the reason why RIZIV-INAMI asked the KCE to evaluate the current situation but also to explore some ideas for further improvements where needed. We interviewed at length many protagonists of the MDT meetings in Belgium. Their opinions are generally very positive: MDT meetings undoubtedly gave a significant boost to the increase in the quality of cancer care in Belgium. We thank those who have generously contributed to this study by sharing their experiences and views on the subject.

We particularly addressed relations with two important partners, the Belgian Cancer Registry - registering all cancer cases to provide our country exhaustive and reliable statistics and allowing to develop a quality of care improvement system – and the sickness funds – who hold the purse strings. And we also had a critical look at the system in light of the new communication tools that modern technology places at our disposal.

But a shadow persistently hangs over the system since its onset: the very low participation rate of general practitioners. They are the ones who know the best their patients, their past history, current problems and wishes for the future. Their contribution to MDT meetings is therefore crucial, and especially as the treatment of cancer today aims not only at technical efficiency but also at the quality of life of patients during and after treatment. We have attempted to identify the causes of their non-participation, and propose some modest ways to improve it. But in the medium term, the whole articulation between hospitals and primary care medicine should be rebuilt.

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■ ABSTRACT

BACKGROUND AND OBJECTIVES

The purpose of multidisciplinary team (MDT) meetings in oncology is to develop with specialists from different disciplines a strategic plan of diagnosis, treatment and follow-up and to discuss the overall care of an individual patient. In Belgium, MDT meetings have been reimbursed since 2003, and in the 2008 Cancer Plan they were identified as an essential step in the clinical pathway of each new cancer patient. The RIZIV-INAMI commissioned a study to provide a global picture of the MDT meeting practice in Belgium, and to identify areas for improvement.

METHODS

Several methodological approaches were used: the analysis of legislative texts, a literature review on international experiences, the analysis of administrative billing data from RIZIV-INAMI, the analysis of Belgian Cancer Registry (BCR) data linked to administrative billing (IMA) data, the analysis of experiences and perceptions of more than 1000 MDT meeting participants captured through a national web-survey, and finally semi-structured interviews with 16 general practitioners (GPs).

KEY RESULTS FROM THIS STUDY

1. The number of patients with cancer discussed during an MDT meeting has steadily increased since 2003, to reach 82% of the patients in 2011. For some cancer types (malignant melanoma, sarcomas) and for elderly patients the proportion was slightly lower. The charges for RIZIV-INAMI in 2012 amounted to € 16.6 million, on average € 160 per MDT meeting per patient.
2. The impact of those meetings on quality of cancer care is globally considered very positive by the participants. The presence of experts from the major diagnostic and therapeutic disciplines is a key condition for a fruitful meeting. However, for some specialties it is extremely difficult to attend all MOCs they should attend. The use of video-conference, already in place in some hospitals, may then be a pragmatic solution. However, currently reimbursement is only provided in case of physical attendance. The necessity of the physical attendance for reimbursement should be further evaluated.



3. The attendance of general practitioners (GPs) at the MDT meetings is extremely low, mainly for organisational reasons. Their implication in the cancer pathway (e.g. by physical attendance at the MDT meeting or through contact before the meeting) should be facilitated, in particular for patients with a complex psycho-medico-social situation.
4. The collaboration of the oncological teams with the Belgian Cancer Registry (BCR) is essential to monitor the quality of cancer care. In this respect the MDT meetings play an essential role. However, the analysis of the BCR data revealed that the quality of data transferred to the BCR is not optimal. For instance, in 2011, no clinical staging information was transferred to the BCR for 32% of the breast cancer patients discussed at the MDT meeting. In order to improve the quality of transferred data, the role of the data manager, the link between the oncological teams and the BCR, should be reviewed.
5. The distinction between 'first MDT meeting' and 'follow-up MDT meeting' are not clear-cut, hence there is a large variability in interpretation and implementation across hospitals. In addition, due to too stringent criteria, the 'supplementary MDT meeting' is currently not paid to hospitals due to administrative reasons. Last but not least, a fourth meeting category could be envisaged: the MDT between reference centres. These different types of meetings should be integrated in a more coherent framework and the financial rules for reimbursement should be re-evaluated.
6. The transfer of administrative data and financial flux between hospitals and sickness funds are slow, heavy and complex; there is much room for simplification and more efficiency. For instance, the replacement of paper by contemporary electronic communication tools should be a priority in order to diminish the burden on data managers and administrative staff.
7. Since 2008 the Cancer Plan finances based on the number of annual MDT meetings some supportive functions in hospitals: psychologists, nurses in oncology, social workers, dieticians and data managers. Their long-term appointment is threatened by administrative delays in publishing new attribution rules, which may lead to an important expertise-drain. In addition, some of these functions (especially the nurses in oncology) need a detailed description.

CONCLUSION

These days, there is consensus that the diagnosis and treatment of cancer should be approached from a multidisciplinary perspective. This is reflected in the increased uptake of MDT meetings over the past 10 years in Belgium. MDT meetings are acknowledged by the health professionals as an important contributor to the improvement of the quality of cancer care and of the health outcomes. Now that the foundations of this practice have been laid, time has come to focus more on the "quality"-side of the meeting, and to shift the paradigm of a very technical disease-centred approach to a more patient-centred one. In addition, several legislative, logistic and administrative improvements are urgently needed.



■ SYNTHESIS

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1. MULTIDISCIPLINARY MEETINGS FOR BETTER CANCER CARE

1.1. Introduction

The diagnosis and treatment of cancer patients is a complex, rapidly and continuously evolving science. While the number of available therapeutic options is getting larger, the number of different health professionals to treat the patient is also expanding. A “typical” patient with cancer will be in contact with numerous specialists: a medical internist of the organ affected, a surgeon specialized in the surgical treatment of the organ affected, a medical oncologist, a specialist in medical imaging (perhaps two if nuclear imaging is involved), a specialist in pathology, a specialist in radiotherapy and sometimes a specialist in genetics. In addition to these physicians, the patient may also benefit from the support of other health professionals: a nurse specialised in oncology, a psychologist, a social worker, a dietician. And ideally, this staff should keep in touch with the patient’s general practitioner. As a consequence, when the number of actors around the patient increases, the potential for miscommunication, poor coordination between healthcare providers and fragmentation of services increases accordingly. This constitutes a major challenge for caregivers and for patients.¹

Multidisciplinary teams (MDT) meetings in oncology were created as a response to this challenge. MDT meetings, as the name suggests, allow specialists from different disciplines to form and to unite the best possible team to achieve optimal care for a cancer patient. The purpose of the MDT meetings is to develop a strategic plan of diagnosis, treatment and follow-up and to discuss the overall care of an individual patient.² MDT meetings were identified as the best approach to organise cancer care in a way that consistently brings together all healthcare professionals involved in cancer diagnosis and treatment,³ and in 2014, the European Partnership Action Against Cancer (EPAAC) published a policy statement on multidisciplinary cancer care which was endorsed by the majority of European scientific societies, patient organisations and stakeholders. In this policy statement, MDT meetings are described as follows (see Box 1).

Box 1: What are multidisciplinary team (MDT) meetings in oncology?

Multidisciplinary team meetings in oncology are an alliance of all medical and healthcare professionals related to a specific tumour disease whose approach to cancer care is guided by their willingness to agree on evidence-based clinical decisions and to coordinate the delivery of care at all stages of the process, encouraging patients in turn to take an active role in their care.¹

1.2. MDT meetings in Belgium, overview of the previous 10 years

In Belgium, MDT meetings have been reimbursed since 2003 by the RIZIV-INAMI for all cancer types. It was one of the first examples of the reimbursement of shared intellectual activity involving different specialties, and acknowledged the added value of multidisciplinary work to the quality of care.⁴ In 2008 the National Cancer Plan identified the MDT meeting as an essential step in the clinical pathway of each new cancer patient,⁵ and extra financial fees were added for the oncologist attending or coordinating the meeting. Nevertheless, the requirement has not been translated officially into legal texts,⁶ and in daily practice there is quite some variability between hospitals, as some cancer types are still not systematically discussed during a MDT meeting.⁷ There are, however, financial incentives to do so: the financing of supportive staff members in the oncological centres (i.e. psychologists, nurses, social workers, dieticians and data managers) is directly based on the number of MDT meetings reimbursed in that centre.⁵

Today, there is a consensus that the MDT meetings do improve the quality of cancer care by strengthening the communication between different healthcare professionals, and that this practice should be facilitated as much as possible. At present, however, little is known about the variability between hospitals in the organisation of the MDT meetings, to which extent new cancer patients are effectively discussed, and to which extent these discussions are really efficient, specific and patient-centred.



