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Abstract

Background: The COVID-19 pandemic has increased awareness of the need for high-quality and timely evidence to support policy- and decision-making in emergency situations.

Aims: To describe the experiences of the National Institute of Health Research (NIHR), Islamic Republic of Iran, in adopting evidence-informed policymaking during the COVID-19 pandemic.

Methods: During the COVID-19 pandemic, NIHR institutionalized a rapid response system that was backed up by evidence-informed policy- and decision-making. Activities included establishment of a preparedness and response management committee, gathering and providing timely pandemic information to policymakers, establishing a timeline of actions and activities, and a feedback system for policy responses and queries.

Results: The COVID-19 rapid response committee addressed the questions of 40 policymakers by synthesizing and analysing evidence and making it available to relevant stakeholders. It developed and disseminated knowledge products to provide relevant information. We identified the need for more timely data and more reliable research evidence for pandemic management.

Conclusion: National institutions responding to health emergencies need to take responsibility for establishing and managing a robust rapid response systems that can provide valid and timely evidence to policymakers. Over time, their capacity should be monitored, evaluated and strengthened to adapt and respond appropriately to pandemics, outbreaks and epidemics.

Keywords: COVID-19, evidence, policymaking, Islamic Republic of Iran, rapid response, UHC, pandemic

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Introduction

There is a growing global interest in achieving Universal Health Coverage (UHC) by strengthening health systems following the introduction of the United Nations Sustainable Development Goals (1). Decisions to achieve these goals need to be informed by evidence. Evidence-informed policymaking is a complex process, and the time required to generate evidence usually exceeds the time that policymakers are willing to wait (2–4). The COVID-19 pandemic forced decision-makers to make rapid decisions under time pressure and situations of scientific uncertainty, which highlighted the need for adaptation of evidence-informed policymaking to changing circumstances. Some solutions have been proposed, and 1 of the most important is the establishment of a rapid response system (5). According to the Evidence-informed Policy Network, rapid synthesis of the best available research evidence on pressing health issues can provide policymakers with a sound basis on which to inform their decisions, and this highlights the importance of establishing a mechanism for generating and

disseminating evidence in a timely manner (6, 7). An example of this can be seen in Canada, where a rapid response programme was developed to serve as a key mechanism for facilitating user-pull (8). Evidence-informed policymaking

is now inevitable, and each country must implement its own plan and adapt it to situations that require a rapid response system.

Immediately after detecting the first case of COVID-19 in the Islamic Republic of Iran, the authorities moved quickly to respond through a whole-of-government and whole-of-society approach (9), which committed all sectors to respond to the pandemic. Numerous national committees were formed and policies were formulated and implemented (10). In this regard, the National Institute for Health Research (NIHR) tried to fulfil its mission by taking an active role in tackling COVID-19. NIHR as a national body has 2 main functions of health observation and rapid response. To realize the latter, NIHR addresses the knowledge gap in situations where health system decision-makers need support through access to and synthesis of optimally packaged, relevant, and high-quality research evidence. The aim of this study was to describe the process and establishment of the rapid response system to support evidence-informed policymaking during the COVID-19 pandemic in the Islamic Republic of Iran.

Institutionalization of the COVID-19 rapid response system in the NIHR

The specific intervention was the establishment of a national rapid response system against the COVID-19 pandemic in the Islamic Republic of Iran, which provided relevant research evidence that addressed urgent questions raised by policymakers. Senior policymakers at the Ministry of Health and Medical Education were identified as the primary stakeholders, and the key players were COVID-19 experts, researchers, and academics.

