

## Assessing the Needs of Health Policy Education for Medical Professionals Following Healthcare Transformation in Saudi Arabia

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### ABSTRACT

Recently, certain factors have increased the importance of health policy training for medical professionals in Saudi Arabia, especially following the health care transformation initiatives. This study presents health policy course content that can be used as a foundational material for teaching health policy, and assesses needs regarding teaching health policy among medical professionals. Mixed methods, used in previous study, were used to achieve the study objectives. Pre- and post-workshop (8 workshops) questionnaires were developed to assess health policy knowledge among senior health care professionals, with a total 285 participants. A semi-structured interview with deans of medical colleges was used to assess their attitudes toward teaching health policy for medical professionals. Compared with the other groups, senior consultant physicians scored lowest (mean scores 2.75 among senior consultant physicians, 4.38 among other service professionals, and 5.75 among management professionals). However, after the workshops, knowledge levels were similar across all three groups. Also study finds agreement among medical college deans regarding the importance of teaching health policy throughout physicians' career path and disagreement among deans as to the appropriate professional level for such training. The study shows the importance of providing formal training on health policy during physicians' medical education. Thus, being an important part of society, the medical community at large should understand the societal complexities of health and thus integrating the subject of public health policy within medical curriculum program should be a welcoming step in this direction..

**KEY WORDS:** HEALTH POLICY TRAINING; HEALTH POLICY KNOWLEDGE; HEALTH POLICY EDUCATION.

### INTRODUCTION

According to WHO, Health policy refers to decisions, plans, and actions that are undertaken to achieve

specific health care goals within a society (WHO 2011). Over the years globally, the practice of medicine are increasingly been influenced by geo-political, socio-economic factors where various stakeholders including governments, private players, NGOs, International as well as transnational agencies are the principal guiding forces, (Khatana 2017; MacNeil et al., 2019). Literature review suggests that both prevention and treatment policies – which lay the basic foundation of modern medicine are impacted by these non-medical determinants. They are known to influence the behavior of population at large, thereby affecting the health outcomes. Thus, Health policy training for health care professionals has increased in importance in recent years.

### ARTICLE INFORMATION

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However, the manner in which health policy training needs are determined can vary (Goetz, Arora, & Press, 2010; Patel, Davis, & Lypson, 2011; Heiman, Smith, McKool, Mitchell, & Roth Bayer, 2015; Bayer et al., 2017; Dark, Pillow, & Haddock, 2018).

Most published studies have focused on the use of different training materials owing to differences in the academic level of medical professionals (Goetz et al., 2010; Greysen, Wassermann, Payne, & Mullan, 2009; Patel et al., 2011; Kidd, Cawley and Kayingo, 2016; Dark et al., 2018). In addition, there are few published studies regarding health policy education for nurses (Ellenbecker et al., 2017). However, it seems clear that health policy teaching programs are not yet sufficiently developed to fit the needs of different health care professionals. Most of the health policy concepts and analyses have been replicated directly from the developed countries without giving much thought about its impact with respect to developing nations. Very little research has been conducted to examine these prepositions from the context of these low income and middle income economies as extensive differences exist between the geo-politico-socio-economic environments (Walt et al., 2008; Patel et al., 2011; Khatana 2017; Kiendrebeogo et al 2020).

With reference to Saudi Arabia, certain influencing factors have propelled the importance of teaching health policy to healthcare professionals. The challenges associated with policy framing, meeting the targeted health outcomes, managing the undergoing major reforms which the Saudi healthcare systems are facing have immense implications for future, (Al Khamis, 2016). From a macro-level health policy perspective, the "Health in All Policies" initiative has been developed in close collaboration with the National Transformation Program, (Ministry of Health, 2017). In alignment with the Ministry of Health (MOH) Vision 2030, transformation of the health care sector in Saudi Arabia is currently underway. Transformation of the role of the MOH involves a change from having the responsibility for planning, financing, regulation, and provision and supervision of publicly financed health care services to a focus on systems governance and stewardship. The new reforms will lead to separation of the MOH from payer and provider functions (Ministry of Health, 2017, 2018).

