Author’s response to reviews

Title: Hospital staff perspectives towards Health Technology Assessment: Data from a multidisciplinary survey

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Author’s response to reviews:

To:
Health Research Policy and Systems- Corrections to HRPS-D-19-00252-R1

Hospital staff perspectives towards Health Technology Assessment: Data from a multidisciplinary survey

Dear Editor,

Thank you for all your comments, we feel this was of assistance to improve our paper.

Please find below detailed reply to the reviewers comments point by point– marked in yellow in the article. All the changes which have been introduced to the manuscript are marked in yellow.

We hope you will find the attached revised manuscript suitable for publication in the Health Research Policy and Systems.

Thank you in advance

Prof. Orna Tal
Reviewer #1

Minor revisions:

Background

1. "Background" is lacking references. (p.5), 'The objective… and their families'. 'HTA is an inclusive, multidisciplinary…each new technology'

(p.6), 'In the last decade …which appear every day'.

Appropriate references have been added as requested by both reviewers (page 4, line 5, 6, 15, 18, 21, 24; page 5, line 8, 14 and line 23). A paragraph to clarify the correlation of HTA and decision making was added (last paragraph page 4). The importance of hospital as innovative players was emphasize (page 5 line 14), and the influence on HB HTA approaches was explained (last paragraph page 5- 2nd paragraph page 6)

(p.6), line 26, consider replacing Rosenstein at al by et al.

The Rosenstein reference was corrected (page 6, line 12)

2. Authors stated that 'Since the beginning of the 2000s a HTA committee has been operating in the Assaf Harofeh Medical Center, …about the new technology acquisition', who acts as a member in this committee? How many are involved? Which types of technologies are mostly assessed?

A more detailed description about the HTA committee in the Assaf Harofeh Medical Center was added to the introduction section (page 7, line 13). Prior to this, the national trend of HB HTA was explained, to meet the remark of reviewer 2, to explain that HB HTA is an evolving trend and not a case study of a single medical center.

Major revisions

Methods section:

The method needs to be more elaborated. Please consider explaining more explicitly the methodology. The method section was elaborated.

1. The study design should be explicitly stated

The study design was detailed - it was a prospective survey (Page 8, line 19).
2. It would be helpful if authors provide information about the study timing. In other words, when the study has been conducted; from date to date.

The study timing was added to the study design paragraph - the study was conducted during 3 months period (July- September 2013) (page 8, line 19 from the last paragraph, and continuing in page 16).

3. Also, the method section should include the following:

All requested details were included in the method section:

3.1 A clear description of the hospital setting Harofeh Medical Center would be helpful highlighting the total number of hospital staff including clinical and non clinical, the HTA committee, who is involved? How many are involved? What are their roles and responsibilities? What are the care services provided?

Assaf Harofeh Medical Center is a general, public 850-beds hospital, including ~3,500 workers, including 821 physicians, 1244 nurses and 1435 non clinical staff at that time. This was introduced to the methods section (page 9, line 1, 8-11). Details about the HTA committee of Assaf Harofeh Medical Center was added to the introduction section (page 7, line 13)

3.2 A sub-title 'Recruitment and selection of Participants'. How authors recruited and selected participants? What were the inclusion and exclusion criteria? How many were targeted at the beginning? A pre list of participants was prepared? How they were invited to participate in the study? Authors stated that four groups of actors including physicians, nurses, engineers/bioengineers, and administrative personnel were included. How many from each were originally recruited? Who exactly was targeted in the administrative group? Information on the recruitment method (invitation letter, e-mail, information sheet, etc.) and the total number of participants solicited to participate in the study needs to be stated explicitly.

All the details regarding the 'Recruitment and selection of Participants' were introduced as requested (page 8, line 21, last paragraph).

Inclusion criteria were: participants that were familiar with the HTA process, as part of assessing medical technologies prior to acquisition, and were involved in in the activity of HTA and technology adoption in the year prior to the survey (June 2012- May 2013) (page 9, line 3)

Exclusion criterion was inability to complete the questionnaire due to language or understanding barriers (page 9, line 6)

The prelist of potential participants and total number of participants, replayed to the invitation letter was added as well as their distribution (page 9, line 12)
3.3 A subtitle named Data collection should be added

Data collection was conducted using Google-docs database forming an excel sheath (page 9, line 19.)

