

SHORT REPORT

HOSPITAL AT HOME: ORIENTATIONS FOR BELGIUM



SHORT REPORT

HOSPITAL AT HOME: ORIENTATIONS FOR BELGIUM

MARIA-ISABEL FARFAN-PORTET, ALAIN DENIS, LUT MERGAERT, FRANÇOIS DAUE, PATRIEK MISTIAEN, SOPHIE GERKENS



■ FOREWORD

You may not have noticed it on the cover, but this report is number 250. Without delving too deeply into our history, it would be fair to say that KCE has covered an extremely broad range of topics, and that its conclusions and recommendations touch almost every health care and health insurance domain. And yet, this diversity does contain a number of constants which are directly applicable to the topic we are interested in today: hospital at home.

First observation: when it comes to health care reform, we must accept that there is no magic bullet. Like the other innovations we have examined during the course of our 250 studies, hospital at home is not *the* solution which will magically resolve all of the troubles faced by hospital care. A health care system must evolve using small steps, taken one at a time, and each must be deployed with great care following pilot studies in the field.

A second major red thread runs through the majority of our endeavours: improvements in health care are impossible without improvements in quality. Quality itself demands professional excellence from physicians and other care providers, encompassing multidisciplinary vision, teamwork and sharing of information. Integration and continuity have become incontrovertible concepts. The same holds true for hospital at home, which will only prove useful if it adheres firmly to this approach.

A third common thread - the last we will mention - among those often repeated during the past twelve years: awareness that the meaning of "patient" is irrevocably changing in the 21st century. Shifting from "passive subject" to full partner and manager of his or her own health. This active role, sometimes taken on by informal caregivers, is an essential precondition for hospital at home to be successful.

Does this study have anything new to share? Yes and no. Our researchers immerse themselves fully in each new topic, critically examining the literature, listening to actors in the field... and thus discover specific challenges and unexpected solutions each and every time. Once again, they have collected a series of questions that still require creative answers tailored to the local context. Thus, this report serves to roughly sketch the contours of experiments worth performing.

Christian LÉONARD
Adjunct General Director

Raf MERTENS
General Director



■ KEY MESSAGES

- Hospital at home (HAH) consists of delivering care in the patient's place of residence that would otherwise need to be delivered in an acute hospital.
- Various existing HAH models have been developed to respond to specific local needs, which in turn depend on national or regional health care systems. The heterogeneity of existing models, and the lack of a preferred model either in the literature or among Belgian actors, reinforces the impression that large-scale deployment of HAH is not desirable at present, but that pilot projects that allow careful testing and assessment of different models should be performed first.
- Despite the great heterogeneity of studies on the subject of HAH, the current state of the art allows the suggestion that HAH is as safe as classical hospitalisation. However, there are no studies that demonstrate superiority to classical hospitalisation, except, to some degree, with regards to patient and family satisfaction. However, in the absence of conclusive evidence in the literature, this will have to be confirmed by evaluating pilot projects.
- International examples suggest that eligibility criteria of patients for this type of care are more related to the intensity of care required (multidisciplinary nature, frequency of home visits, etc.) than to a specific pathology. The scope of services is wide, and includes curative care (medical and post-surgical), but also palliative care and, to a lesser extent, rehabilitation and mental health care, depending on local needs.
- On an organisational level, specific attention is given to the multidisciplinary approach around a "care and support" plan, defined based on patient needs, to the empowerment and support of patients and relatives, to the coordination of care and non-medical services, and to ensure the continuity of care (24/7) and the cooperation with existing structures. Belgian actors have insisted on making use of existing structures wherever possible, rather than creating new ones.
- In terms of financing, international examples show that this generally depends on the integration of HAH in the offerings of other health care providers, and therefore on how these offerings are financed. In Belgium, HAH financing will depend on the nature of the medical activities that will be provided, and the sharing of responsibilities among various care providers. It must be noted, however, that the development of HAH will only be possible if suitable financial incentives are provided.
- In Belgium, a regulatory framework ensuring the safety and quality of care provided via these new care modalities will have to be defined. It will also be necessary to ensure that sufficiently qualified staff, adequate financing, appropriate information technology (IT) tools and decision-making supports and adequate support to coordination are available prior to implement such a programme. Finally, it will be necessary to create links between the various governmental levels, as the current responsibilities for health services, social services and personal care are divided between federal and federated authorities. This will require multilateral negotiations and the creation of new rules for the transfer of separate budgets.



- The hope that HAH will allow the reduction of costs will depend on how HAH is organised and financed in Belgium, and therefore shall require additional study in the future. Specific attention will have to be given to the patients out-of-pocket payments, in order to avoid costs being transferred to the latter. Finally, the potential for cost savings will depend not only on the ability to provide alternatives to hospitalisation, but also on the ability for restructuring the hospitals.



■ SUMMARY

TABLE OF CONTENTS

■	FOREWORD	1
■	KEY MESSAGES.....	2
■	SUMMARY	4
1	CONTEXT OF THIS STUDY.....	6
1.1	RESEARCH QUESTIONS	6
1.2	METHODS.....	7
2	THE CONCEPT OF HOSPITAL AT HOME.....	8
2.1	WORKING DEFINITION	8
2.2	VARIOUS MODELS	8
2.3	NO SPECIFIC TARGET POPULATIONS IN TERMS OF DISEASES.....	8
2.4	EFFECTIVENESS AND SAFETY	9
2.5	FIRST CONCLUSION : IT IS TOO EARLY FOR GENERALISATIONS.....	9
3	KEYS ACTIVITIES FOR HAH PROVIDERS.....	11
3.1	IDENTIFICATION OF PATIENTS AND ELIGIBILITY CRITERIA	11
3.1.1	Eligibility criteria	12
3.2	PLANNING, COORDINATION AND DELIVERY OF HAH CARE.....	12
3.2.1	A multidisciplinary team around the patient	12
3.2.2	Establish an individualised " care and support plan "	13
3.2.3	What care is part of the HAH ?	13
3.3	EMERGENCY PLAN.....	14
3.4	EMPOWERMENT AND SUPPORT FOR PATIENTS AND THEIR FAMILY	14
3.5	CONTINUITY OF CARE AND INTEGRATION OF HAH ACTIVITIES IN THE HEALTH CARE SYSTEM	15
4	IMPLEMENTATION OF A BELGIAN HAH PROGRAMME : IMPLICATIONS FOR THE HEALTHCARE SYSTEM.....	16
4.1	A STRUCTURED FRAMEWORK	16
4.1.1	Norms and legislations.....	16
4.2	AVAILABILITY OF SUFFICIENT QUALIFIED STAFF.....	17



- 4.2.1 Training qualified staff17
- 4.2.2 Making HAH programmes more attractive and monitoring the available human resources .17
- 4.2.3 New titles and functions 18
- 4.3 ADEQUATE FINANCING18
 - 4.3.1 Other issues to consider related to HAH financing19
- 4.4 PROCESS IN SUPPORT OF QUALITY OF CARE20
- 4.5 IT TOOLS20
- 4.6 SUPPORT STRUCTURES FOR COORDINATION AND COOPERATION BETWEEN VARIOUS LEVELS OF POWER21
- 5 CONCLUSION22**



1 CONTEXT OF THIS STUDY

Technological progress in the area of health care has been such that some care activities that could previously be performed in a hospital only may now be performed in outpatient facilities, or even in the patient's home. This has contributed to the emergence of new health care models over the past decade that aim to topple the walls surrounding acute hospital care. However, even if these walls become more 'porous', the hospital retains a crucial - and irreplaceable - central role. The challenge is to find the right balance between in-hospital care and care outside the hospital.

The concept of hospital at home (HAH) is a good example of this trend: the goal is to provide a maximum of care to patients in his/her own environment rather than within the walls of a hospital. However, within this concept, various approaches jostle for primacy, and even contradict each other. What care can be provided outside of the hospital? Who can provide this care? Who will prescribe it? How does it need to be organised?