1.3. Research questions

Ten years after the introduction of the MDT meeting reimbursement, the RIZIV-INAMI commissioned a study to provide a global picture of the MDT meeting practice in Belgium, and to identify areas of improvement. More precisely this study addresses the following research questions:

1. What is the evolution in the practice of MDT meetings? What is the corresponding evolution in terms of charges for the RIZIV-INAMI budget?
2. Are all cancer patients equally benefiting from the MDT meetings? Which factors influence the chances of a case being discussed?
3. Today, how are these meetings organized in the hospitals? What are the barriers and opportunities for a more efficient organization of the MDT meetings?
4. What are the role and the expectations of the general practitioners (GPs) with regard to the MDT meeting? How can GP participation at the MDT meetings be improved?

The following data sources and methods (qualitative as well as quantitative) have been used in this study (see Box 2).

Box 2: Data sources and methods

- **Desk search:** analysis of **legislative texts** (analysis of Royal Decrees with regard to MDT meetings) and **literature review** (on impact of MDT meetings, barriers for implementation and practices in other countries).
- **Analysis of administrative billing data from RIZIV-INAMI.** These billing data from sickness funds are compiled at the national and hospital level. Date, number, place, professional qualification of healthcare providers and total amounts reimbursed of health services are available. These data are further referred in the text as **the RIZIV-INAMI data**.
- **Analysis of Belgian Cancer Registry (BCR) data linked to administrative billing (IMA) data at individual patient level.** This database contains information on diagnosis, staging, patients' characteristics, and all cancer-related diagnostic acts and treatments reimbursed. Seven cancers (i.e. breast, prostate, lung, rectal, malignant melanoma, acute leukaemia and soft tissue sarcoma) were analysed. These data are further referred in the text as **the BCR-IMA data**.
- **Experiences and perceptions of MDT meeting participants.** We conducted a national online survey to give an overview of the current practice of MDT meetings in Belgium and to catch the perceptions of MDT meeting participants from all hospitals registered with a program in oncology. In total, 4 203 persons were invited and 1 014 completed the questionnaire; results were discussed with two subgroups of respondents (one French speaking, one Dutch speaking) to enrich the interpretation of the survey results. These data are further referred in the text as **the web survey data**.
- **Semi-structured interviews with general practitioners (GPs)** to catch their perceptions on MDT meetings (role towards the MDT meeting as well as barriers and facilitators to attend). Semi-structured interviews with 16 GPs (8 French speaking, 8 Dutch speaking) who had already attended at least one MDT meeting were conducted by a consortium of UGent and ULG research teams. These data are further referred in the text as the **GPs interviews data**.

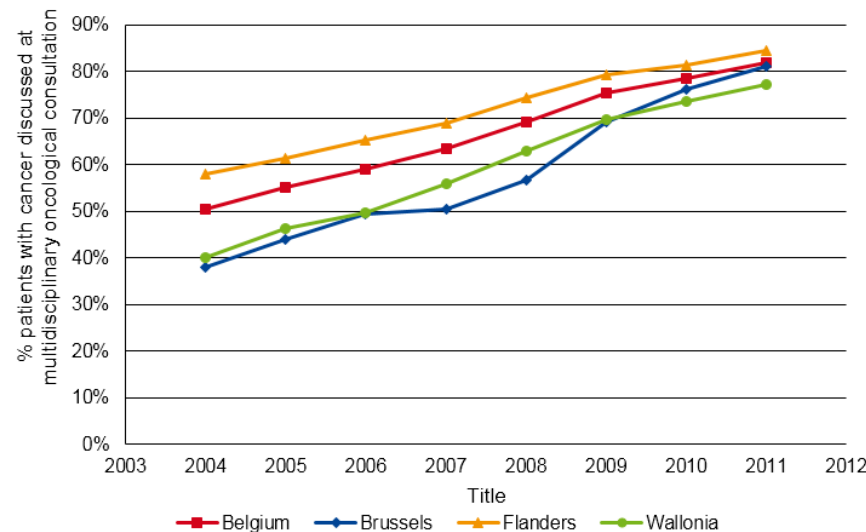


2. GRADUAL INCREASE IN MDT MEETING UPTAKE AND POSITIVE IMPACT

2.1. A MDT meeting for all patients with a new cancer diagnosis, almost a reality

In 2004, one year after the introduction of the reimbursement, merely 50% of newly diagnosed cancer patients were discussed during MDT meeting. This percentage progressively increased in each region to reach in 2011, at the country level, a coverage of 82% of all patients with a new diagnosis of cancer (81% in Brussels, 85% in Flanders and 77% in Wallonia; Figure 1).

Figure 1 – Evolution in percentage of patients diagnosed with an invasive cancer and discussed during a MDT meeting (2004-2011): national and regional data



Source: Belgian Cancer Registry data linked to data of the Inter-mutualistic Agency

Source: BCR-IMA data

So far, MDT meetings are not mandatory for every new cancer case (and virtually excluded for basocellular and spinocellular carcinomas of the skin), but only in some very specific situations that are precisely described in the law (see Box 3).

Box 3: When is a MDT meeting legally mandatory?

- For every oncological treatment which deviates from the written guidelines of the oncological centre (manual of oncology);
- For a repetition of irradiation in the same target zone, starting within 12 months after the start of the first series of irradiation;
- For a chemotherapy with a drug which, in its first reimbursement phase, has been designated to be monitored by the MDT meeting;
- For every woman diagnosed with a breast cancer and treated in a breast cancer clinic.

Source: AR-KB 25/11/2002 (general legislation) and AR-KB 26/04/2007 (breast clinics)

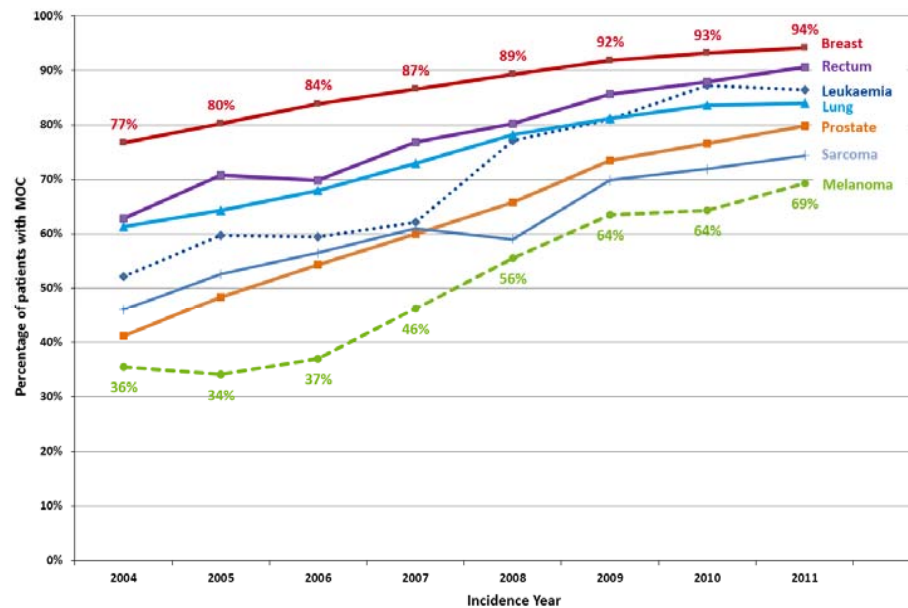
Anyway, setting a 100% target is not realistic, as particular reasons can hamper the discussion of the patient case during a MDT meeting: the patient may for instance die very soon after the confirmation of the diagnosis. In that case, the cancer should be registered at the Belgian Cancer Registry, but there was no time to discuss the patient in a MDT meeting.