3.3.1 Survey Questionnaire

The questionnaire consists of how many questions? In which language the questionnaire was administered?

Was the questionnaire pre-tested before administration?

Authors stated the dissemination of the questionnaire was done through Internet, how? Was it an online questionnaire? A link was created and sent to all participants? Was it confidential? Who took care of the platform? Or the questionnaire was sent to all participants through emails? Who collected the completed questionnaires?

How many reminders have been made? How many time participants were given to complete the survey questionnaire?

Authors stated participants were asked to rank 4 aspects including clinical, technological, social, and economical aspects. For each aspect, how many questions per criteria were used? It would be helpful if authors attach the survey questionnaire used. Also I suggest authors to use the word 'aspect' instead of 'criteria' (social criteria) for these 4 ranked aspects for consistency.

The questionnaire consisted of 54 questions, including 5 demographic details, in Hebrew which is the formal language used in the country (a translation of the questionnaire is presented at the end of the reply to the reviewers comments) (page 9, line 21).

A pre-test was conducted among 25 physicians to validate the Hebrew version (page 10, line 16).

The survey questionnaire was disseminated by internet via mailing lists (page 9, line 14)

3 reminders were sent to the selected participants (Page 9, line 10). Data collection lasted for 3 month (page 8, line 19).

The number of questions for each aspect and criteria were administered to the questionnaire part in the methods section (page 9, line 22).

The survey questionnaire is presented at the end of the reply to the reviewers comments.

The term "aspect" was consistently used for the major topics (clinical, economic, etc.) while the term "criterion" was consistently used for the focused sub-elements, as the reviewer suggested,
4. Also, Authors stated that in the first part of the questionnaire, the participants were asked to rank these considerations as they assess their relative "weight", from "highly important" (ranked 10) to "less important", What about the Participants' standpoints regarding the HTA process? How data was collected? Using same questionnaire? I would authors to provide more information in this regard.

As can be seen in the attached questionnaire, the participants' standpoints regarding the HTA process was also ranked at the same scale from “highly important” (10) to “less important” (1). This was included in questions # 20-32 and 41-49. A single questionnaire was used for the collection of the entire data. A detailed explanation of the questionnaire's fragments is presented in page 10, line 4.

Please consider explaining more explicitly the methodology.

The methodology was further explicated as requested.

Results

1- Authors stated that 71 respondents answered the questionnaire. 71 completed the questionnaire over the total of how many invited originally? How the 71 were distributed per group of actors? (ex. physicians (n=?); nurses (n=); engineers n=?, administrative staff n =?). All invited respondents completed the questionnaire? It would be helpful to provide more information about it and on reasons of non-participation or dropping out during the process if so.

Indeed 71 respondents answered the questionnaire (21% compliance): 29 physicians, 20 nurses, 12 administrative staff, 6 engineers, 4 allied professionals (page 10, line 24)

2- P.10-11, results section, Distribution of the criteria ranking by profession: authors stated the results highlighted by allied health professionals as group of actors involved in the study. However, in the methods section p.8, authors mentioned that the questionnaire was disseminated to four groups of actors including nurses, physicians, engineers, and administrative staff. Please consider revising. Allied healthcare professionals include a variety of disciplines, which disciplines were involved in the study?

The questionnaire was disseminated to five groups of "actors" including nurses, physicians, engineers, administrative staff and allied professionals (which included social workers, physiotherapists, and dieticians). This was corrected at the method section (page 9, line 8).

Also, Authors said Physicians ranked HI mostly clinical aspects ("lifesaving" - 93%, "safety" - 74%, and "quality of life improvement" - 56%)... etc. Over the total of 71 participants, how
many physicians in total ranked the various criteria cited? How many nurses? Allied health professionals? Engineers? Administrators? It would be helpful for readers if authors consider adding more information in this regard.