This is also an approach that may fulfil a variety of needs and motives: a way to address the lack of available hospital beds in overburdened hospitals, an attempt to reduce health care costs and length of stay and/or the number of hospital admissions, or, from a demand perspective, a way to allow patients to remain within their own environment and respect their preferences - based on the assumption that patients generally prefer to stay at home.

Belgium is nevertheless in a situation of overall overcapacity of acute-care hospitals beds, except for geriatric care bed. Thus, the major challenges lie rather in ensuring continuity of care, bridging the current gap between primary and secondary care, and keep people in the least complex environment that is clinically appropriate.

Additionally, Belgium currently reflect on a vast reform of the hospital system, making fundamental questions such as the role of the hospital, its financing and how it meets the population's needs. The issue of HAH is therefore current in a way it has never been before, and has taken a prominent role on the political agenda.

KCE already submitted proposals for organisational reform of health care in 2012 and 2014, focusing on two key pillars - chronic diseases and hospital financing. One of the things these two studies have in common -

and which aligns them with international trends - is that hospitals must integrate more strongly into the care network around them. The intramural and extramural worlds need to integrate and expand in order to ensure seamless care, with patient needs as a central focus. In other words: we must evolve towards a system centered on demand rather than on supply.

In this study, we examined the international literature on HAH and reviewed the models developed around the world in order to assess their strengths and weaknesses, and subsequently attempt to trace the outlines of a model suitable for our country.

1.1 Research questions

This study focuses on lessons to be learned from experiences with HAH gathered abroad, and their transferability to the Belgian system. The three research questions were formulated as follows:

- What evidence can be found in the literature on the effectiveness and on the safety of hospital at home?
- How is hospital at home organized in a selection of five other countries or regions?
- What are the key issues that may play a role in building and implementing an organizational framework for hospital at home in Belgium?

This study only briefly addresses the question of HAH costs, as these will depend on organisational and financing models that are retained. It also does not go into detail on the conditions required for the management of specific diseases in a HAH setting in Belgium. These two issues will need to be elaborated in the future based on the evaluation of HAH pilot projects.



1.2 Methods

This “short report” contains the main messages drawn from our scientific research. For interested readers, detailed methods along with exhaustive results are available in the [scientific report](#). In summary, methodologies used were multiple:

Chapter 1: examines systematic reviews of the literature on the effectiveness and safety of HAH. The quality of systematic reviews was assessed using the AMSTAR scale.

Chapter 2: is a cross-sectional analysis of how HAH systems are organised in 5 countries/regions: France, The Netherlands, autonomous regions of Valencia and Basque Country (Spain), and the state of Victoria (Australia). We selected 5 countries/regions that developed a care model that corresponds with the HAH concept described in the literature and which already have a certain degree of experience with this model:

- France and Spain (autonomous communities of Valencia and Basque Country), identified as countries where HAH programmes increasingly represent significant alternatives to hospitalisation;
- Australia (state of Victoria), where HAH was launched under conditions that are similar to those found in Belgium (i.e. initiatives from the field and pilot projects) ;
- The Netherlands, where formal HAH structures have not been developed, but where there is ample experience with providing complex care at home within a multidisciplinary setting.

For each country, we analysed the websites of governmental institutions and professional organisations. These data were subsequently validated and supplemented by experts from the studied countries. Finally, the cross-sectional analyses of the different organisational models for HAH between countries were validated by international experts in HAH. The details of this cross-sectional analysis may be found in the detailed scientific report, Chapter 2.

Chapter 3: reviews and analyses Belgian studies on related themes that may influence the organisation of HAH. All KCE reports were screened, along with other studies identified thanks to our contacts with actors in the field and via the snowball method.

Chapter 4: Discusses the possibilities for HAH organisation in Belgium, based on semi-structured interviews and face-to-face meetings and workshops with Belgian health care actors. The results from this chapter reflect the perception of these actors, and should not be considered as "proof". People for face-to-face interviews were selected chiefly based on their expertise and experience in the field, while workshop attendees were selected as representatives of various stakeholder groups. Shortly before finalising the report, a broader consultation of various stakeholders was also done in order to present the results and recommendations of this study. A summary of this consultation may be found in the appendix to this report, section 5 of the [appendix](#).

To simplify the reading, all these individuals (people of the field and stakeholders) are named "Belgian actors" in the next parts of this short report. They can be categorised into the following groups: political decision-makers (federal and local entities), sickness funds, hospitals, industry, general practitioners and medical specialists, pharmacists, nurses, patients, medico-social institutions, home care and support services, and coordinating structures.



2 THE CONCEPT OF HOSPITAL AT HOME

2.1 Working definition

The concept of HAH dates back to the 1950's, but consensus on its definition is still lacking. Various models may be found over the world. Created with a great deal of enthusiasm and creativity, but, it must be acknowledged, also a degree of disorder. Our first task was therefore to agree on a working definition for the concept of hospital at home (HAH) which we could focus on. Among the definitions we encountered, the common thread appeared to be that the complexity of care to be provided must be such that, without HAH, the patient would have to be treated at the hospital. Thus, we propose to use the following definition for the purpose of this study :

Hospital at home (HAH) consists of delivering care in the patient's place of residence that would otherwise need to be delivered in an acute hospital.

The place of residence may encompass homes for the elderly and nursing homes.

The concept of HAH encompasses other concepts that more generally aim to reduce or replace hospital stays, and to keep care closer to the patient's natural environment: "discharge planning", "nurse-led care", "care pathways", "transmural care", "intermediate care" and "readmissions reduction interventions", which we will not address here. It is also important to distinguish hospital at home from home care. In Belgium, there is currently no recognized and legal status for HAH, even though numerous actors already practice some form of care that may be considered as such. We identified (and encountered) several active initiatives in various sectors: paediatrics, oncology, dialysis, as well as 'general' hospital care projects. The emergence of these (non recognized) initiatives displays the current need to reflect upon a regulatory framework designed to ensure the safety and quality of care provided by these new health care modalities. It should be noted that this study is in no way an assessment of these first initiatives.

2.2 Various models

Our review of the literature and our cross-sectional analysis between countries did not provide a great deal of solid evidence for the best organisational models for HAH. The different models we identified have generally grown out of pilot projects conceived to respond to specific local needs, and which in turn depend on the health care systems within which such projects are developed.

The literature review also does not allow determination of the superiority of one model over the others in terms of patient or health care system outcomes.

Based on the literature, we suggested to Belgian actors to reflect on three theoretical models : (1) a model in which hospital professionals go to the patient's home ; (2) a model where autonomous entities that are independent of the hospital and consisting chiefly of primary care professionals provide care at the patient's home, and (3) a mixed model where primary care and hospital professionals fulfil specific and distinct tasks within the patient's home.

Significant polarisation became apparent during face-to-face interviews with the actors, largely favouring the model corresponding with their own work environment.

2.3 No specific target populations in terms of diseases

Our cross-sectional analysis does not allow the definition of an exhaustive list of diseases that potentially qualify for HAH, as the majority of the eligibility criteria employed are focused chiefly on care intensity. This intensity is quantified differently in each country, but generally takes into account elements such as the multidisciplinary nature of care or frequency of patient visits required. In effect, the potential range of diseases is broad: respiratory diseases, cancer, and hematologic, cardiovascular, neurological, ENT, rheumatologic, digestive diseases, HIV/AIDS or other infectious diseases, diabetes, and so forth.

In the literature, we also identified many publications on 'generalist' HAH initiatives as publications concerned with specific target groups such as patients with cystic fibrosis, chronic obstructive pulmonary disease (COPD), renal insufficiency, various cancers, heart diseases, stroke, pulmonary embolism, or deep vein thrombosis. We also identified a broad



range of interventions/techniques: dialysis, mechanical ventilation, parenteral nutrition, etc.

All Belgian actors insisted on the necessity for clearly defined eligibility criteria, but their opinions on suitable target populations diverged. A majority was of the opinion that a HAH initiative had to potentially address all diseases, while those with some experience with a pilot project - a minority - tended to favour projects for a specific disease. Some of the actors had participated in projects aiming at defining target groups that might benefit from HAH (or for whom there might be a financial incentive for hospitals to transfer the patient to HAH) Nevertheless, no list was published.