As there are no binding legislation (except those cases mentioned in Box 1) the treating physician usually decides which patients are discussed during a MDT meeting. As a consequence, there is some variability in the frequency (certain) cancer types are discussed in MDT meetings (see Figure 2). From 2004 to 2011, a diminution of the variability between cancer types was nevertheless observed, but in 2011 there were still some cancers types most often discussed than others in multidisciplinary setting.



Breast cancer patients are for instance most frequently discussed during MDT meetings (over the whole period 2004-2011): this reflects the fact that they have historically been the first cancer cases to be discussed and treated multidisciplinary, with the creation of dedicated breast cancer clinics for which discussion in MDT meeting is mandatory. On the contrary, melanoma are least frequently discussed in MDT meetings (over the whole period 2004-2011), an observation that is very logical: melanoma are also often diagnosed and treated outside the hospital setting (in ambulatory dermatology practices). In this case, diagnoses are reported directly to the BCR by the pathological laboratory.

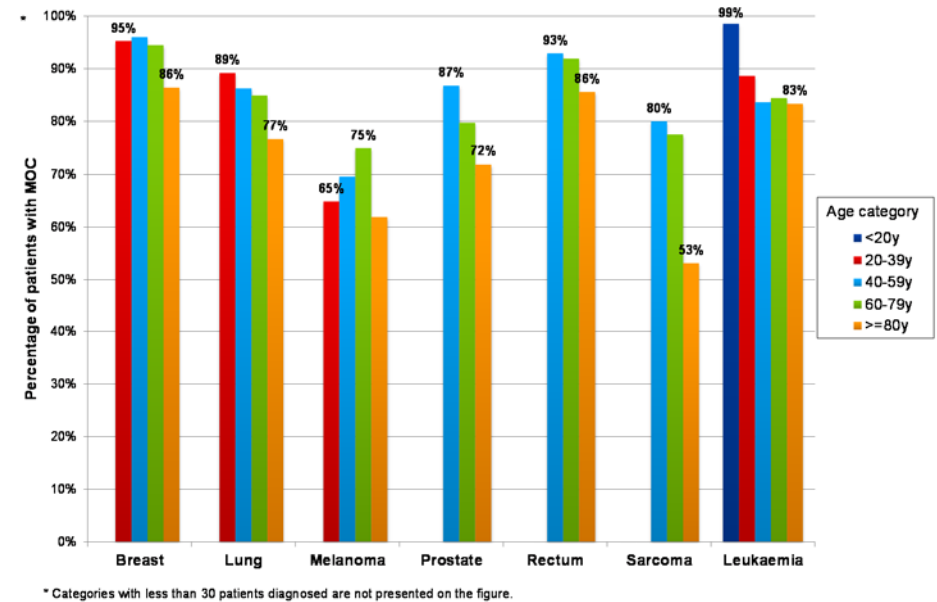
Figure 2 – Evolution in percentage of patients diagnosed with an invasive cancer and discussed during a MDT meeting (2004-2011): national data, by cancer type



Source: BCR-IMA data

Age also seems to play a role in the decision of referring the patient to a MDT meeting. Figure 3 shows that elderly patients (defined as ≥ 80 years old) are less often discussed during a MDT meeting, for all cancers studied. For some of these elderly patients, probably unfit to undergo a curative treatment, a MDT meeting could certainly have had an added value to determine in a multidisciplinary way which strategy could be helpful for the patient, whatever its intent, curative or palliative.

Figure 3 – Percentage of patients diagnosed with an invasive cancer and discussed during a MDT meeting (2011): national data, by cancer type and age categories



Source: BCR-IMA data



2.2. Impact on quality of cancer care

There is an abundance of scientific studies^a, yet of low quality of evidence, that documents that MDT meetings may be beneficial for several aspects of cancer care. It improves **care processes: clinical decision making** (better staging accuracy and treatment selection, better adherence to evidence-based guidelines, increased recruitment into clinical trials, higher referral to palliative care and over treatment avoidance) and facilitated **communication/coordination/continuity of care between healthcare providers** (decreased time from diagnosis or presentation to initiation of treatment; simplification of referral processes between health professionals; and avoidance of the duplication of examinations and investigations, enhanced referral and continuing care pathways).

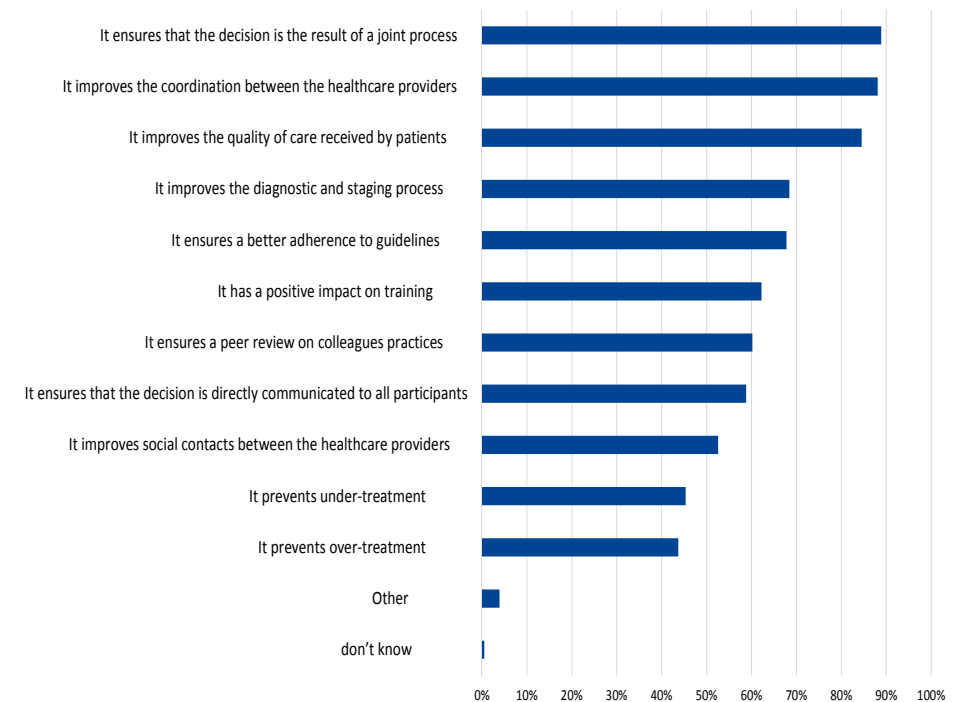
The improved processes result in improved **clinical outcomes** (improved survival for several cancer types and reduced variation in outcomes between hospitals) and **patient well-being** (increased patient satisfaction by encouraging involvement of patients' families and friends and by helping patients take treatment decisions; dissemination of information about support groups; more consistent information for the patient, as each team member is aware of his/her own and other team members' roles when they provide information to patients).

More specifically for the physicians, MDT meetings improve **staff training** (excellent opportunity for training doctors and nurses; the mutually supportive environment is experienced as beneficial, especially in complex cases; improved education and collegiality for members of the MDT meeting).

Belgian MDT meeting participants reported the same positive implications of MDT meetings in the web survey (Figure 4); this was the case for the process and the quality of decision making, as well as for the quality of care and in terms of social contacts between healthcare providers. Nearly 90% of the respondents appreciate the conjoint decision making process and the coordination aspect. The positive impact on training is also reported by the majority of the respondents. Interviews of GPs participating to MDT

meetings showed the same trends with regard positive impacts of MDT meetings on quality of cancer care.

Figure 4 – Positive impact of MDT meetings: perceptions of MDT meeting participants (2014)



Source: Web survey data

Note: Based on 1 014 respondents, several answers were possible

^a All bibliographical references of those studies are mentioned in chapter 2 of the report (available on the website).