The requested numbers were introduced to tables 2a and 2b

3- P. 14, occupation section, authors stated a new group of actors 'Researchers', who is considered in the research-targeted group? Please explain

Among the participants, 5 declared their main daily occupation was research and were defined as "researchers". All of those participants were physicians. This information was added to the result section (page 12 line 22-23, page 13, line 1-2)

Please consider replacing words factors by criteria for ex. 'among the technological factors'; 'The factor "requires significant investment in infrastructure for technology adoption", etc.

The term “factor” was replaced with the term “aspects” or “criteria” according to the text (page 13 line 6, 17, page 16, line 4; page 18, line 18)

4- Section gender, p. 14., how many females / males were considered in the total sample of participants?

The survey included 37 male and 34 female participants. This data was added to the result section (page 13, line 13) under the subtitle "Gender"

5- Authors presented the results related to participants' views on the HTA process, how were these results analyzed? This section seemed to be parachuted since nothing was mentioned by the authors in the methods section. Please consider adding more information in this regard.

As can be seen in the attached questionnaire, the participants' standpoints regarding the HTA process was also ranked at the same scale from “highly important” (10) to “less important” (1). This was included in questions # 20-32 and 41-49.
Reviewer #2:

This study address a relevant topic about the use of structured approaches in order to manage technological innovation in hospitals. The literature around the so called hospital based HTA is wider and wider. Moreover there are recent efforts made to spread knowledge regarding the use of HTA in hospitals. For example a EU VII Framework Program project (AdHopHTA) produced analysis about the adoption of HTA use at hospital level. A recent book edited by Laura Sampietro Colom and Janet Martin reported 31 case studies about the use of HTA in hospitals in the 5 continents. All these knowledge is important also for this study in order to better place the research question. It is clear that in the background a wider literature research is needed since, at the moment, seems insufficient. Moreover the analysis of the wide literature on the determinants of technology adoption in hospitals is under represented in the introduction of the paper. The same can be said regarding the use of multidimensional approaches (such as MCDA) for to support decision making in hospitals.

Details about AdHopHTA were added in the introduction section (page 6, line 11)

Some specific points:

1) It is not clear how the sample has been selected

Information regarding the selected participants was added to the method section (page 8, line 21)

2) Since the population invited to the study is not well defined is impossible to understand which is the redemption rate for each professional group;

The details of the participants was added to the result section (page 9, line 8,

3) It is not clear if the researchers have provided to the respondents a clear definition of "health technology" (it is wide or narrow? clinical procedures should be considered or not?...): without this definition it is possible that answers could be biased

The term "medical technology" was introduced to the responders in the introduction of the questionnaire – see the attached translated questionnaire. It was defined as referring to accessories, devices, medications, diagnostic and imaging measures and health services (such as procedures) provided to the patient.

4) the questions posed to respondents refer to the adoption of health technologies (a) in that specific hospital or (b) in Israeli’s hospitals or in hospitals in general terms? it is not clear.
In the case, as I suppose, the answer is (a), the author should made it clear that this paper is a "case study" and, as a consequence, the case study methodology and approach should be declared, presented and formally applied. It would be important to understand which role different responders were playing in the HTA process; which are the characteristics of this process; to which technologies it is applied and how.

HTA mechanism in different structures of committees is conducted in several large public hospitals in Israel, and a basic model (as presented in the current survey) exist. It was added in a paragraph explaining the Israeli setting (page 7, line 3)

"In the hospital setting, a group of 11 hospitals, supervised by the governmental division of medical centers, with a mutual influence, simultaneously adopted similar doctrines. Although the basic HTA principles are maintained, HTA in these hospitals is still performed separately without a unified methodological framework while agility is playing a role in the dynamic world of medicine. For example, new approaches enlighten incorporating the volume and characteristics of patients and economic considerations may vary while a new technology is adopted under unique circumstances."

We also revised the English.

Criteria for adoption of new medical technologies

As part of the improvement of the work of the Health Technologies Assessment committee, we are interested in developing the committee's decision-making methodology by improving the prioritization tool.