Of course, it should also be noted that target populations also depend on what is provided locally.

2.4 Effectiveness and safety

Our analysis of the international scientific literature is hampered by the lack of a widely accepted definition of the concept of HAH, and the heterogeneity of the patient populations in question, the interventions performed, the organisation of care and the assessment methods employed. Thus, overall assessment of effectiveness or safety of HAH was difficult.

Length of stay and readmission.

The results on the length of hospital stay are difficult to compare. While some studies mentioned a reduction in length of hospital stay, there is no evidence for a reduction of the total duration of the health care episode (hospital + HAH care) ; this aspect does not appear to have been studied. Therefore, it cannot be ruled out that prolonged HAH substitutes home care. There is also no evidence that HAH reduces or increases the number of readmissions.

Quality of life

In terms of quality of life and patient and family satisfaction, results between HAH and hospital care are equivalent, or slightly favour HAH. It should be kept in mind, however, that the majority of HAH experience has been garnered among patient populations who consented to participate (self-selection) and subject to strict selection criteria.

Complications and mortality

No publication reports a higher number of complications or significant mortality increases in HAH compared with classical hospitalisation.

Despite some reservations due to the heterogeneity of populations and some suspected methodological bias, it may be stated that the current state of knowledge suggests HAH is no less safe than classical hospitalisation, at least when practiced within a well-defined framework. However, considering the lack of strong evidence from current studies, this will require confirmation based on assessment of the first initiatives deployed in Belgium (e.g. pilot projects).

The details on the review of the literature may be found in chapter 1 of the detailed scientific report.

2.5 First conclusion : it is too early for generalisations

The initial phase of our investigations leads to a conclusion : the heterogeneity of existing models, and the lack of a preferred model - both internationally and among Belgian actors - leads us to believe that large-scale deployment of HAH is not desirable at this point in time, but that pilot projects designed to carefully study and assess various possible models are to be preferred.

An additional - and equally important - conclusion is that Belgian actors are very demanding and eager to take the leap into the experience. According to their perceptions, the advantages of a HAH programme in our country would be:

- Improvement of quality of life and satisfaction of patients and family;
- The de-institutionalisation of patients, the release of hospital beds and the reduction of hospital readmissions,
- A better quality of care and the reduction of risks for hospital-acquired infections,
- The revalorisation of the image of primary care,
- More patient-oriented care and a more holistic approach,
- Better complementarity between settings, and
- Improved therapeutic impact (e.g. due to better understanding of the care plan, also linked with the patient empowerment and increased



compliance, although there are also worries about reduced compliance due to a lack of monitoring).

Conversely, the opportunity for cost savings is not listed among the key concerns ; most even consider this outcome highly unlikely.

In general, they primarily argue against the creation of new structures, and propose to organize HAH in geographical care zones and to define specific yet flexible norms that may be adapted to various management models.

It should be noted that a potential obstacle to the development of HAH is the 'density' required for certain types of care. In effect, one might wish to keep a patient hospitalised not due to true 'complexity' of care, but because the concentration of such care allows greater efficiency and safety (e.g. it is more practical to have 20 patients receiving intravenous therapy on a single ward compared with 20 patients in their own homes).

Based on this first conclusion, we propose an initial series of recommendations for the development of pilot projects.

In the following sections of this report, we will analyse the available data from abroad and the observations made by Belgian actors in greater detail, in order to sketch the outlines for operationalizing a Belgian model, and we will formulate :

- concrete recommendations for the field regarding key activities that will need to be deployed in the field when such pilot projects are launched (**section 3**) ;
- recommendations for health care authorities regarding the conditions required for this Belgian model to be successful (**section 4**).

Recommendation 1

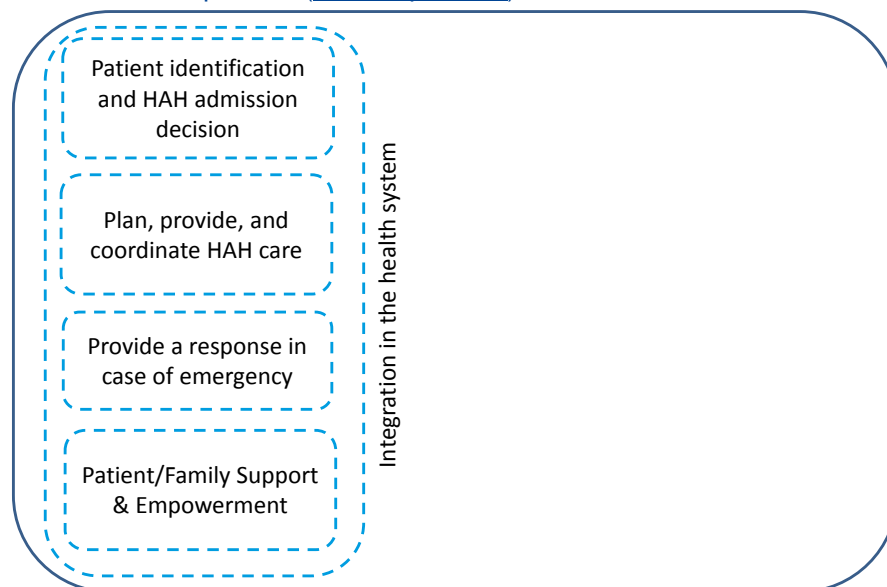
- **Large-scale HAH deployment is currently not desirable; rather, various models should be tested via pilot projects.**
 - **A steering committee must be put in place to organise project selection, to monitor their deployment and proceed with final evaluation**
 - **Criteria and indicators for the evaluation must be predefined by the steering committee before the launch of the pilot projects and should be collected by all pilot projects.**
 - **These criteria and indicators should help, in every setting of care involved, to assess the quality and the outcomes of care (effectiveness, efficiency) as well as the satisfaction and quality of life of patients and their families, so that these different items can be compared with existing alternatives (classical hospitals and day hospitals) for the full episode of care.**
 - **The definition of what HAH encompasses and its organizational characteristics should currently not be too restrictive, so as to leave some flexibility at the local level and room for innovative initiatives. A minimum requirement, however, is to respect the definition of HAH, namely to limit HAH to care that otherwise should have been delivered in a hospital.**
 - **Each HAH project must define its own eligibility criteria, defined in terms of (minimum / maximum) complexity of care, frequency and duration of daily care required, skills and equipment required, and geographic region served.**
 - **A degree of safe experimentation must be allowed for pilot initiatives in order to test various financing modalities, including the possibility of financing outside the hospital care that can currently only be financed in hospitals.**



3 KEYS ACTIVITIES FOR HAH PROVIDERS

This section is dedicated to describing the key elements to consider when conceiving pilot projects intended for trialling in the field diverse models of hospital at home.

Figure 1 – List of activities required for developing a high-quality HAH programme focused on the patient (inspired by the position paper on care for chronic patients (KCE Report 190))



3.1 Identification of patients and eligibility criteria

Recommendation 2

- **In addition to clinical assessment, the decision on whether to admit each patient must be based on an assessment of his social and family environment, in order to determine whether he has sufficient support and whether his/her living conditions are sufficiently safe and appropriate for HAH.**
- **The patient and his family must be fully informed of the possible choices - HAH or other modalities (generally hospital admission) - and must provide consent if they decide (the patient, but also his/her family) to opt for HAH.**

In the international models, both medical specialists and general practitioners (GP) may suggest HAH, but in practice, it is rare for GP to suggest it. A parallel may be drawn between this situation and the current situation in Belgium in the palliative care domain, where a similar reticence to propose (timely) care of this nature to patients who might benefit from it has been observed among GPs. Therefore, the countries studied are currently deploying initiatives to raise awareness among GPs. We have also identified a selection of information technologies (IT) tools aiming at supporting proactive identification of patients who may benefit from HAH. These tools have been particularly developed in emergency departments of hospitals. For more details on this subject, please see the appendix to this report, section « *IT services* ».