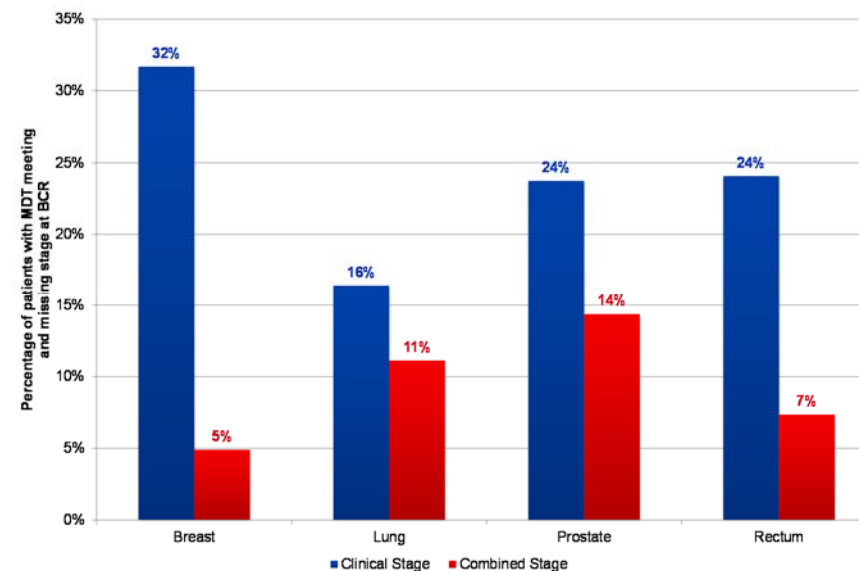
2.3. Impact on cancer reporting to the Belgian Cancer Registry

All new cases of cancer have to be reported to the Belgian Cancer Registry. In daily practice this is accomplished by a data manager, specialised in cancer data.

Over the years, the MDT meetings have contributed to an increased coverage of the cancer reported by the oncological programs to the BCR (from 71% of all invasive cancer cases in 2004 to 86 % in 2011) and improved quality of cancer registration to the BCR (source: BCR).

Nevertheless, there is room for improvement with regard to the completeness of information transmitted. For instance, for 32% of the breast cancer patients diagnosed in 2011 and discussed during a MDT meeting, the clinical stage was not reported to the BCR by the oncological care programs (see Figure 5). For other cancers studied, this percentage of missing information ranges from 16% to 24%. By adding data about the pathological stage delivered by the pathology laboratories, the proportion of missing information may be reduced, but still the level of missing staging information; especially the clinical stage, remains unacceptably high, reducing possibilities to conduct in-depth studies on quality of care. As explained further in chapter 4, the actual legislation may have the perverse effect that some hospitals are triggered to ask for MDT meeting reimbursement, even when not all data necessary to take a decision are available.

Figure 5 – Percentage of patients diagnosed with an invasive cancer discussed during a MDT meeting with clinical/combined stages missing in the Belgian Cancer Registry database (2011): national data, by cancer type



Source: BCR-IMA data.

Combined stages combines information from clinical and pathological stages. The pathological stage prevails over the clinical stage except when the clinical stage is stage IV.



3. PRESENCE OF KEY ACTORS AT THE MDT MEETING: ORGANISATIONAL PERSPECTIVE

To obtain a global picture of the patient, MDT meeting meetings should theoretically be composed of **medical, paramedical and psycho-social** staff, and have sufficient **administrative support**. The coordinator of care and the data manager have important tasks to ensure the efficiency of the meeting and to ensure that all post meeting actions (e.g. report, transfer of data to the sickness funds and BCR) are executed. Therefore, the presence of the following participants is desirable (see Box 4).

When the respondents of the web survey were asked to reflect on the last MDT meeting they attended, all expected health professional profiles were – to a certain extent – represented (Figure 6). The different profiles are discussed in the following sections.

Box 4: Theoretical list of desired participants to a MDT meeting

- **Specialists from the major diagnostic lines:**
 - medical imaging
 - nuclear imaging
 - pathologist and/or molecular biology
- **Specialists from the 3 major therapeutic lines:**
 - surgery
 - radiation oncology
 - medical oncology

An organ specific specialist (pneumologist, gastro-enterologist, gynaecologist...), often the treating specialist of the patient

A coordinator of care in oncology/onco-coach. This role is usually (but not always) endorsed by a nurse specialized in oncology

A data manager who will transfer the required cancer data to the Belgian Cancer Registry

And depending on the patient medico-psycho-social situation:

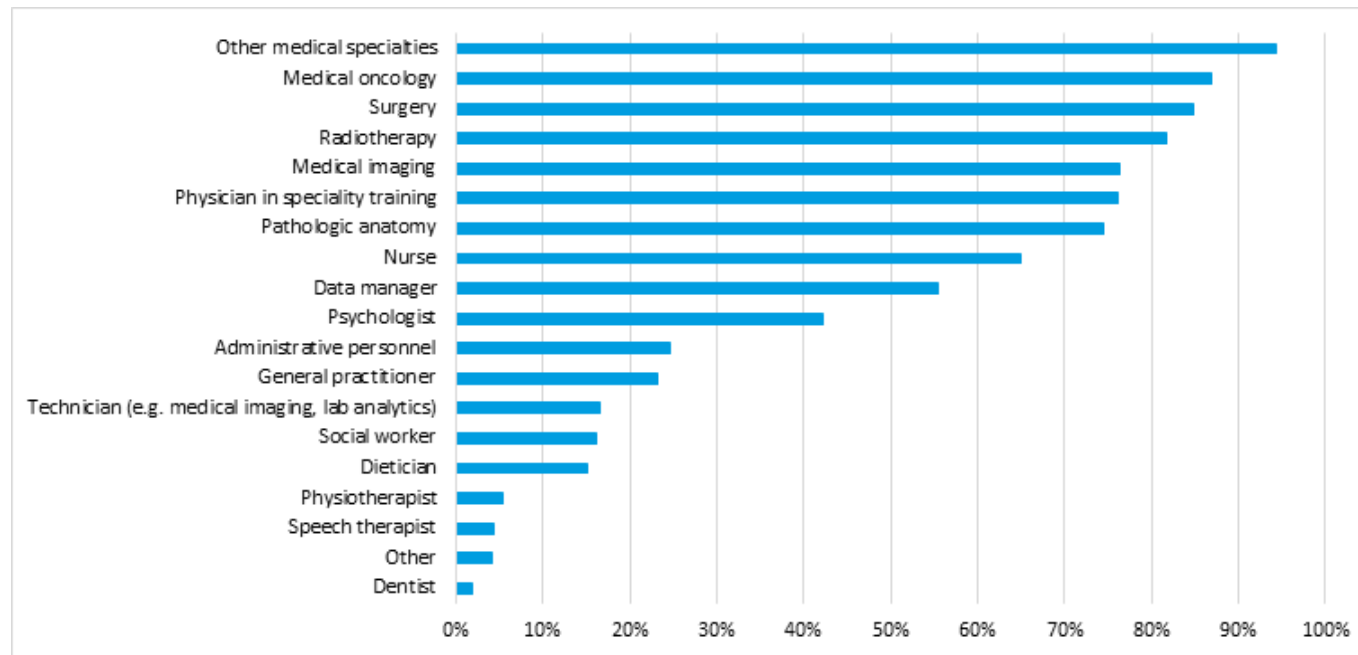
The patient's general practitioner

A psychologist and/or a **social worker**

This is valid mainly for solid tumours and for adult patients. For haematological tumours, and for tumours in children, the composition of the medical staff might differ.



Figure 6 – Professional profile of the meeting participants, as reported by MDT meeting participants (2014)



Source: Web survey data

Note: Based on 1 014 respondents, several answers were possible. Question referred to the participants to the last MDT meeting the respondent attended.



3.1. General versus specific MDT meetings

In general MDT meetings, patients with different types of cancer are discussed in the same meeting whereas in specific MDT meetings only the patients suffering from the same type of cancer (e.g. MDT meeting breast cancer, MDT meeting colorectal cancer, etc.) are discussed. According to respondents we met after the survey, general MDT meetings are sometimes organized as a succession of 'specific MDT meetings' where patients with the same 'type of cancer' are successively discussed and the different specialists follow others in function of the theme under discussion.