From a micro-level health policy perspective, part of the transformation of the MOH with respect to providers involves the creation of a holding company responsible for managing exiting MOH providers. The holding company will in turn manage the establishment of a total 20 geographic clusters and will support the development of these autonomous clusters (Ministry of Health, 2018). The strategic planning of the MOH involves decentralizing health services and increasing autonomy via these clusters. These autonomous clusters are expected to increase the efficiency of medical and managerial functions, achieve financial and administrative flexibility through adopting a direct budget strategy, apply quality assurance programs, and

simplify the contractual process with qualified health professionals (Ministry of Health, 2018).

The MOH has issued regulations on the functioning of self-operating hospitals, emphasizing the importance of establishing a dedicated department that is responsible for developing health policies and procedures to govern the operation of these hospitals (Ministry of Health, 2010). Establishment of these autonomous clusters has increased the need for administrative policies and procedures that are anchored in Saudi Arabia's statutory mandates regarding the provision and delivery of health care, which conform to the guidelines of international accreditation bodies on patient safety and quality of health care delivery. For example, international health care quality accrediting bodies, such as the Joint Commission International, stress the importance of all health care professionals understanding an organization's health policy and procedures; these guidelines also require that all medical students and trainees comply with these policies and procedures (Joint Commission International, 2013).

Based on the above aspects, future clinicians will need additional knowledge and skills, apart from clinical competences, to work effectively in the newly created autonomous clusters. Such additional knowledge and skills form an important segment for health policy development. The findings of the present study hypothesize that there is little understanding of health policy principles among health care professionals in Saudi Arabia and feel that this situation has created a gap in the processes of introduction, formulation, and implementation of health care policies in some self-operating health care facilities. To address this problem, eight seminars and workshops were conducted among health professionals working at senior management level in four regional locations throughout Saudi Arabia. The aim of these workshops was to assess their basic knowledge about health policy as well as to facilitate their understanding about health policy development with context to Saudi Arabia and its analysis. Participants received continuing medical education credits for attending the workshops.

These workshops constituted the first-ever activity conducted to develop a health policy training course to be used as foundational material for health policy education in the context of Saudi Arabia. To the author's knowledge, the present study is the first to compare health policy knowledge among health care professionals in order to assess the needs for teaching health policy to medical professionals.

## MATERIAL AND METHODS

Quantitative and qualitative methods were used to achieve the study objectives. Quantitative methods were used to compare the knowledge of health policy among health care professionals. Study participants were recruited in four cities (Riyadh, Jeddah, Dammam, and Al-Hasa) of Saudi Arabia. The workshop was conducted

in eight sessions at the four study sites. All workshops at each facility were of two days, conducted from October 2018 to February 2019, the workshops were conducted in Riyadh four times whereas it was conducted one time in other cities. The details of the participants have shown in Table 1. The number of participants varied among workshops but these were planned so as not to exceed 48 attendees (for a maximum of six teams with no more than eight people per team). Participants included 104 consultant physicians (chairs or deputy chairs), 99 management professionals, and 82 professionals from other services departments.

Medical service professionals included consultant physicians providing medical services in different departments (internal medicine; surgery; emergency department; oncology; cardiology; pediatric medicine; family medicine; ear, nose, and throat; labor and delivery; anesthesia; and pathology). Management group participants worked in administrative departments (finance and patient care services). Participants working in other services included those in nursing, pharmacy, and other specialties from non-clinical services.

A one-page survey questionnaire in English was distributed to participants before and after each workshop. During registration, participants were given a written pre-test questionnaire by the workshop assistants; completed questionnaires were returned prior to entry to the workshop venue. The pre-test survey collected information on department/area (medical, management, or other services) and position title of each participant; the names of participants were not recorded. Workshop site and regional information were previously recorded on the forms. Workshop participants were verbally informed that the information they provided would remain confidential. On the questionnaire, participants were required to match a list of terms (column A) with their definitions (column B). The questionnaire was designed in such a way as to ensure that all topics covered in the workshop were addressed.

The survey was meant to gauge awareness of and familiarity with terms and differences among health care professionals. Participants completed the same survey after the end of the workshop, with the addition of one open-ended question asking respondents to provide feedback on the workshop. Workshop assistants then collected post-test questionnaires and submitted them to the organizing team. The post-workshop questionnaire was designed to cover the main learning outcomes. Because there is no agreed content for the health policy training curriculum (Patel et al., 2011; Heiman et al., 2015; Kidd et al., 2016) the questionnaire and content of the workshop were reviewed by three experts in health policy, medical education, and health systems.