There is no consensus among Belgian actors about who should have the final responsibility for the decision to hospitalise a patient at home. According to some, this responsibility belongs exclusively to the prescriber (the GP or medical specialist, depending on the model), while others believe the decision must be shared between the prescriber, the patient and his/her family, and other potential actors involved, such as structures providing home care and support services. The role of a coordinating physician or a coordinating centre has also been suggested.



3.1.1 Eligibility criteria

It is important to leave room for experimentation in the conception of pilot projects. However, each project must define clear inclusion and exclusion criteria for HAH. Notably, this will allow avoidance of inclusion of patients who should receive traditional home nursing care.

As mentioned below (section 2.3), HAH programmes developed abroad utilise criteria based more on care intensity (multidisciplinary character of care, frequency of visits, etc.) than on a specific disease. The criteria used to characterise this intensity of care vary from country to country, and evolve over time and as technology changes (see the appendix to this report for a description of these criteria per country). Actual guidelines per care type/technique are becoming increasingly common.

In addition to care intensity criteria, both (i) the international analysis and (ii) interviews and focus groups with Belgian actors underline the importance of also respecting the following conditions:

- The patient must be in a stable state ;
- His/her care must not require the availability of heavy equipment nor the permanent presence of a professional ;
- The patient must have an adequate family support ;
- The living environment must be appropriate and free of dangers ;
- The patient and his/her family must have given their consent for hospital at home, implying that they have been clearly informed of the possibility to choose between hospital and hospital at home, and have indicated their choice in a formal manner ;
- The geographic distance that the HAH team must travel has also been cited as a criterion.

3.2 Planning, coordination and delivery of HAH care

Recommendation 3

- **A multidisciplinary team, sharing a “care and support” plan that meets the patient's needs and tailored to the local situation must be put in place. The roles and responsibilities for each healthcare professional and other people involved in care and support - including those of the patient and his/her family - must be clearly described in this plan. This plan must also determine a.o. who coordinates the activities between the various health services but also between health and social services, who is the physician responsible for medical follow-up and who is the physician responsible for keeping the patient's medical file up to date.**
- **Medical and non-medical services provided by the HAH project must, wherever possible, make use of existing services, structures and programmes. Where highly specialised or 'rare' interventions are concerned, agreements between the HAH programme and 'specialised centres' or 'specialised healthcare professionals' are to be preferred.**

Both the cross-sectional study and Belgian actors emphasised the importance of management by a multidisciplinary team and the elaboration of an individual, precise and detailed “care and support” plan that defines the role of each involved party, while taking into account the patient and his family.

3.2.1 A multidisciplinary team around the patient

The importance of a multidisciplinary approach based on patient needs was an important focus in the literature and in the various models from the countries we studied. The role of each involved professional must be clearly defined :

The physician's role

The involvement of a medical specialist and/or general practitioner (GP) in patient follow-up is not the same in all countries. In France, a GP - preferably the patient's GP - is responsible for medical follow-up. In the



autonomous region in Spain, this role is given to a doctor from the HAH team, either a GP or an internist. In the state of Victoria (Australia) and in the Netherlands, medical follow-up is primarily the responsibility of a medical specialist working in a hospital.

For Belgian actors, the involvement of the GP is essential to ensure the continuity of care, but differences of opinion remain regarding the degree of this involvement. A number of conditions remain indispensable for allowing the GP to ensure medical follow-up: the necessity to keep a close link with the medical specialist, the possibility for the GP to call upon a colleague in case of absence, and the existence of an efficient coordination of the medical care, social care and support services. The current model for palliative care was repeatedly referred to as a solution that might be adapted to HAH, with a specialised team providing support to the GP.

The role of nursing staff

Every source we consulted stated that nurses had a major role to play in HAH initiatives. For those working in primary care (home care), specific training may be required (see section 4.2). In cases where very complex care services were required and/or for which the required expertise was not available (e.g. for rare diseases), the option to involve the hospital nursing team was also suggested. However, defining what constitutes "complex care" makes this very challenging.

The role of the pharmacist

The role played by the pharmacist depends primarily on the connections between HAH and the hospital. In Australia, some hospital pharmacists are part of the HAH team. In France, where autonomous HAH units are possible, the role of a community pharmacist in the follow-up of patient medication is growing in importance. We will comment on this in more detail below (see section 4.2)

The role of other professionals

The cross-sectional analysis reveals that the involvement of other professionals (healthcare and others) is most often determined on a case by case basis. In Belgium, considering the possibility that an increasing number of patients will receive hospital care at home, Belgian actors believe that it would be desirable to integrate other professionals into the care process in a more structured manner.

The role of technicians and the industry

The role of technicians who provide specific medical devices and associated services is only mentioned in the French projects. The Belgian actors also underlined the importance of properly defining the role of the industry with regard to the use of medical devices and the delivery of certain medication in HAH.

3.2.2 Establish an individualised "care and support plan"

The "care and support" plan (a term preferred by Belgian actors over "care plan" as it involves a more global approach than merely planning care) must be created based on goals defined in consultation with the patient and his/her family. It must describe the sharing of medical responsibilities, the medication management plan, the planning for medical follow-up, the start date, a clear response plan in case of emergency, and a clear limit from which the patient will no longer be considered for HAH. The plan must also take into account the patient's psychological and social needs.

International examples have shown that non-medical aspects, such as the delivery of meals, domestic help, etc. are sometimes also included in the "care and support" plan, depending on the goal and available services within the HAH initiatives, and the services locally available.

If patients also require the presence of traditional home care, such as assistance with cleaning, it is important for the "care and support" plan to specify whether such services are provided by the HAH or by existing local services; and in the latter case, the plan must include stipulations for coordination with these services.

3.2.3 What care is part of the HAH ?

In all of the countries examined in our study, the nature of care provided depends on the organisation and infrastructure of local care. A basic principle is that patients must receive equivalent services, regardless of whether they are in the hospital or at home. However, the question of how non-medical care is handled remains unanswered, and we did not find a simple answer to how this may be organised in practice.

For medical care: analysis of international data from the selected countries and the literature review provided a broad range of services,



including curative care (medical and post-surgical), but also palliative care and, to a lesser degree, rehabilitation and mental health care.

In France, the need for cooperation between HAH and specialised services is a key element. Rather than develop specific skills as part of the HAH programme, it appears preferable to establish cooperation with other, existing specialised services in order to ensure the safety and efficiency of care, and avoid redundancy of services and unnecessary expansion of local actors.

Access to medicines and medical devices is another area for attention. It is necessary to establish clear channels of cooperation between HAH programmes and pharmacies. Where a programme based from a hospital is concerned, it is generally the hospital's pharmacy that handles the provision of medicines and medical devices. In other cases, agreements must be made with community pharmacies, but also with hospital pharmacies for the delivery of medicines and devices only available at hospitals. In The Netherlands and France, the industry can deliver products directly to HAH.

The management of waste must also be addressed.

For non-medical services, e.g. concerning "hotel services", the situation is more blurred. The responsibility rests in part with the family and in part with home care services, depending on availability.

The authorities in the countries studied generally preferred cooperation agreements with other specialised services over the development of specialised skills within the HAH organisation itself. The KCE position paper on chronic diseases (KCE Report 190) also insisted on using existing structures wherever possible, rather than creating new structures. This position is in line with that of Belgian actors, and will need to be examined in greater depth when deciding which activities will need to be developed within a HAH programme.

The development of IT tools will also need to encompass these external actors.

3.3 Emergency plan

Recommendation 4

- **A detailed emergency plan must be developed in each HAH programme. It must specify the roles and responsibilities of each person in case of emergency.**

In all of the countries studied, HAH programmes included a detailed plan of action in case of emergency, encompassing contact information, the role and responsibilities of all professionals in case of emergency and the response process. The response process starts always with the healthcare professionals from the HAH programme and emergency services are only intended to complement but not to substitute the activities of the HAH team.

Ensuring the continuity of care 24/7 was required in all countries, implying the necessity to be linked with or to conclude agreements with hospitals but also to have shared protocols.

Belgian actors were of the opinion that it should be avoided to recreate specific services for HAH emergencies and that collaboration with and reinforcement of the existing structures should be envisaged.