Nearly 80% of the respondents of the web survey have participated in a specific MDT meeting the last time. Nevertheless, there are differences in the proportion of specific or general MDT meetings in function of the hospital size. These differences seem to be logical because it is necessary to have a sufficient number of patients to be discussed in a specific MDT meeting to plan it.

3.2. The presence of various specialists: the key to a multidisciplinary approach

According to the respondents of the web survey, the most frequently represented medical specialties in the last MDT meeting they attended, were medical oncology, surgery and radiotherapy. In less than 80% of the last MDT meetings they attended, a specialist in medical imaging and pathology was present. (Figure 6). The legal requirements for specialist's attendance for obtaining the reimbursement are described in Box 5.

Box 5: Legal requirements for specialist's attendance for obtaining reimbursement of a MDT meeting

Legally the minimal requirements to organize and to have a MDT meeting reimbursed are rather lax: **at least 4 specialists from different specialities need to physically attend the meeting**, and *at least one of them* has to

- have surgical expertise in oncology, or
- have the recognition in medical oncology, or
- have the recognition in radiotherapy, or
- have the recognition of clinical haematology or paediatric haematology and oncology.

Since 2011, the maximum number of specialists reimbursed is 5 (4 until 2010), plus one treating specialist not belonging to the hospital staff, or plus the patient's GP.

Source: AR 25/11/2002 and 18/08/2010.

Before 2011, the presence of 4 intra-muros specialists was reimbursed. Since 2011 the maximum number of attendees per MDT meeting is 5 for hospital staff. This modification has been mainly beneficial for specialists in medical imaging and pathologists: e.g. for breast cancer patients, their attendance and reimbursement rose from 50% in 2010 to 66% in 2011 (source BCR-IMA). An additional reimbursement is provided for the treating specialist if he/she does not belong to the hospital staff or for the attendance of the patient's GP (but not for both).



With the limitations of the reimbursement rules explained above, BCR-IMA data from 2011 illustrate that the presence of an internist/organ-specific specialist was billed in 90% of all cases, followed by the surgeons who were present in more than 80% of the cases (except for acute leukaemia and lung cancer). The presence of specialists in imaging, pathology and radiotherapy is more cancer specific, and within ranges of 50%-80% (source BCR-IMA data).

There is no specification in the legislation for the presence of any treating specialist of the patient, or in the presence of any specialist in diagnostics (medical imaging or pathologic anatomy). According to the respondents of the web survey, this is regrettable; among the '**missing specialties**' they reported, the radiologist is often cited. His/her presence is considered crucial to help understand the images, especially when there are discrepancies between the images and the clinical data. Pathologists are often missing too, and this is, again according to the respondents, due to the lack of physicians specialized in this field in Belgium. The few pathologists available have to attend many MDT meetings and/or have to move from a hospital (site) to another. However, it's also possible that the pathology reports were prepared in advance by the specialists and made available during the meeting, or presented by an assistant.

Last but not least, the respondents also underlined the importance of the presence of the referring physician or treating specialist; this would guarantee the quality of the MDT meeting discussion and decisions.

Another example of unspecialized MDT meetings arose from the analysis of billing data. In some hospitals, all MDT meetings are exclusively coordinated by one specialist, i.e. a pneumologist, a gastroenterologist, an urologist or a gynaecologist whatever the cancer types discussed during the meeting. This poses some questions about the quality of the MDT meeting coordination when the expertise is not in line with the pathology discussed.

3.3. The GPs, why they should preferably attend, and why they often don't

Without doubt, GPs have a unique position as patient representatives, sharing a longitudinal history of care with the patient, leading to the acquisition of unique information on medical, personal and social patient-related aspects. They can enrich the multidisciplinary reflection on the care pathway of a cancer patient, and as a consequence participate to the MDT meeting. During the semi-structured interviews with the GPs who have already attended a MDT meeting, MDT meeting attendance was considered to be part of the GP's job.

Nevertheless, all data sources confirmed that the attendance of GPs in the MDT meetings is inexistent in many hospitals, or at the best very low.

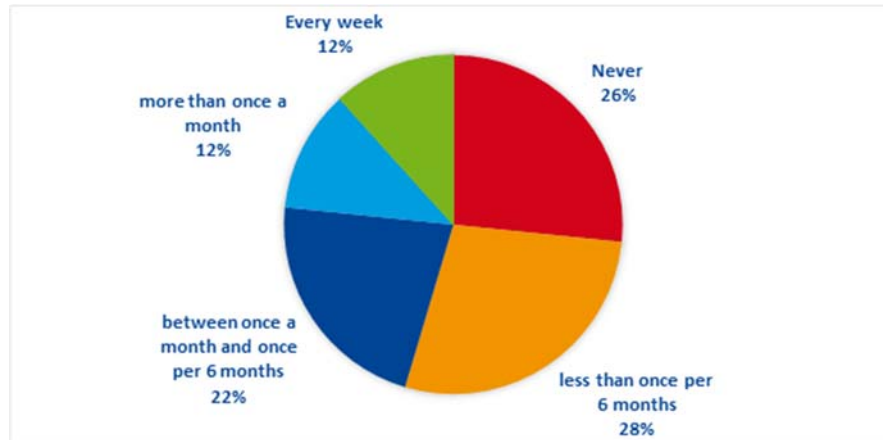
In the web survey, only 12% of the respondents reported the regular presence of a GP in the MDT meetings they attend. Some MDT meeting participants even reported that they never see a GP attending a MDT meeting (Figure 7). This is in contradiction with the fact that 20% of the respondents cited the presence of a GP during the last MDT meeting they attended (Figure 6). This proportion was also judged as surprisingly high by the participants of the discussion meetings. They suspected a confusion in the comprehension of the question.

In addition, the web survey illustrated that GP's participation was higher in smaller hospitals than in larger hospitals. One possible explanation is that smaller hospitals are also typically rural hospitals, easier to access and probably with more personal relationships between the GPs and the hospital staff.

In the BCR-IMA reimbursement data, the attendance of the GPs in the MDT meeting was very low for all cancers types (2% for breast cancer, 4% for rectal cancer, and 3% for lung cancer).



Figure 7 – Frequency of GPs' presence during MDT meetings, as reported by MDT meeting participants (2014)



Source: Web survey data

Note: results based on 1014 respondents.

The hypothetical reasons for this low attendance rate are multifactorial, and detailed in the GPs interviews. **Most importantly**, GPs are not systematically invited to the MDT meetings: only 46% of the web survey respondents reported they systematically invite GPs. **Secondly**, and perhaps consequently, there is an information deficiency about the organisational, content and objectives of MDT meetings as well as about the opportunity for GPs to attend MDT meetings. This is especially the case in Wallonia: the recent national survey on Belgian GPs indicated that 20% of Dutch-speaking GPs and 58% of French-speaking GPs were not aware of the existence of the MDT meetings^b. **Thirdly**, GPs may choose to attend depending on the complexity of the situation (medical or psycho-social, palliative), and give priority to meetings where their input may be greater. **Fourthly**, practical factors may be a barrier for attendance: too late invitation, timing of the MDT meeting during practice hours and long travel time from door to door for a discussion which actually only lasts about 10 minutes per patient. Because GPs are informed about the MDT meeting results (as declared by 80% of respondents, in case the patient's GP is known), they may consider it more time efficient to read the MDT meeting report than to physically attend the meeting. **Finally**, interpersonal factors may also (dis)encourage the attendance of GPs: the relationship with the involved specialists, the feeling to be recognised as a person and as a valued health professional, as well as the training aspects of the MDT meeting.

Depending on the complexity of the patient's case (medical case, deteriorating medical situation, complex home care situation), the interviewed GPs perceived their attendance as an added value to put the therapeutic strategy adopted by specialists in perspective of the patients' own situation and preferences.