A pilot test was conducted among 10 people with different health care backgrounds, to assess their understanding of the questions and seek their advice about the questions. The results of this pilot test allowed the organizing team

to assess the questions and to reconsider some of the possible answers. It was at this stage that, to minimize guessing of correct answers, more entries were included in column B. Appendix 1 presents the main questions, with their correct answers. In addition, some respondents commented that the questions were long and that those in senior positions would not like it to be known that they did not know the answers to the questions. Based on these comments, items querying information that could lead to personal identification of individual participants were minimized, but the main matching questions were not changed.

The workshops were designed to be intensive, covering all course material in 2 days. Workshops followed an interactive format, allowing for the exchange of ideas between presenters and participants. Information on topics associated with Saudi health care policy was adapted from materials that have been published elsewhere (Al Khamis, 2016). Participants from similar professional areas were grouped together and tasked with developing a micro policy specific to their assigned areas. The output was then presented and used as a springboard for a discussion of different topics and challenges on policy development. Although most participants were Saudi nationals, the workshop was conducted in English, including workshop materials, group discussions, and group presentations. Survey results before and after the workshop were assessed using Microsoft Excel 2013.

Qualitative semi-structured interviews were used to seek medical college deans' advice regarding the results of the study and assess their attitudes with respect to teaching health policy to medical professionals; interviews were conducted from July 2019 to January 2020. A qualitative approach was followed owing to its flexibility and allowing for in-depth understanding of participants' attitudes; this approach can help to identify gaps in health policy education that cannot otherwise be identified using survey-based research methods (Berg, 2011; Mullen & Reynolds, 1978). Eight deans of medical colleges with a minimum 10 years' experience in academic and health care fields were interviewed.

The deans were all men with an academic title of at least assistant professor and were located in different cities (four from Riyadh, one from Medina, one from Al Majmaah, and two from Jeddah). Two deans were consultant physicians with the MOH Vision Realization Office, which gave them the advantage of a deeper understanding of the MOH transformation. To provide a good basis for discussion, participants were asked about their understanding of the meaning of health policy and what issues are covered by health policy. All deans were briefed about the workshop outcomes and were asked three main questions, as follows: (1) How do you evaluate physicians' health policy knowledge based on the workshop outcomes? (2) Do you think it is important to teach health policy to physicians? If the answer is yes, at what level along the career path should this be taught?

## RESULTS AND DISCUSSION

The 285 workshops participants were senior management level professionals (director, chair/deputy chair, or higher)

with three different backgrounds: medical services, management, or other services (clinical and non-clinical services). The main workshop content, teaching methods, and learning outcomes are illustrated in Table 1.

Table 1. Health policy workshop timetable, contents, and learning outcomes

	Session	Teaching and learning methods	Learning outcomes	References
Day 1: Policy, policy categories, and policy analysis	What is health policy?	Interactive presentation Individual Exercise: What is the policy from your perceptive?	The participants will be able to understand variations in policy terms and usage (general policy / health policy / public policy)	[22, 23]
	Health policy categories	Interactive presentation	The participants will be able to understand the difference between micro and macro policies	[10]
	Micro health policy categories and the differences between policy and procedure	Interactive presentation •Individual exercise and group discussion / presentation: Determining the classification of example policies as micro or macro policy •Determining the classification of example as Administrative Policy and Procedure (APP), Clinical Practice Guidelines (CPG), or departmental policy and procedure (DPP).	The participants will be able to understand the differences between APP, CPG, and DPP	[10, 24, 25]
	Developing micro policy	Interactive presentation	The participants will be able to understand the following: •how to start developing a micro policy •the main components of the analytical process •plan, policy, procedure, and relationship •the main templates used in writing APP, DPP, and CPG	[10, 23, 25, 26]
	Macro policy	Interactive presentation	The participants will be able to understand the following: •the difference between global policy and national policy •healthcare system components •type of health care financing systems •the relationship between national and global policy	[27-31]
	Health policy analysis	Interactive presentation •Group work: The participants are grouped		[9, 23, 32-34]