3.4 Empowerment and support for patients and their family

Recommendation 5

- **The patient (and his/her family) must be involved in his/her own "care and support" plan. Specific attention must also be given to educating the patient and his/her family. Furthermore, support of the family is essential to reduce the risk of exhaustion.**

All HAH programmes in selected countries share the principle that patients and their families (informal caregivers) are active decision-makers in the process of being admitted and receiving HAH care. In line with this, the spirit of HAH in all countries is certainly attached to the principle of empowering patients and their families. How this principle is put in day-to-day practise is hard to say as it seems to depend in the extent to which enough resources are available to provide training, education and support.



Moreover, HAH may require an important participation of informal caregivers and in heavy situations, a support may be necessary to avoid hospitalization or re-hospitalization.

Belgian actors also highlighted the need for patient empowerment and education, also to ensure the compliance with the treatment.

More detailed KCE recommendations regarding patient empowerment, drawn from the *position paper on chronic care* (KCE Report 190), are summarised in the detailed scientific report, section 3.8.

3.5 Continuity of care and integration of HAH activities in the health care system

Recommendation 6

- **To ensure continuity of care, networking must be promoted, including agreements with other care providers and care services, both upstream (with hospitals) and downstream (with the first line of care).**

Integration and continuity of care across various levels of the system are the goals targeted by health care authorities in all examined countries. The solutions put in place generally consist of formulating clear rules and providing incentives to increase integration between all healthcare providers. Information gathered in the international comparison reflects more policy guidelines or objectives than a measure of how much integration has been achieved between HAH programmes and other healthcare services.

We identified a number of specific areas for attention :

- **The lack of integration of HAH with primary care.** Referral of patients from primary care remains low in all studied countries. This is less so in cases where HAH management is partially organised via the GP, as it is the case in France ;
- **The risk of inappropriate utilisation of HAH services,** particularly for less complex care which does not strictly require HAH, due to a lack of coordination between care services and poorly defined criteria at all levels of care. This is particularly common if the same institution or group of healthcare professionals provides both HAH and more traditional forms of home care ;

- **Disruption of continuity in the provision of medicines** to the patient at the beginning and/or end of the HAH programme.

In Belgium, smoothening the transition between the different lines of care, has also been regularly addressed as one of the areas that needs attention in Belgium. Belgian actors agree that the different settings in the Belgian health care landscape should operate in a continuum and that transition between settings should not disrupt the continuity of care along the lines of the individual care plan of the patient, especially in case of emergency, implying to develop and promote the use of shared protocols across settings and shared electronic medical files (see section 4.5).

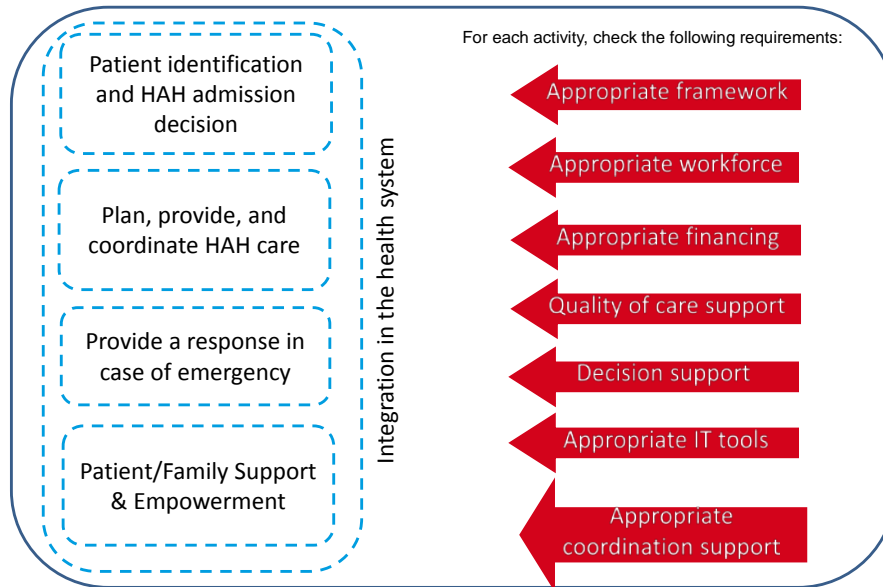
This is also why HAH programmes must be given incentives to cooperate with other actors in the field and enter agreements which explicitly describe their respective missions. Cooperation with home care services is of particularly crucial importance in order to ensure follow-up for the patient at the end of a HAH, but also to avoid excessively prolonged HAH when it is no longer necessary (with a clear agreement about the end of the HAH). Our cross-sectional analysis shows that a great amount of latitude remains in how these agreements need to be translated into practice.

We also noted that all HAH programmes developed abroad are linked to a hospital. In effect, even autonomous HAH programmes that operate independently of hospitals must conclude an agreement with a hospital to ensure continuity of care, particularly in the event of an emergency.



4 IMPLEMENTATION OF A BELGIAN HAH PROGRAMME : IMPLICATIONS FOR THE HEALTHCARE SYSTEM

Figure 2 – Requirements linked to key HAH activities



4.1 A structured framework

4.1.1 Norms and legislations

Recommendation 7

- An evaluation of eligibility criteria defined by the various pilot projects will need to be performed in order to define the most appropriate criteria for large-scale implementation of HAH. The instruments selected for evaluating these eligibility criteria will need to be validated

Recommendation 8

- A legal framework will need to be developed, including safety and quality of care norms adapted to the specific context of HAH. This legal framework will also need to provide norms in terms of subsidiarity, delegation and responsibility.

In all studied countries, HAH programmes include organisational norms. These norms provide, among other things, a system for remote communications, a permanent connection between the patient, his/her family and HAH staff, and the obligation to guarantee a minimum number of care providers. Each studied country or region also defined detailed eligibility criteria (regarding intensity of care) in order to better define which patients qualify for HAH.

For Belgian projects, it would be good to also provide a legal framework to guarantee the quality and safety of HAH. The reflection on these conditions will depend on the outcome of pilot project evaluations, particularly with regard to the position of HAH with respect to the hospital and/or primary care. The evaluation of pilot projects will also need to yield clearly defined eligibility criteria that apply to all HAH programmes in Belgium. This step is considered essential by Belgian actors.

Since HAH does not fit the legal definition of a traditional hospitalisation, it will be equally important to examine relevant issues related to regulations that need to be followed, interventions that can or cannot be performed outside of the hospital, etc.



4.2 Availability of sufficient qualified staff

4.2.1 Training qualified staff

Recommendation 9

- **Depending on the model selected, appropriate training programmes will need to be developed, for example continuing education programmes adapted to the needs of complex interventions commonly performed in HAH, or training programmes given by actors in the field (cooperation with the hospital sector, creation of platforms to exchanges experiences).**

In all studied countries, key staff consisted of nurses ; in general, these nurses were not specifically qualified or trained for HAH, but rather had relevant working experience and were given continuing education.

Belgian actors confirm that they believe it is crucial for HAH nurses to be provided opportunities to garner relevant skills and experience, and that this is impossible without deploying field initiatives.

A lack of qualified staff might limit the possibilities for finding replacements, or delegate care to professionals not normally involved in the HAH team.

Another potential problem identified is the lack of expertise among primary care providers in Belgium regarding the provision of complex care normally provided in a hospital setting. It is therefore important to provide training modules both in educational curricula for future care professionals and in continuing education programmes.

However, it is not realistic to expect all nurses be specialised in all aspects of complex care that may be administered during HAH, particularly for rarely provided care. In some countries, there was a preference for using contracts with specialised institutions or professionals.

4.2.2 Making HAH programmes more attractive and monitoring the available human resources

Recommendation 10

- **The attractiveness of HAH programmes for doctors and nursing professionals will need to be reinforced, particularly via a proactive information about the concept of HAH.**

The lack of information about the concept of HAH and inappropriate financing structures were factors believed to form significant barriers to its development in the other countries. Poorly informed about this topic, the medical profession has displayed scepticism regarding the added value of HAH, and remains hesitant due to perceived constraints.

