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The Leading Edge

How to manage external demands in hospitals – the case of atrium MC

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ABSTRACT

In all modern healthcare systems, it is difficult for hospitals to keep pace with the increasing number of clinical guidelines. In the Netherlands, this poses a specific problem, as the national quality regulator holds hospital boards responsible for compliance with guidelines. We sought to address this problem by constructing a centralized database of guidelines. Due to the enormous number and the interrelatedness of the guidelines, this task was larger and more complex than anticipated. This raises questions regarding the feasibility of adhering to external demands and concerning effective management by hospital executive boards of compliance with clinical guidelines.

1. A wake-up call

In February 2010, Atrium Medical Centre, a 700 bed teaching hospital with 200 medical specialists, providing an annual 27,000 admissions and 500,000 outpatient visits in the Netherlands, was placed under 'enhanced surveillance' by the Inspectie voor de gezondsheidszorg (IGZ), the national regulator for healthcare quality. 'Enhanced surveillance' is an instrument that the IGZ imposes by means of an official warning. In this case, the IGZ threatened to close the operating theaters because the hospital did not adhere to a hygiene guideline and to the "air treatment plan in operation theaters". Both guidelines were not deemed obligatory until that point, but were considered as non-mandatory guidelines. The air treatment plan, in particular, had been developed by a committee of experts and was intended to serve as a consensus document rather than an enforceable regulation. Nevertheless, the official warning placed upon the Atrium Medical Centre resulted in higher alertness to clinical guidelines and other external demands (e.g. consensus documents or legal requirements) in Atrium Medical Centre. The executive board of the hospital wanted to be better prepared by developing a structure to coordinate, respond to and control clinical external demands in the future.

In the Netherlands, as in other Western healthcare systems, hospitals are important healthcare suppliers. Therefore, regulation of hospital quality is important. However, in a recent essay, Greenhalgh et al. state that 'the number of clinical guidelines is now both unmanageable and unfathomable'.[1] In this essay, we shall describe how the national quality regulator triggered an effort to gain control of this problem. The national quality regulator holds hospital executive boards accountable for compliance with clinical guidelines and other external demands and is entitled to enforce this policy with penalty fees and forced closings of services. We aim to describe how the Atrium Medical Centre has tried to cope with this responsibility and to discuss what other hospitals can learn from this approach.

2. Background

Prior to 2011, it was common practice that the IGZ visited hospitals annually to examine and discuss overall medical policy and to carry out in-depth investigations with respect to safety incidents. In 2011, the IGZ announced that they would focus more strictly on promoting and if necessary, enforcing "compliance with legislation, (professional) standards and guidelines", hereafter referred to as "external demands".[2] In this essay, the term "external demands" comprises anything a hospital is obliged to implement by external parties responding to broader social, political and contextual factors. These include laws, rules, (professional) standards, guidelines, codes, instructions, guidance, as well

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as quality indicator sets that hospitals have to measure and report on publicly.

After declaring their new policy on compliance, the IGZ did not further specify standards and guidelines with which hospitals must comply, nor did it give a concrete definition of the professional bodies whose guidelines are considered applicable in the hospital setting. Quality metrics form an exception: the IGZ explains in detail which quality indicators should be measured, and where, when and how indicator scores should be submitted. However, with regards to compliance of standards and guidelines, they are far less specific. Topics for inspection visits are announced on a yearly basis, but the universe from which they are selected is broad and not defined a priori. Therefore, a basic condition for a pro-active compliance management is lacking. This is where the action of Atrium Medical Centre started.

After making inquiries among several colleagues in the ninety university, teaching and general hospitals in the Netherlands and their sector associations, the leadership of Atrium Medical Center concluded that the problem faced by hospital boards is that there is no overview of applicable external demands. Apart from that, the dissemination of relevant guidelines to a variety of hospital professionals, with different areas of expertise, is not well-organized. This lack of oversight and dissemination contributes to the problem of overload[3] and lack of adherence, which is prevalent in Dutch hospitals as in other countries.[4,5] Problems encountered by too many guidelines have been observed before,[6] but no solution has been offered. While colleagues from Germany did not experience enforcement measures, they are challenged by the same knowledge-gap related to external demands in their systems and acknowledge that too many demands are made upon hospitals.

3. Atrium medical centre's response to the challenge

The official warning given to Atrium Medical Centre motivated the hospital board to initiate a thorough study and inventory of external demands and guidelines so they could form a pro-active approach to responding to such regulation.[6] The Quality and Safety Department started collecting guidelines in spring 2011. The first priority was to identify medical, nursing and governance guidelines and then later expanding the scope to include all external demands, including IT, hygiene, pharmacy, finance, etc. At present, the data collection is still ongoing.