Continue Table 1

		according to their specialties and develop a policy (micro or macro) using the analysis steps	<p>The participants will be able to understand the following:</p> <ul style="list-style-type: none"> <li>•the definition of health policy analysis</li> <li>•health policy development stage in theory</li> <li>•health policy triangle in theory</li> <li>•some of the health policy analysis tools</li> <li>•the use of a sample tool for policy makers</li> <li>•the health policy analysis checklist</li> <li>•the complexity of the policy process in the real life</li> <li>•the main challenges facing policy developments in different stages</li> </ul>	
Day 2: The actors in the policy process and policy context; main challenges in implementing health policy; user training on policy writing	Power and types of actors	Interactive presentation	<p>The participants will be able to do the following:</p> <ul style="list-style-type: none"> <li>•Identify different kinds of power</li> <li>•Understand the main actors in the policy process</li> <li>•Identify the main players in the policy process</li> <li>•Illustrate the influence of actors on the policy process</li> <li>•Analyze the relationship between policy content and context</li> </ul>	[9, 32]
	Policy context and content; Main policy implementation challenges	<p>Interactive presentation</p> <p>Group Discussion: Based on the policy you developed with your team yesterday, please define the main challenges facing the implementation of your policy</p>	<p>The participants will be able to do the following:</p> <ul style="list-style-type: none"> <li>•Understand the main contextual factors influencing policy development</li> <li>•Analyze the main challenges facing the policy implementation process</li> </ul>	[32, 35, 36]
	Writing health policy	Interactive presentation	<p>The participants will be able to do the following:</p> <ul style="list-style-type: none"> <li>•Identify the main tips in writing policy and procedure</li> <li>•Understand the main policy format writing</li> <li>•Understand how to write a professional policy and procedure</li> </ul>	[26, 37]

Table 2 illustrates participants' characteristics. More than 34% of participants were in the management group, and more than 36% were consultant physicians. The number of participants in each workshop ranged from 30 to 45. The highest proportion of participants with medical backgrounds was in Jeddah (Workshop 6, 16/40 participants) whereas the lowest proportions were in Dammam (Workshop 3,

10/34 participants) and Riyadh (Workshop 8, 10/31 participants). Across the four facilities, 86% (246/285) of participants completed both the pre- and post-workshop questionnaires. When only one pre-/or post-workshop questionnaire was submitted by a participant, the data were considered incomplete and excluded from the analysis.



Table 2. Main characteristics of participants

Facilities / Group	Medical			Other Services			Management		
	# of Participants	Pre-Workshop Average Score	Post--Workshop average Score	#of participants	Pre-Workshop average Score	Post--Workshop average Score	# of participants	Pre-Workshop average Score	Post--Workshop average Score
Workshop 1 (Riyadh)	11*	3	8	5	5	8	13*	7	10
Workshop 2 (Jeddah)	13*	2	8	12*	4	8	12*	5	8
Workshop 3 (Dammam)	10	2	7	10*	3	7	11*	4	8
Workshop 4 (Al Hasa)	12*	3	8	7*	3	7	13*	5	8
Workshop 5 (Riyadh)	13*	3	9	3*	5	8	11	6	9
Workshop 6 (Jeddah)	15*	2	8	9*	6	10	9*	7	10
Workshop 7 (Riyadh)	13	4	10	9*	5	8	8*	6	10
Workshop 8 (Riyadh)	9*	3	10	11*	4	10	7*	6	10
Total Participants per Group/ Mean Scores Per Group	96	2.75	8.50	66	4.38	8.25	84	5.75	9.13

\*39 questionnaires were missing

Table 3 shows that senior consultant physicians had the lowest pre-workshop scores (mean 2.75 points) whereas the other services and management groups had mean scores of 4.38 and 5.75, respectively. However, after the workshop, the difference in knowledge scores was minimal across the three groups, with the medical, other services, and management groups scoring a mean 8.5, 8.25, and 9.13 points, respectively. Among participants with a medical background, the lowest pre-workshop scores were observed in Workshop 2 (Jeddah), Workshop 3 (Riyadh), and Workshop 6 (Riyadh), with a mean 2 of 10 possible points. The highest mean scores following the workshop among participants with a medical background were in Workshops 7 and 8 (both in Riyadh).