This was particularly visible in France, where the GP plays a key role. French healthcare authorities are currently working to improve the visibility and attractiveness of HAH by providing proactive information, by involving representatives of GP in the reflection about HAH development and by increasing the stages in HAH during the physician training. An adaptation of the GP remuneration in HAH is also under discussion.

Our consultation of Belgian actors revealed that the willingness of GPs to invest in HAH programmes and the availability of qualified healthcare professionals are key preconditions that must be met before launching a HAH project. The lack of sufficient qualified nurses and the shortage of general practitioners are therefore perceived to be extremely problematic issues. Measures focused on increasing the attractiveness of these professions have been deployed in recent years ; the possibility to work in a HAH programme may be an additional incentive, but analysis of international experiences underlines the importance of informing professionals about what HAH is in order to combat certain preconceptions.

For nurses, HAH represents a new potential area for specialisation and may serve to increase the attractiveness of the profession, although it may also contribute to the shortage of qualified nursing staff in hospitals and other care structures. Therefore, it is important to monitor these human resources.



4.2.3 New titles and functions

Recommendation 11

- **The need for new function descriptions for some healthcare professionals will need to be evaluated based on the outcomes of pilot projects.**
- **As coordination of patient care remains a key issue in HAH, current deliberation on the role of case managers for chronic patients must take into account the possibility to expand this function to patients in HAH.**

Specialised nurses

Numerous new titles and nursing functions are appearing at the international level: *nurse practitioner*, *advanced practice nurse*, *nurse consultant*, *clinical nurse specialist*, etc., but these are not related to HAH. Among Belgian actors, the option of recognising the title of *clinical nurse specialist*, which currently does not exist here, was mentioned as an interesting option for HAH. However, the more widely held opinion was that it would be preferable for HAH to work with existing title.

Case management functions

A feature common to all international HAH programmes reviewed is the central role given to the *case manager*. In these countries, this key actor is a health care professional; he manages the “care and support” plans for patients and coordinates the various providers of care and support services (including non-medical services).

Belgian actors are also unanimous in underlining the importance of the case manager; this is currently a key issue in discussions related to care for chronic patients. Belgian actors also suggested that such a function should be integrated into structures such as the groups of general practitioners having a multidisciplinary team, or home care organisations.

An expanded role for the pharmacist

Some international HAH programmes propose to expand the role played by the community pharmacist, and to involve him in the management of patient medication. This new role for community pharmacists is also being developed in Belgium. The role of hospital pharmacists will also need to be examined more closely if the number of HAH increase significantly.

Barriers to the creation of new functions in Belgium

The position paper on chronic care already highlighted potential barriers facing the implementation of new healthcare functions within the Belgian healthcare system, including a.o. the potential resistance of (other) health professionals, the difficulty to adapt the legislation, the need to finance these new functions, the lack of adequate training and the workforce shortage.

4.3 Adequate financing

Recommendation 12 :

- **The financing modalities tested during the pilot projects will need to be evaluated. The choice of financing will take into account all of the direct and indirect costs of patient care (including the coordination of care, patient education and support for his/her family, etc.) The financing should also be coherent with other care settings, in order to allow transfers in the best interest of the patient.**
 - **Particular attention will be required for the remuneration of healthcare professionals, to ensure appropriate compensation for the workload and the required expertise.**
 - **Particular attention will also need to be given to the reimbursement of pharmaceuticals.**
 - **Patients out-of-pocket payments and issues concerning supplements and the transferability of hospital insurance cover will need to be investigated within the specific context of HAH.**

With regard to financing, international experience clearly indicates that the financing of HAH is highly dependent on their integration into the overall healthcare system, and thus on the type of financing of other health care providers. In other words, it is impossible to create independent financing modalities for HAH; rather, HAH should be considered an extension of the system it is a part of.

As for all healthcare services, an issue of concern was how to allocate resources in accordance to the level of activity. The international comparison pointed out that using homogenous groups of activity for HAH



payments similar to inpatient stays was a matter of discussion as classification systems used for inpatient settings may not capture the patterns of care for HAH services. Only France has developed a specific classification system reflecting HAH activities (according to the mode of care) that differ for inpatient stays. This model nevertheless still reported some limits such as the fact that it does not sufficiently assess the patient's level of dependency and that there is room for interpretation in the determination of the mode of care (given place to inappropriate coding practice to increase the revenues).

Another problem revealed by our cross-sectional analysis is that of travel expenses for care providers. If these expenses are not taken into consideration in the HAH financing, the financial health of certain HAH programmes may be undermined, particularly in rural areas.

For more details on the financing systems in each country, see the scientific report, section 2.11.3.

The financing of HAH activities in Belgium will depend on the choice on the nature of the medical activity that will be performed in HAH as well as to how responsibilities will be assigned among different levels of care. However, above the discussion of the organizational framework for HAH, Belgian actors were of the opinion that a mixed financing system could be envisaged with lump sum payments; and with additional payments for the remuneration of some specialized services and of expensive pharmaceuticals and medical devices

Nevertheless, because all lump sum payments systems could induce patient selection if tariffs are disconnected from costs, Belgian actors stressed that it should be preferable to link these payments to actual resources consumptions. Nevertheless, they also highlighted the difficulty of such a process and feared that we are not ready for this at this moment. It was also stated that, with a mixed system, clear rules on what is covered in the lump sum is needed, especially for medical devices and pharmaceuticals.

It should also be noted that reflections of HAH payments should be in line with current discussions on reforming the hospital payment system. These discussions include the ideas of a refinement of the activity-based financing with DRG tariffs based on the average cost (which require a system of cost collection based on a representative sample of hospitals,

with recent and of quality cost data), a financing linked to quality, and the possibility to eventually evolve towards a financing of the whole episode of care.

4.3.1 Other issues to consider related to HAH financing

The remuneration of healthcare professionals: adapting the payment system to better reflect workload and specialization

Medical specialists and GPs in Belgium are usually paid on a fee-for-service (FFS) basis, except for medical specialists working in a university hospital who usually receive a salary.

Both the cross-sectional analysis of other countries and the analysis of Belgian reports highlighted that these fees need to be adapted to the workload and the specialization. In France for example, some GPs were reluctant to work in HAH because a.o. they considered that the remuneration was not adapted to the workload linked to the complexity of case nor to the time need for non-care activities such as coordination.

For nurses, if a FFS payment system is chosen, the analysis of Belgian reports showed that the current nomenclature need to be changed, i.e. the payment should also be more adapted to the workload and to the level of specialization and more services should be included in the nomenclature.

A coherence of financing mechanisms between settings and an attention on potential double payments

Evidence from the international comparison pointed out that HAH financing also needs to be adapted with respect to the financing of healthcare providers to which he is not directly tied to. Because HAH services interface with different care levels, differentiation in the level of payment between different community care providers combined with lack of clear eligibility rules to access HAH, has led to mobilize HAH resources for interventions bellow their potential and know-how.

Some Belgian reports also highlighted that financial mechanisms between settings should be more neutral to avoid inappropriate choices between settings. It is therefore preferable to better link payments to resources consumptions. Some reflections on providing incentives to optimize the choice between different therapeutic settings (hospital, day-hospital, and outpatient care) were also done.



The international comparison also showed that attention must be paid on the risk of multiple payments during the same care episode. This risk can for example arise when the patient change “momentarily” of setting during the HAH stay (e.g. for day hospital care). He could be considered to be cared in two settings during this period, implying a double payment. In France, more coherence between the different payment systems (i.e. between (day-) hospitals, medico-social facilities, SSIAD, rehabilitation care, HAH) is currently under discussion.

Finally, we were also unable to find an evaluation of total costs for the whole episode of care (hospital + HAH) in the international literature. Although some studies mentioned a reduction in length of hospital stay, the number of days in HAH may result in a longer episode, and it is important to check whether HAH has not simply replaced traditional home care (or outpatient care).

Attention for accessibility

All countries usually try to keep HAH cost neutral for the patients and their families. Nevertheless, in practise, it was not always clear the extent in which HAH programmes make arrangements to cover non-medical needs and whether this creates additional costs for the patients. Some evaluations showed that HAH was not always cost neutral for families and patients. This should thus be monitored. Because in Belgium supplements can also be asked to the patients, this question should also be analysed for HAH care.