^b Presentation by Prof. dr. Sara Willems on the results of the QUALICOPC study on 25/03/2014 for the "Nationale Raad voor Kwaliteitspromotie- Conseil National de la Promotion de la qualité" (NRKP-CNPQ) (RIZIV-INAMI)



3.4. Other non-medical attendees

Since July 1st 2008, the Cancer Plan offers support to hospitals having a certified oncological care program^c by financing extra manpower to support patients with cancer.⁸ The following functions are financed:

- nurses in oncology (Cancer Plan Action 14)
- onco-psychologists,
- social workers (Cancer Plan Action 10),
- data managers (Cancer Plan Action 11)
- dieticians (since 2011).

The full-time equivalents of the extra manpower are calculated based on the number of MDT meetings reimbursed in the hospital. For 2011-2013, reimbursement data from 2009 have been used. For 2014 (and 2015-2016), a new way of computation has still to be put in place, but this be only available in 2015.

In 2012, 1 070 full time equivalents (FTE) were financed by the Cancer Plan: 330 nurses in oncology, 330 onco-psychologists, 165 social workers, 163 dieticians and 82 data managers.⁸ For a medium size hospital which would perform 500 MDT meetings per year, this corresponds to 6.5 FTEs.

3.4.1. *The coordinator of care in oncology/onco-coach*

Nurses in oncology are financed by the Cancer Plan, but their exact function is nowhere described, which leaves it room to decide how to best use and organize this extra manpower. Therefore it will not be surprising that interpretations of the role vary across hospitals.⁹ This is also illustrated by the plethora of function titles reported in the web survey.

Many hospitals however, have organized a function of “coordinator of care^d in oncology”. This function is often (but not always) endorsed by a nurse specialized in oncology. For instance, as was reported by one hospital, his/her main role existed in being a contact person for the patient, in

preparing MDT meetings so that all information is available when the case is discussed at the MDT meeting, and in coordinating all (medical and paramedical) appointments for the patient. This is a crucial function, as it encourages smooth transitions and coordination between the different healthcare providers, in addition of being the single point of contact person for the patient.

3.4.2. *The (very ambitious) role of the data manager*

The role of the data manager is well described in the law: the data manager is responsible for collecting and sending the required data to the Belgian Cancer Registry, for the evaluation of adherence to the recommendations of the hospital manual of oncology and also for the evaluation of the good implementation of the decisions of the MDT meeting that he/she attends. Data managers have to hold a university degree and to attend trainings at Belgian Cancer Registry.

The reality is a bit different. In large hospitals, up to 10 different MDT meetings are planned per week (one per cancer type), which makes it very difficult for one or two data managers to attend them all. Several solutions have been sought: in some hospitals, administrative personnel attends the MDT meetings and encodes under the supervision of a data manager, in other data managers attend the MDT meetings, but get support from administrative personnel. In all cases, data managers focus on the data registration; due to their high workload they cannot fulfil the other duties. Sixteen out of the 25 data managers who completed the web survey (64%) indicated that they never or rarely checked the adherence of the decisions of the MDT meetings to the hospital manual of oncology.

3.4.3. *Psychologists, paramedics and the social workers*

Psychologists and social workers were reported to attend the MDT meeting by respectively 40% and 17% of the web survey respondents. Other paramedics were less frequently represented.

^c This encompasses the care programme for basic oncological care (le programme de soins de base en oncologie - het zorgprogramma voor oncologische basiszorg) and the oncology care programme (le programme de soins d'oncologie - het zorgprogramma voor oncologie).

^d Usually coordinateur de soins en oncologie (CSO) in French, usually onco-coach in Dutch (or coordinator zorgprogramma, verpleegkundig consultant, expertverpleegkundig), but other names also exist (accompagnateur de soins en oncologie, infirmier d'accompagnement ou encore case-manager en oncologie)



While the participation of psychologists and paramedics were not questioned by the participants of the discussion meetings, the place of the social worker was less obvious. Although they are clearly identified as key actors in the multidisciplinary approach of the patient, their physical attendance in the MDT meeting, where different treatment options are discussed, is not considered sensible. It was suggested that it would be more efficient to have a de-briefing afterwards so that all healthcare providers involved were aware of the decisions taken during the MDT meeting and so that e.g. the social workers would not waste their time with multiple meetings instead of assisting directly the patients.

3.5. Videoconferencing as a promising solution to organizational issues?

Bringing together a high number of persons at the same moment in the same room represents a real organisational challenge for hospitals. Videoconferencing could improve the participation of the most appropriate experts and the GPs participation in MDT meeting meetings. It should also reduce the shortage of participation of disciplines (i.e. pathologists) and could favour the organization of dedicated meetings (i.e. dedicated to a certain (group of) cancer type(s)).

At present, MDT meeting participation via videoconference is not eligible for reimbursement, as the law requires all participants to be *physically* present. Nevertheless, videoconferencing was reported to be used by 13% of the web survey participants.

According to some participants of the discussion group, some hospitals ask reimbursement without mentioning that some participants attended via videoconferencing, other hospitals organize what they call “pure administrative MDT meetings”, meetings when all participants can be present and only sign the attendance sheet (but the real MDT meeting was during the videoconference) and still other hospitals would like to invest in the technology but are restrained by the stringent reimbursement rules.

Last, the technical requirements for video conferencing may be different for those attendees who only want to attend (e.g. GPs) than for those who also want to share information e.g. medical imaging. A pilot project on GP participation via teleconference funded by the RIZIV-INAMI was conducted between 2009 until October 2010 and showed encouraging results (report still unpublished).

4. MDT MEETINGS' REIMBURSEMENT: ROOM FOR IMPROVEMENT

4.1. Increasing number of reimbursed MDT meetings

The number of MDT meetings has continually increased since their introduction in the billing codes in 2003. In 2012 (the last year for which almost complete billing data are available), 104 530 MDT meetings were reimbursed, of which 65% were first MDT meetings (N=68 142), which is more than the number of new invasive cancers diagnosed in Belgium (i.e. 64 301 in 2011).¹⁰ This apparently peculiar finding could be explained by the fact that some hospitals ask and receive reimbursement for in-situ tumours and some benign tumours (eg of the brain) for which a registration for the BCR is mandatory. Some hospitals ask also a reimbursement for tumours of which the malignancy is not yet confirmed, only assumed.

From 2003 to 2010, reimbursement was limited to one MDT meeting per patient per calendar year. This rule changed in 2010 with the differentiation of a first MDT meeting (for the first cancer diagnosis), and then a follow-up MDT meeting in case of relapse or recurrence. The follow-up MDT meeting is reimbursed at a lower rate, but its frequency is not limited.

In 2012 the total charges for all MDT meetings (including first, follow-up, second opinion, and supplementary fees) for RIZIV-INAMI amounted to €16.6 million; this corresponds with an average of €160 per MDT meeting per patient.



Box 6: The three types of MDT meetings reimbursed

A first MDT meeting

A first MDT meeting is meant for the first diagnosis and treatment plan of a newly diagnosed cancer patient.

A follow-up MDT meeting

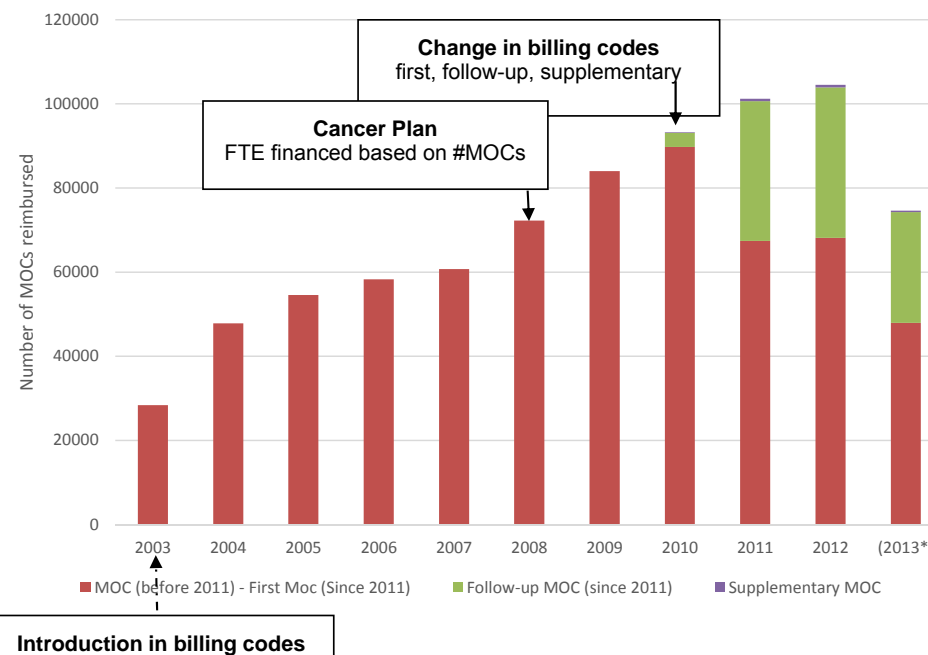
A follow-up MDT meeting is meant to discuss revision of the diagnosis and/or change in the treatment plan, and/or to repeat a series of irradiations within 12 months after the start of the first series of irradiation.