Most participants did not thoroughly understand the relationship among global health policy, national health policy, and administrative health policy within their facilities. In addition, there were clear misunderstandings of the stages of the public policy process. The study was unable to conduct a detailed analysis of the effects of participants' individual characteristics because only limited data were available. This was because one of the outcomes of the pilot study was to minimize descriptive variables collected together with survey questions, to encourage greater participation and ensure the confidentiality of participants. However, the semi-structured interviews conducted with deans of medical colleges enabled analysis of the views and attitudes among these senior health professionals about teaching health policy at some point during physicians' careers. The qualitative aspect of this assessment enabled clarification of attitudes toward teaching health policy for medical professionals. For example, participants tended to see policy as rigid statements that cannot be

modified or changed, despite changes in the environment or circumstances.

There was agreement in the semi-structured interviews among medical college deans about the importance of teaching the basic principles of health policy as part of the undergraduate medical college curriculum. During and after the workshop, participants realized the importance of the training for their practice as clinicians and medical educators. There was also agreement in the semi-structured interviews among medical college deans regarding the importance of health policy education at some point in a physician's career path, but they expressed different approaches on how health policy knowledge should be enhanced. For example, some deans believed that health policy could be included as an elective course within undergraduate programs whereas others felt it should be part of a health care systems course; yet other deans expressed that the curriculum should include one core course containing the different principles of leadership, health systems, and health policy.

One dean stated, "Previously, the medical curriculum was focused on diseases and sciences in general terms, but the new medical college curriculum has been shifted globally to include soft skills such as communication, health systems, health policy, and research". The deans referred to the national outcomes/competency framework for Saudi medical education and practice. This framework declares the national health systems including organizations, policies, and procedures as a part of medical students' curriculum (The Saudi Dean's Committee, 2017), there are variations in implementation of the national framework among medical colleges.

All deans agreed about the importance of teaching health policy at postgraduate level, but that the scope and length of instruction might differ according to specialty, depending on the level of exposure to the community in a particular specialty. For example, teaching health policy is important in community medicine and emergency medicine whereas it might be less so in surgical specialties. One dean stated, “We have just finished writing the main competencies for family medicine for

the Saudi Commission for Health Specialties and one of the main competencies is to be a manager and leader and to be able to accommodate oneself within the Saudi health system, including the cost effectiveness of the health system”. This move toward teaching health policy and health systems is supported by the program outcomes of the Canadian framework, CanMEDS (The Royal College of Physicians and Surgeons of Canada, 2019).

Table 3. Mean scores of participants by specialty and facility

Workshop/Facility	Medical		Other services		Management	
	Pre-workshop	Post-workshop	Pre-workshop	Post-workshop	Pre-workshop	Post-workshop
Workshop 1 (Riyadh)	3	8	5	8	7	10
Workshop 2 (Jeddah)	2	8	4	8	5	8
Workshop 3 (Dammam)	2	7	3	7	4	8
Workshop 4 (Al-Hasa)	3	8	3	7	5	8
Workshop 5 (Riyadh)	3	9	5	8	6	9
Workshop 6 (Jeddah)	2	8	6	10	7	10
Workshop 7 (Riyadh)	4	10	5	8	6	10
Workshop 8 (Riyadh)	3	10	4	10	6	10
Mean	2.75	8.5	4.38	8.25	5.75	9.13

Regarding teaching health policy after postgraduate education as a part of professional development, all deans agreed that this might differ based on the role of consultant physicians. For example, if physicians are assigned a managerial role in health care, they must have extensive knowledge and skills in managerial and health systems, including health policy principles. Otherwise, these professionals do not require advanced knowledge in health systems and health policy principles. All deans felt optimistic that health policy knowledge in Saudi Arabia is gradually increasing. Changes in the health system have forced physicians to practice differently. Previously, there was little accountability regarding services provided to patients. Physicians’ salaries were unrelated to the degree of effort and level of practice. With the current health care transformation, physician’s awareness and practice will undoubtedly change. One of the interviewed deans expressed, “Our teaching is hospital oriented and not health oriented. Health transformation programs have changed physicians’ attitudes toward the leading health systems and health policy. Today, population health management, value-based care, and so on have become part of physicians’ concerns and discussions”.