The term "medical technology" refers to accessories, devices, medications, diagnostic and imaging measures and health services provided to the patient.

In order to determine the impact of different aspects on the decision to adopt technologies to the hospital and to prioritize between the technologies in question, we would appreciate your opinion on the relative weight of each of the below listed components

The data in this questionnaire is anonymous and will be used for statistical analysis only.

We will weigh your position among the other decision-making positions, which will help to determine the "value" of the parameter in the next decisions.

Please rate the following statements according to their importance according to the key 10 (Most important) - 1 (Least important).

* Required
The decision to adopt the new technology will be affected by:

Extent of benefit to the patient as a life-saving technology *
Mark only one cube.

Extent of benefit to the patient as a life-quality improving technology *
Mark only one cube.

Extent of benefit to the patient through functional improvement *
Mark only one cube.

Use risk level = and chance of side effects *
Mark only one cube.

The extent of the response that it can provide to a large population *
Mark only one cube.

The degree of response that it can provide to a designated population in the hospital's patient community *
Mark only one cube.

Patient preference (demand) *
Mark only one cube.

Lack of effective alternatives *
Mark only one cube.

Streamlining the work of the medical staff (shortening work time) *
Mark only one cube.

Improving medical standard innovation *
Mark only one cube.

Improving the work of the medical staff - Saving of manpower *
Mark only one cube.

Budget savings *
Mark only one cube.

Additional cost of preparing the hospital for the technology integration *

Mark only one cube.

Maintenance Cost *

Mark only one cube.

Being complementary to existing technology at the hospital *

Mark only one cube.

Degree of need for training of new specific skills *

Mark only one cube.

Its assimilation requires significant investment in infrastructure *

Mark only one cube.

Its contribution to improving patient service *

Mark only one cube.

Its contribution to improving the hospital's reputation *

Mark only one cube.

What is the importance of each of the following factors in the committee's activities?

Physicians *

Mark only one cube.

Nursing Staff *

Mark only one cube.

Engineers / Bio Technicians *

Mark only one cube.

Economists / Purchasing Officers *

Mark only one cube.

Information *
Mark only one cube.

Researchers *

Mark only one cube.

Patients’ representatives *

Mark only one cube.

What is the weight of each component in a process of health technology assessment?

Submission Document *

Mark only one cube.

Medical assessment *

Mark only one cube.

Economic assessment *

Mark only one cube.

Discussion in the Committee *

Mark only one cube.

How often should the committee convene? *

Mark only one cube.

Where should the technology committee process be conducted? *

According to what do you think the hospital management should decide about the adoption of a new technology?

The new technology will contribute to the hospital's reputation *

Mark only one cube.

The new technology will contribute to the financial strength of the hospital *

Mark only one cube.

The new technology will promote the quality of care. *
Mark only one cube.
The new technology will promote the outcomes (efficiency) of the treatment.*

Mark only one cube.
The new technology will promote safety. *

Mark only one cube.
The new technology will advance the service provided to the patient and his family.*

Mark only one cube.
The new technology will increase staff satisfaction. *

Mark only one cube.
Everyone already has such technology *

Mark only one cube.
To what extent do you think the following aspects should be considered?
The technology will increase hospital profitability *

Mark only one cube.
There is solid scientific evidence for the benefit of technology *

Mark only one cube.
Many international studies have been/are being conducted on the technology and their results are available. *

Mark only one cube.
There is pressure from senior physicians to implement the technology *

Mark only one cube.
There is pressure from the industry to implement the technology *

Mark only one cube.
There is resistance from the staff to the technology integration *

Mark only one cube.
It is possible to integrate the technology in the hospital without additional investment *
Mark only one cube.

The technology is only given in a private fee *
Mark only one cube.

There is approval from the regulator *
Mark only one cube.

Respondent details
In order to analyze the data that will be used for statistical analysis only, we ask you to answer the following questions.

Gender *
Mark only one cube.

Age *
Mark only one cube.

Profession *
Mark only one cube.

Primary Occupation *
Mark only one cube.

Seniority in current position *
Mark only one cube.