The initial aim was to collect all external demands, split them into individual requirements, then eliminate redundancy and finally deliver them to the professionals affiliated with Atrium Medical Centre – a policy we had derived from good dissemination practices in chemical and construction industries. However, due to the large amount of external demands we encountered, this appeared to be too time-consuming, so a new aim was set, which was twofold: firstly, to gather all external demands existing within the Dutch hospital sector in a database and secondly, to make external demands easily accessible to management and professionals. The database is called *l'artis*, which is inspired by the Latin term "lege artis". It means working according to the rules of art. To fill the database, we systematically searched for directories and websites containing external demands related to Dutch hospitals and newsletters for information on other external demands.

Each external demand was added to the database, including the title of the external demand, concerned discipline and specialties and publication year. Due to the diverse structure of the different external demands, it was challenging to fill the database consistently. For example, it is often unclear whether the date in the guideline refers to the publishing date or the date of validation. In most guidelines (estimated 90%), an expiry date is missing. Often it is unclear, as to whether the external demand is evidence-based or consensus-based. In several cases, it even is uncertain whether relevant professional bodies have authorized the document at all.

L'artis is now functions as a library and central reference point for external demands within Atrium Medical Centre for two areas: first, to elaborate protocols and practices to be in line with the external demands, and second, to serve as a reference point for internal audits. To improve access for professionals, the Quality and Safety Department started using l'artis to establish which external demand belongs to which specialty. The database is searchable by title, specialty and publication year of the external demand.

As of January the 1st 2014, 1678 external demands had been gathered. Currently, up to 20 newly published titles are entered per month. The database makes it possible to link external demands to specific groups of professionals. When evaluating compliance to specific patient care processes, multiple applicable guidelines are found: for instance, in the surgical pathway, not only the guidelines for safe peri-operative care and procedure-specific surgical guidelines apply, but also rules and guidelines for anesthesiology, and record-keeping apply.

Requirements may contradict each other or be unsafe when combined, as was learned from a devastating case study of a ward in 2008. An elderly patient was fixated in bed to prevent doing herself harm, while also using an anti-decubitus mattress to prevent pressure ulcers. Both preventive measures were applied to conform to the respective guidelines, but the patient strangulated herself as the mattress allowed for more movement then intended.

The goal is now to attract external cooperation in filling the database. The time investment required to maintain this database is enormous. Partnership with other hospitals would ease this burden, while helping meet an urgent need to recognize and address external demands.

4. Discussion

The initiative can be considered successful in the sense that the Atrium Medical Centre now knows what external demands are imposed on hospitals. The existing external demands for Dutch hospitals can be found in l'artis, which is used as central reference point in the Atrium Medical Centre. However, it remains difficult to keep the database updated, as the publishing of external demands is high paced and unstructured and notifications when new guidelines are published are limited. As a practice, guidelines and external demands are not periodically published at certain time intervals, so a substantive permanent search activity is necessary. Compiling a database is only a first stepand will not be sufficient in supporting medical specialists and hospital management to guide their implementation activities. Other barriers to implementation include time needed to implement a single external demand, specialties needing to stay appraised of guidelines outside their own specialty that may still apply, and difficulty coordinating, selecting, and prioritizing external demands.

However, there is little literature that describes the scope of the problem, as implementation studies usually focus on the implementation of one single guideline at a time. As a hospital, we are responsible for the compliance with a multitude of guidelines and while the Atrium Medical Centre is aware of their external demands, it is unclear whether it is at all feasible to meet the 1600 external demands. Guidelines were intended to support the commitment towards better quality health services, and to reach standardization by decreasing variation.[7] While necessary, the purpose needs to be clear as some external demands are merely

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intended as guidance for professionals, while others are mandatory and thus provide a basis for supervision and enforcement.

The creation of the database was a reaction to a problem that is not specific to Dutch hospitals. However, the role of the IGZ, which is to expand the responsibility of hospital boards and professionals to comply to all external demands and maintain quality and safety of care has triggered our endeavor to find a way to cope.

At present, five other Dutch hospitals are investigating the possibilities in working together on l'artis. We are committed to introducing an appraisal of the relevance of external demands for hospital management based on risks, and to fuel the debate about the problem of multiple and conflicting external demands placed on hospitals by organizing invitational conferences and discussions with the IGZ, and other stakeholders.

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