The “change in treatment plan” has to be interpreted in a restricted way and used with parsimony: it only refers to a change in the treatment plan where a multidisciplinary decision is required. Changes in the chemotherapy or radiotherapy treatment plan or in palliative care is the responsibility of the treating specialist, and does not necessarily require a follow-up MDT meeting.

A supplementary or second opinion MDT meeting

A second opinion MDT meeting is meant for establishing the diagnosis or treatment plan in another hospital, when the first MDT meeting could not establish a diagnosis or treatment plan with confidence. To be considered, the referring hospital has to mention the name of the referral hospital for this diagnostic workout or treatment planning.

Figure 8 – Evolution in number of MDT meetings reimbursed (2003-2013): national data by type of MDT meeting



Source: RIZIV-INAMI (DOC N, update August 2014, includes booking data 4Q2013), KCE calculation (year based on MDT meeting date) (2013)* data not yet complete



4.2. Issues related to the MDT meeting reimbursement

4.2.1. A high administrative burden to request and receive reimbursement

Because a MDT meeting is a unique example of delivery of health services *when the patient is not present*, the usual, automatic and direct tariffing system of hospitals does not apply. Instead, to receive reimbursement for a patient discussed during a MDT meeting, 5 *printed* documents have to be sent (in hard copy) to the advisory doctor of the regional sickness fund of the patient:

1. A letter detailing the billing request to the sickness fund
2. A letter from the treating specialist to the MDT meeting coordinator asking to put the patient on the MDT meeting agenda
3. The cancer registration form (“annex 55 template”) for the Belgian Cancer Registry
4. The MDT meeting report, which should be a more detailed document than simply the cancer registration form
5. The list of attending participants who request reimbursement, and their signature

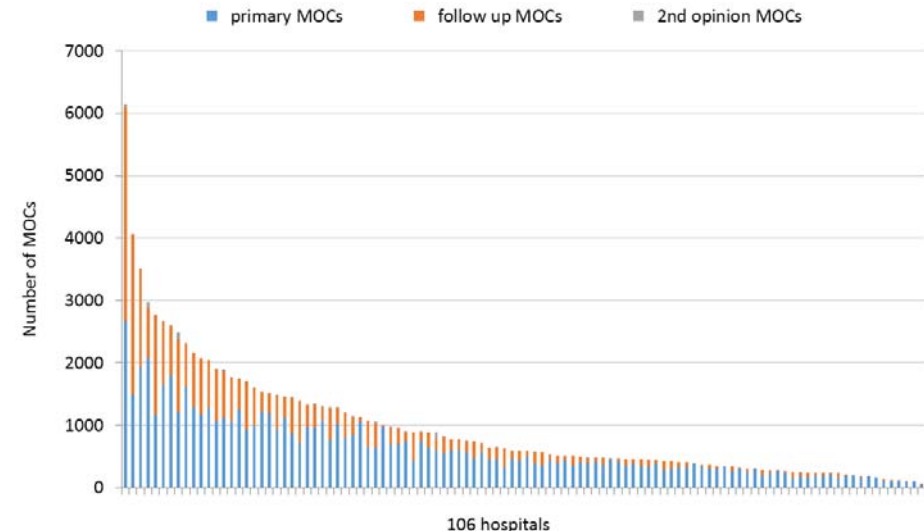
In practice, data managers and administrative support staff spend a lot of their time preparing these documents.

When the sickness funds receive all the documents required, an administrative control is performed to ascertain that a MDT meeting has not been billed so far for the same patient and for the same tumour.

4.2.2. Legislation on follow-up MDT meeting subject to interpretation

Today, there is still some confusion on the billing rules for follow-up MDT meetings; this is also illustrated by the variation in number of follow-up MDT meetings billed per hospital (Figure 9). During the discussion meetings, some participants reported that when patients are discussed in MDT meetings pre-operatively as well as post-operatively, the post-op meeting was frequently billed as follow-up MDT meeting, which is an incorrect interpretation of the legal definitions.

Figure 9 – Number of MDT meetings reimbursed (2011): national data, per hospital and type of MDT meeting



Source: RIZIV-INAMI

4.2.3. “Second opinion” MDT meetings rarely reimbursed

More and more frequently, patients ask for a second opinion besides the demand made by treating physicians. More precisely, if the MDT meeting cannot lead to a definitive diagnosis or to a concrete treatment plan, the team can decide to refer the patient to a hospital with more expertise. In both situations, the patient may have been discussed during a MDT meeting in the first hospital that probably will ask for reimbursement of this service. The second hospital, whose specialists discussed the case again was denied reimbursement, no matter which of the two hospitals eventually treated the patient. In order to face this problem, a specific nomenclature code was added in 2010 allowing the billing for the second opinion MDT meeting. But, to receive reimbursement, the name of this referral hospital has to be mentioned in the MDT meeting report of the referring hospital. There are several problems related to this condition. First, some patients who ask a



second opinion do not inform the first hospital where they were diagnosed, hence nothing is stated on the MDT meeting report and the second opinion MDT meeting cannot be reimbursed. In other cases, even when a hospital wants to refer patients for a second opinion, they may do so without naming directly the hospital in their report, as there is no direct interest for them to do so. In that particular case, the hospital where the second opinion MDT meeting occurs will not be reimbursed for the MDT meeting. As a consequence, only 645 second opinion MDT meetings were reimbursed in 2012, representing 0.6% of all MDT meetings.

As the FTEs of the nurses in oncology, the onco-psychologists, the social workers, the data managers and the dieticians are calculated based on the number of reimbursed MDT meetings, the number of non-reimbursed MDT meetings should be reduced to a minimum.

Centres of expertise where a lot of second opinion MDT meetings are held and where often much time and energy is spent to collect all necessary information to come to a profound advice, particularly for rare or complex cases, are thus heavily disadvantaged by this rule and work “pro deo”.

5. BARRIERS FOR EFFICIENT MEETINGS

5.1. General perception of the quality of the MDT meeting

Several aspects of the discussion could be used as indicators of the quality of the MDT meeting: MDT meetings aim to discuss a patient as soon as possible in order to develop a treatment plan collegially. For 89% of the web survey respondents, the MDT meeting occurs early enough in the clinical path of the cancer patient. Also, 14% respondents think that non-medical aspects are not sufficiently addressed in the discussions and 15% consider that some aspects are still missing, i.e. discussion of psycho-socio-economic issues, imaging results (e.g. RX), GP' or paramedic's advice and patient wishes and preferences.

5.2. Barriers for efficient multidisciplinary meetings

As multidisciplinary team meetings have been installed in several countries, quite some attention has been paid in the international literature to the potential barriers (see Box 7).

**Box 7: Main barriers for efficient MDT meeting in international literature^e**

Workload: participants spend an enormous amount of time in meetings and preparing for the meetings.

Attendance: poor attendance by key staff; lack of dedicated time; staff shortages; allied health professionals not invited as the main focus is nursing and medical care.

Logistics & organisational aspects: the difficulty in coordinating the material for review and the exchange of patient materials with outside institutions are a cause of concern when full data are not made available in a timely fashion, insufficient administrative support; deficient record keeping; lack of availability of a consistent venue; no fixed sessional time.