Discussions surrounding HAH financing will also need to address the issue of the reimbursement for pharmaceuticals in order to ensure this does not differ depending on the status of the patient or the organisation of the provision of pharmaceuticals (outpatient or hospital). The role of "hospitalisation" insurance in covering these costs must also be examined.

In addition to purely financial elements, access to HAH also depends on the patient's physical environment, which may result in a de facto inequality of access to care.

4.4 Process in support of quality of care

Recommendation 13

- **Guidelines, protocols, information tools and proactive patient screening instruments will need to be developed.**

In the studied countries, the level of HAH integration with the rest of the healthcare system largely determined the quality standards with which HAH needs to comply. This may explain why few specific process indicators and clinical outcome indicators for HAH programmes were identified.

According to the Belgian actors, one of the drivers for HAH should be the quality of care and this objective must be monitored. Belgian reports nevertheless reported that more coordination was needed between the different level of authorities and the different agencies implied in quality of care initiatives, within an integrative global quality system, a.o. to avoid the duplication in data collections.

4.5 IT tools

Recommendation 14

- **Clinical information systems are required (integrated into the national e-health plan) to fulfil the different requirements in terms of sharing of information between health care professionals and between the different care settings, the collection of accurate data for financing, and the monitoring of the quality of care.**

There are few information technologies (IT) tools designed specifically for HAH. In the countries we analysed, the use of IT in HAH interventions was mostly related to the overall level of IT development in the healthcare system. However, it remains clear that the existence of a shared digital medical file for each patient is an essential precondition for all HAH implementations.

Furthermore, HAH programmes must also have means of communication to allow permanent contact (24-7) between patients, their relatives and the care team.



We did not find a great deal of information regarding the use of telemedicine in HAH programmes. In Valencia, certain initiatives developed specific applications for remote monitoring of patient parameters.

In Belgium, IT use in healthcare is linked to the eHealth programme, which has the goal of achieving widespread use of online health services by 2018.

Some Belgian actors believe further investment in telemonitoring systems to allow HAH teams to e.g. consult a hospital specialist from the patient's bedside will be required.

Finally, we would like to underline a number of issues already mentioned that require IT investments :

- Access to the medical file for all professionals involved requires compatibility between IT systems between all care settings and all professionals ;
- IT is also indispensable for extracting the data required for quality monitoring ;
- Automatic reminders (decision-making support) may be used to identify patients eligible for HAH and to improve guideline adherence.

4.6 Support structures for coordination and cooperation between various levels of power

Recommendation 15

- **To support the coordination of HAH services, it will be needed to continue to develop coordination structures and existing local networks, and rely on them.**

Recommendation 16

- **An agreement between the various governmental levels (federal and federated authorities) will need to be negotiated, with an improved coordination between policies for personal aid and health policies, and with financing modalities that give incentives in the best patients interests.**

The international analysis revealed that all countries pay particular attention to the coordination between health services, but also between health and social services. This implies giving a central role to more general, community-level support structures. In Belgium, various coordination structures, platforms and local networks already exist in both medical and social support domains. Nevertheless, redundancy and the lack of interaction between these structures has already been identified as a potential problem. Therefore, it is essential to continue the development of coordination structures, but also to simplify and streamline them.

Integration and continuity of care also implies the need to formulate clear rules and provide incentives to favour cooperation between all care providers.

Finally, there will be a need to building bridges between the different levels of governance in Belgium. Given the current distribution of responsibilities on healthcare and social care between the federal and federated entities, the implementation of HAH in Belgium will require negotiations between multiple actors and the creation of new rules to transfer separated budgets.



5 CONCLUSION

This report aims to identify key elements that need to be taken into account when envisaging to build an organizational framework for HAH. The concept of HAH remains challenging to define; it may apply to a large variety of diseases and implies a variety of (complex) care and technics/technologies. It is also essential to clearly define the outlines of HAH management (clear inclusion and exclusion criteria, financing modalities, norms) in order to avoid inappropriate implementation. According to the literature, HAH safety does not appear to pose a problem, while quality of life and patient satisfaction appear to be at least equivalent to those for classical hospitalisation. However, in the absence of conclusive evidence in the literature, this will have to be confirmed by an evaluation of the first initiatives launched in Belgium (e.g. via pilot projects).

The heterogeneity of existing models, and the lack of a preferred model either in the literature or among Belgian actors, reinforces the impression that large-scale deployment of HAH is not desirable at present, but that pilot projects that allow careful testing and assessment of different models should be performed first.

Nonetheless, we were able to identify a number of areas for attention for both the creation of pilot projects and the future framework for the Belgian HAH programmes. On an organisational level, specific attention will be required for a multidisciplinary approach around a “care and support” plan based on patient needs, services tailored to local needs, coordination of medical care and non-medical services, empowerment and support for the patient and his/her family, and for ensuring the continuity of care and cooperation with existing structures. Procedures including minimum safety and quality requirements will have to be put in place. It will also be necessary to ensure sufficient qualified staff, adequate financing, appropriate information technology and decision-making support and adequate support for coordination prior to implement HAH programmes. Finally, it will be necessary to build bridges between various levels of government, as the current responsibilities for health services, social services and personal care are divided between federal and federated authorities. This will require multilateral negotiations and the creation of new rules for the transfer of separate budgets.

The hope that providing alternatives to hospital care, including HAH, will reduce costs remains an issue that should be look at in more details in Belgium. First, this implies to measure the cost engaged by all parties including the patient and his/her family. Second, it may be important to point out that savings require not only to provide care alternatives but to restructure hospitals capacity; namely to be able to close beds or even wards. The latter remains a difficult policy decision requiring a fine tuning of how we finance different services within and outside the hospital walls. The organizational framework for HAH cannot be built alone without taking into account the roles of primary, secondary and even tertiary care providers.

The limits of what may be managed via HAH are currently poorly defined, and are also strongly related to technological developments that allow the transfer of hospital care to a home setting. Nevertheless, it is not only the possibility but how we implement those transfers that will ultimately determine what can be considered as HAH care. Additionally, despite the fact HAH is theoretically considered to be a way to reduce hospital stays or avoid hospital admission, field experience has shown that in practice, HAH programmes are more likely to achieve the former goal than the latter. The reduction in hospital admission via HAH is currently being investigated.

Finally, in an ideal world, where we would be able to build a new healthcare system from scratch, HAH services should be aligned and never in opposition to other healthcare providers. The current discussion on building alternatives to hospital care could be an excellent opportunity to discuss how to make more progress in reforming a system that has grown more and more as a well-intentioned patchwork of services to cover unmet care needs into one single interlinked system of care services.