The workshops described here were conducted at different hospitals in four cities of Saudi Arabia. These represent the first intervention conducted in the Saudi Arabian context to target health care professionals and address some of the basic principles of health policy. The aim of these workshops was to identify and assess knowledge among health care professionals regarding basic health policy principles. Workshop participants included medical, management, and other health care

professionals from different health facilities in Saudi Arabia. This is the first study evaluating health policy knowledge among different health care professionals and the first report of health policy knowledge in Saudi Arabia.

Mean scores of the initial assessment revealed that health policy knowledge among senior medical professionals was lower than that of senior staff working in management and other services. However, after the workshop, scores were improved among all medical staff members. The lower levels of health policy knowledge among medical professionals before the training can be attributed to this group having received no exposure to health policy topics during their formal education, as has been reported previously, (Greysen et al., 2009). Some prior studies have indicated that health policy should form part of physicians’ medical education, (Clancy et al., 1995; Goetz et al., 2010; Sabat et al., 2020); however, there is limited evidence on how to develop and evaluate health policy curricula. Although several curricula have been proposed (Chinitz, 2002; Greysen et al., 2009; Heiman et al., 2015; Kidd et al., 2016), there is no consensus as to which content should be included in health policy training (Patel et al., 2011; Khatana 2017; Kiendrebeogo, Allegri and Meessen, 2020).

.As part of reforming the health care sector, the Saudi government will move to extend the number of health insurance beneficiaries (The Council of Economic and Development Affairs, 2016). Following the health care reforms, health professionals will increasingly be required to have knowledge regarding not only clinical

practice but also health policy, (Kidd et al., 2016). In Saudi Arabia, formulation of a national health policy is necessary to align with the MOH's strategic plan and Saudi Vision 2030. Academics must actively participate in this development by assisting health care professionals to understand the basic concepts of health policy in the context of Saudi Arabia's unique environmental, demographic, and political system. Although there is agreement about providing health policy education during undergraduate and postgraduate medical training as well as professional development, there is no mechanism to ensure that all medical schools are aligned in this regard and moving in the same direction.

The participants in this study expressed agreement that the principles and concepts taught in the workshop were important and beneficial to health care professionals. However, prior to the workshop, some medical staff members expressed reservations about attending because they believed that the workshop would not be relevant to their professional activities. This initial attitude, which was also observed in a prior study (Greysen et al., 2009), highlights the importance of communicating with medical professionals to increase their awareness of the benefits this kind of training can provide in their work. In this study, all venues and facilities were provided by the hospitals, and use of assistants helped to increase efficiency of the activities conducted during the workshops. For example, assistants were assigned to each team to guide participants in understanding the assignments and completing the workshop exercises.

The workshops described in this article covered the main health policy issues relevant to health care providers and used different approaches such as lectures, discussions, and group projects. However, there is a need to develop a national health policy program that elaborates on the other health policy domains, particularly with movement of the Saudi government toward reforming the national health system (The Council of Economic and Development Affairs, 2016). Thus, developing a national health policy curriculum should be a priority, with participation by the academic community, to assist medical and public health programs in providing training for health care professionals that will serve to increase their knowledge of health policy.

This study has some limitations. The study was unable to conduct a detailed analysis of the effects of participants' individual characteristics because only limited data were available; this was because one of the outcomes of the pilot study was to minimize descriptive variables collected together with survey questions, to encourage greater participation and ensure the confidentiality of participants. However, the semi-structured interviews conducted with deans of medical colleges enabled analysis of the views and attitudes among these senior health professionals about teaching health policy at some point during physicians' careers. The qualitative aspect of this assessment enabled clarification of attitudes toward teaching health policy for medical professionals.

## CONCLUSION

The findings of the current study revealed that medical professionals had lower levels of knowledge regarding health policy than those in other specialties because they had received no health policy training during their medical education. Introduction of the health policy workshop described in this article helped to reduce the knowledge gap among health care professionals in this regard. Although the intervention in this study presented some health policy content that can be used in teaching health policy, there is still a need to formulate a national health policy program that is aligned with the current government health care reforms. The present study results stress the importance of communicating with medical staff members and increasing awareness of the benefits of health policy training for their work, to minimize resistance by senior medical professionals to participating in health policy workshops.

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**Conflict of Interest:** The authors declare that they have no conflicts of interest.

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