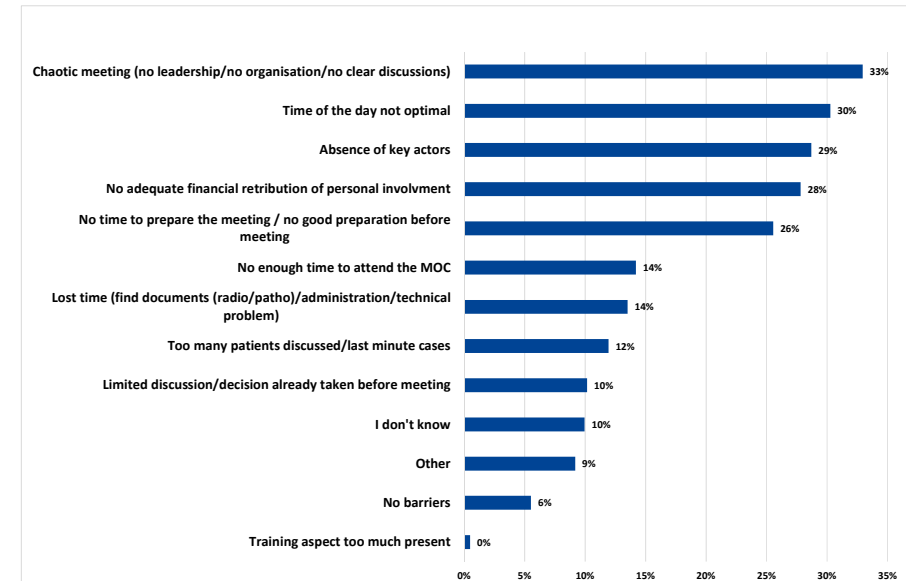
Team work and communication: hierarchical boundaries; disagreement; bad communication amongst subgroups (e.g. surgeons) during the meeting; unequal participation in decision making (e.g. nurses reporting that they were marginalised and their contribution of patient-centred information ignored); lack of a dedicated clerk or MDT meeting coordinator; not having a chair who is experienced, inclusive, respectful and efficient; lacking good leadership, which is necessary to foster inclusive case discussions,

Information: lack of information at meetings to support decision making; lack of personal knowledge of the patient; lack of information on co-morbidities.

Respondents to the Belgian web survey go in the same way: they reported mainly organizational barriers to an efficient MDT meeting meeting, i.e. chaotic meeting (33%), time of the day not optimal (30%), absence of key actors (29%), no adequate financing (28%) and no time for meeting preparation (26%).

^e All specific bibliographical references of those studies are mentioned in chapter 2 of the report.

Figure 10 – Barriers to efficient meetings: perceptions of MDT meetings participants (2014)



Source: Web survey data

Note: N=1014 respondents, several answers possible



6. CONCLUSION

There is today nearly a consensus in the medical community that cancer should be approached from a multidisciplinary perspective, that MDT meetings do improve the quality of cancer care and that this practice should be facilitated as much as possible. The uptake of MDT meetings this last 10 years in Belgium reflects this trend. Now that this practice has almost become a standard, more focus could be put on the “quality” of the meeting, by paying attention to the presence of key actors, without whom the meeting should preferably not take place, by strengthening technical support when needed (to display imaging and/or pathology results), and by ensuring that MDT meetings gather specialists with real expertise in the management of cancers discussed. While the very technical purpose of these meetings is not minimized, attention should also be paid to stay patient-centred and not only disease-centred. To that end, the implication of the treating GP, who has the full knowledge of the patient medical and psycho-social context and history, is undoubtedly the best person to attend the meeting to represent the patient. Practical time and logistic constraints usually hamper the GP to do so, and because in the future there is no sign that the GP workload will diminish, the use of videoconferencing technology is probably the best manner to improve GP participation to MDT meetings. Moreover, this promising tool could also be considered to substitute for the physical attendance of some specialists not present on all hospital sites (typically, radiotherapists or pathologists), or when there is a need to confer with highly specialized experts, in the case of rare tumours for instance.



■ RECOMMENDATIONS^f

Recommendation 1

To increase the number of patients with cancer discussed in MDT meeting, the KCE recommends:

To the physicians

- Theoretically, every attempt should be made to discuss patients with new diagnosis of cancer at a MDT meeting, regardless the type of cancer, patient age, stage of disease or physical status. Nevertheless, if the treating physician decides not to put the patient on the MDT meeting agenda, the rationale to do so should be clearly documented in the patient medical file.

Recommendation 2

To improve the multidisciplinary, the KCE recommends:

To the RIZIV-INAMI

- Currently, the nomenclature code for attendance to MDT meeting requires physical presence of physicians. Rules should be revised to allow participation via videoconference or conference call, with strict conditions on the technical quality.

Recommendation 3

Today, the presence of GPs at the MDT meeting occurs very rarely. To improve the involvement of the GPs at the MDT meetings, the KCE recommends:

To the scientific associations of GPs

- To increase the general awareness of GPs for MDT meetings

To the coordinators of the MDT meeting

- To ensure that the information-flow is fluid and of high-quality, starting from the invitation and ending with the report;
- during the MDT meeting, ensure that clear agreements on the way to communicate results to the patient are made.

^f The KCE has sole responsibility for the recommendations.

**To the RIZIV-INAMI**

- Currently, the nomenclature code for attendance of external physicians can be billed either by the GP, either by a treating specialist, but not by both. A specific code for GPs should be envisaged, or the code should be available for both GPs and treating specialists.
- Currently, the nomenclature code for attendance to MDT meeting requires physical presence of physicians. Rules should be revised to allow participation via videoconference or conference call, with strict conditions on the technical quality.

Recommendation 4

To improve MDT meeting forms, the KCE recommends:

To the health authorities, the College of Oncology and the Belgian Cancer Registry

- To adopt a more flexible procedure for the adaptation of the general MDT meeting form to integrate data specific to cancers that have been discussed during a MDT meeting. These adaptations will be proposed and approved by the College of Oncology and the Belgian Cancer Registry, before being officially published by the Cancer Registry. These adaptations will no more require a systematic registration in a Royal Decree.

To improve the quality of those data, the KCE recommends:

To the Belgian Cancer Registry

- Timely feedback to oncological centres on their data quality, stratified by type of cancer and with benchmarking to other centres, could motivate practitioners to improve their registration practice. Based on these feedback results, and when appropriate, a concrete plan for improvement should be agreed upon with the coordinator of the oncological centre.

To the FPS Public Health

- The computation of the number of full time equivalents of supportive staff for the oncological centre, currently solely based on the number of MDT meetings reimbursed to the centre, should also take into account the quality of the data reported.
- To review the function description of the data managers, in order to focus on their core business, data registration and quality improvement, and less on verification of decisions taken at the MDT meeting that is outside their field of expertise

**Recommendation 5**

To reduce the variability between hospitals with regard to number of first and follow-up MDT meetings to encourage the practice of 'second opinion' MDT meetings, the KCR recommends:

To the INAMI-RIZIV

- To clarify inclusion and exclusion criteria for reimbursing MDT meetings for in situ tumours
- To improve information to hospitals on the minimal requirements to bill second opinion MDT meetings.
- To adapt existing rules to bill second opinions MDT meetings (allowing referral hospital to motivate the demand for reimbursement).
- To foresee a reimbursement for the organisation of "reference COM" to allow experts from reference centres to discuss more complex cases at a (inter)national level (recommendation from report 219 on the organisation of care for complexe and rare tumours)

Recommendations 6

To lower the currently high administrative burden to request reimbursement for a MDT meeting, the KCE recommends:

To the sickness funds

- To evaluate the relevancy of each document and to suppress those which are not essential
- To lower administrative burden by switching towards paperless technologies with authenticated signature.

Recommendations 7

To clarify the role of supportive staff at MDT meetings and to ensure their durability, the KCE recommends:

To the FPS Public Health

- To publish a function description for the nurses in oncology and for the coordinators of care in oncology, and to better define/delimit both functions. .
- To publish rapidly the new computation of FTEs on supportive staff in oncological centres.



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