COLOPHON

Title :	Hospital at Home: orientations for Belgium – Short report
Authors:	Maria-Isabel Farfan-Portet (KCE), Alain Denis (Yellow Window), Lut Mergaert (Yellow Window), François Daue (Yellow Window), Patriek Mistiaen (KCE), Sophie Gerkens (KCE)
Project coordinator:	Nathalie Swartenbroekx (KCE)
Reviewers:	Anja Desomer (KCE), Nadia Benahmed (KCE), Carine Van de Voorde (KCE), Dominique Paulus (KCE), Raf Mertens (KCE)
External experts:	Daniel Crabbe (RIZIV – INAMI), Bart Criel (ITG), Juan Gallud (Conselleria de Sanitat Comunitat Valenciana, Spain), Jan Heyrman (KU Leuven), Romain Jarry (Statelys, France), Charles Mentink (Marente, The Netherlands), Michael Montalto (Hospital in the Home, Royal Melbourne Hospital, Australia), Saskia Van den Bogaert (FOD Volksgezondheid – SPF Santé Publique), Ann Van Hecke (Universiteit Gent), Jan Veerkamp (Zorgverzekeraars Nederland, The Netherlands)
Stakeholders:	Diego Backaert (E-VITA), Frédérique Basselet (UGIB), Christine Bierme (Direction Générale Opérationnelle des Pouvoirs locaux, de l'Action sociale et de la Santé), Frédéric Chaussade (Stratelys for Fédération des Hôpitaux Privés de Belgique (FHPB)), Aude Cleve (Union National des Mutualités Libres (MLOZ)), Claudio Colantoni (Fédération des Centrales de Services à Domicile (FCS)), Lode De Bot (Vlaams Patiëntenplatform), Paul De Munck (GBO for le Cartel), Bernard Debbaut (CM), Wouter Decat (AUVB), Guy Defraigne (Domus Medica), Jean Desbeek (Conférence des Hôpitaux Académiques de Belgique (CHAB)), Ellen De Wandeler (NVKVV for AUVB), Pierre Drielsma (Fédération des Maisons Médicales (FMM voor het Kartel)), Micky Fierens (Ligue des Usagers des Soins de Santé (LUSS)), Aline Hotterbeex (Fédération des Institutions Hospitalières (FIH)), Liselotte Huyghe (RIZIV – INAMI), Fred Mabrouk (Arémis for Fédération des Hôpitaux Privés de Belgique (FHPB)), Michel Mahaux (Santhea), Isabelle Martin (Fédération Nationale des Associations Médico-Sociales (FNAMS)), Laurent Mont (Direction Générale Opérationnelle des Pouvoirs locaux, de l'Action sociale et de la Santé), Guy Navarre (Ligue des Usagers des Soins de Santé (LUSS)), Mathias Neelen (Nationaal verbond van socialistische mutualiteiten (NVSM)), Ingrid Nolis (Zorgnet Vlaanderen), Stefaan Noreilde (Solidariteit voor het Gezin), Louis Paquay (Wit-Gele Kruis van Vlaanderen vzw), Alex Peltier (MC), Edgard Peters (Fédération Aide et Soins à Domicile (FASD)), Geert Peuskens (Agentschap Zorg en Gezondheid), Marie-Claire Sepulchre (Fédération wallonne de services d'aide à domicile (FEDOM)), Daphné Thirifay (Union National des Mutualités Socialistes (UNMS)), Isabelle Van der Brempt (SPF Santé Publique – FOD Volksgezondheid), Hendrik Van Gansbeke (Wit-Gele Kruis van Vlaanderen vzw), Michel Van Halewyn (Société Scientifique de Médecine Générale (SSMG)), Thierry Vandebussche (Forum des Associations de Généralistes (FAG)), Patrick Verliefe (RIZIV – INAMI), Karel Verlinde (UNAMEC), Annelies Veys (Nationaal verbond van socialistische mutualiteiten (NVSM)), Dirk Vos (Algemene Pharmaceutische Bond (APB)), Dominique Wouters (Association Belge des Pharmaciens Hospitaliers (APBH))



- External validators: Karine Chevreul (Unité de recherche clinique en économie de la santé de l'Île-de-France (URC ECO), France), Jozef Pacolet (KU Leuven), Jean Macq (UCL)
- Acknowledgements: Gudrun Briat (KCE), Daniel Crabbe (RIZIV – INAMI), Lieselotte Huyghe (RIZIV – INAMI), Isabelle Van Der Brempt (SPF Santé Publique – FOD Volksgezondheid), Anneleen Craps (FOD Volksgezondheid – SPF Santé Publique), Saskia Van Den Bogaert (FOD Volksgezondheid – SPF Santé Publique), Virginie Verdin (SPF Santé Publique – FOD Volksgezondheid), Frédéric Chaussade (Stratelys), Fred Mabrouk (Arémis), Martine Braem (Mederi), Sofie Menu (Mederi), and all persons who agreed to be interviewed.
- Other reported interests: Membership of a stakeholder group on which the results of this report could have an impact.: Fred Mabrouk (Arémis asbl), Jean Desbeek ((CHAB), Cliniques Universitaires Saint-Luc), Mathias Neelen (NVSM), Annelies Veys (FNBV), Claudio Colantoni (Fédération des Centrales et Services à domicile), Frédéric Chaussade (Stratelys), Louis Paquay (Wit-Gele Kruis), Christine Bierme (Direction Générale Opérationnelle des Pouvoirs locaux, de l'Action sociale et de la Santé, SPW DGO5 direction soins hospitaliers), Ingrid Nolis (staff member Zorgnet Vlaanderen), Isabelle Martin (FNAMS), Daphné Thirifay (UNMS), Michel Mahaux (Santhea), Dominique Wouters (UCL St Luc; ABPH), Pierre Drielsma (le Cartel; FMM; GBO), Bernard Debbaut (consultative GP for CM), Wouter Decat (AUVB), Guy Navarre (LUSS Namur), Romain Jarry (Santelys), Hendrik Van Gansbeke (general coordinator Wit-Gele Kruis van Vlaanderen vzw)
- Holder of intellectual property (patent, product developer, copyrights, trademarks, etc.): Fred Mabrouk (Arémis holder of the Benelux registered trademark 'Cité Sérine')
- Participation in scientific or experimental research as an initiator, principal investigator or researcher: Jean Desbeek (ongoing pilot project about antibiotherapy at home in terms of a classic hospitalization), Claudio Colantoni (consultant for a hospital; project 'Hospital at home'), Frédéric Chaussade, Pierre Drielsma (study service FMM; practice data analysis)
- Consultancy or employment for a company, an association or an organisation that may gain or lose financially due to the results of this report: Fred Mabrouk (CEO Arémis), Stefaan Noreilde (Solidariteit voor het Gezin is a homecare company who wants to offer possible (future) services for hospitalization at home), Karel Verlinde (works as vice advisor for UNAMEC), Bernard Debbaut (consultative GP for CM), Romain Jarry (consultancy for Santelys), Hendrik Van Gansbeke (general coordinator Wit-Gele Kruis van Vlaanderen vzw)
- Payments to speak, training remuneration, subsidised travel or payment for participation at a conference: Pierre Drielsma (travel costs for EFPC, SUG, WONCA...)
- Presidency or accountable function within an institution, association, department or other entity on which the results of this report could have an impact: Fred Mabrouk (president and delegate of Arémis), Marie-Claire Sépluchre (FEDOM), Louis Paquay (Wit-Gele Kruis Wit-Gele Kruis van Vlaanderen vzw), Ingrid Nolis (Zorgnet Vlaanderen Board member of a hospital), Michel Mahaux (Santhea), Pierre Drielsma (study service FMM), Dirk Vos (first secretary APB), Hendrik Van Gansbeke (general coordinator Wit-Gele Kruis van Vlaanderen vzw)
- Other possible interests that could lead to a potential or actual conflict of interest: Wouter Decat (coordinator



Layout:	AUVB) Ine Verhulst
Disclaimer:	<ul style="list-style-type: none">• The external experts were consulted about a (preliminary) version of the scientific report. Their comments were discussed during meetings. They did not co-author the scientific report and did not necessarily agree with its content.• Subsequently, a (final) version was submitted to the validators. The validation of the report results from a consensus or a voting process between the validators. The validators did not co-author the scientific report and did not necessarily all three agree with its content.• Finally, this report has been approved by common assent by the Executive Board.• Only the KCE is responsible for errors or omissions that could persist. The policy recommendations are also under the full responsibility of the KCE.
Publication date:	14 October 2015
Domain:	Health Services Research (HSR)
MeSH:	Home Care Services, Hospital-Based; Organization and Administration; Delivery of Health Care, Integrated; Patient-Centered Care; Continuity of Patient Care
NLM Classification:	WY 115
Language:	English
Format:	Adobe® PDF™ (A4)
Legal depot:	D/2015/10.273/67
Copyright:	 KCE reports are published under a “by/nc/nd” Creative Commons Licence http://kce.fgov.be/content/about-copyrights-for-kce-reports . 
How to refer to this document?	Farfan-Portet M-I, Denis A, Mergaert L, Daue F, Mistiaen P, Gerkens S. Hospital at Home: orientations for Belgium – Short report. Health Services Research (HSR) Brussels: Belgian Health Care Knowledge Centre (KCE). 2015. KCE Reports 250Cs. D/2015/10.273/67. This document is available on the website of the Belgian Health Care Knowledge Centre.