The NIHR has a rapid response system, and the new intervention was an adaptation of the current structure to the COVID-19 pandemic situation. The NIHR established a committee for evidence-informed policymaking, with the following subcommittees: (1) The steering committee determined the work plan, priorities, and general scope of activity; estimated the budget; reviewed the proceedings; oversaw, planned, and organized meetings; coordinated and communicated updates with policymakers; informed the technical committee; and made decisions about allocation of resources. (2) The advisory committee had an arbitration role, providing expert advice and guidance on matters within their fields of expertise. The committee’s critical role was to review and approve materials for publication. Their expertise enabled them to provide valuable feedback on content, accuracy, and relevance. They carefully scrutinized products to ensure that they met quality standards. After the review, they granted permission for publication . This ensured that published materials were reliable resources for

policymakers. (3) The technical committee was in charge of developing all products.

The managers and senior policymakers of the Ministry of Health and Medical Education were informed of the COVID-19 rapid response system. The system established specific timelines for different stages of the process, with the initial stage taking 3 business days, the subsequent stage 7 business days, and the final stage 30 business days. These timelines allowed for identification and summary of relevant systematic reviews, which were delivered in a timely and efficient manner to decision-makers.

To facilitate the process of receiving and responding to queries from policymakers and senior health managers, a specific form was developed. This query form included various elements, such as the names of the policymakers submitting the query; a well-defined question formulated as a query; information on the intended use of the response (e.g. for macro or micro-level policymaking, mass media, etc.); and the timeframe within which the response to the query was required. These elements helped streamline the process of receiving and responding to queries in a timely and effective manner. The response form used in the rapid response system was comprehensive and included a range of information such as the name and affiliation of the applicant, as well as the question that had been answered and the deadline for the response. The form also included key findings, review methods, results, and conclusions. It had a section for references, allowing for transparency and accountability in the sourcing of information.

Evidence preparation

The NIHR COVID-19 rapid response system included: finding the best and most relevant evidence; synthesis of the evidence and production of rapid reviews; and generation of meta-analyses in response to user-defined queries.

The evidence was synthesized using the following steps: (1) searching databases such as the Cochrane Library and PubMed; (2) determining the appropriate inclusion and exclusion criteria for extracting evidence; (3) extracting data from final studies; and (4) analysing the data. Different types of evidence were used, especially systematic reviews, meta-analyses of randomized controlled trials, and evidence-based clinical practice guidelines based on systematic reviews of at least 3 randomized controlled trials, which were the first choice. All products were indexed on the NIHR website and delivered to policymakers through official correspondence. They were also presented to them in a series of meetings.

Main outcomes of COVID-19 rapid response system

The committee answered > 40 important questions up to the time of writing this paper. The following topics were covered: (1) Rules for holding mass gatherings, including religious meetings and sports (the evidence led to closure of mosques). (2) School reopening (the evidence led to a halt in reopening). (3) Rate of reinfection and antibody persistence, which led to the formation of a serosurveillance system in the Islamic Republic of Iran. It was hypothesized that herd immunity may lead to disease control and that no vaccine would be needed. This led to the refusal of some individuals and even policymakers to take the vaccine. The seroepidemiological studies conducted through the serosurveillance system showed that reinfection was possible and antibodies were not persistent. This prompted policymakers to put vaccination on the agenda (11). (4) Administration of the first vaccination booster for specific groups (evidence showed that booster doses were effective). (5) The effectiveness of oral and injected antiviral drugs. A rapid review of chloroquine, favipravir, remdesivir, monolopiravir, and some other drugs was carried out. Remdesivir has been widely used in the Islamic Republic of Iran, and the Annual Pharma Statistics Report of the Iranian Federal Drug Administration (2020) mentioned remdesivir as the most widely used drug. Evidence showed that remdesivir was not effective.

As an additional outcome, by creating a COVID-19 information platform and the associated website, the evidence was available for public use and was widely disseminated. This information was also used by the media and some of the questions made headlines in the official media (NIHR; https://nih.tums.ac.ir/En).

Key challenges and related strategies

The important challenges are as follows: (1) Limited human resources posed a challenge to providing prompt responses to queries. This challenge was compounded by difficulties in managing time constraints. In order to overcome these challenges, teams were formed to provide answers to queries instead of relying on individual efforts. This team-based approach expedited the response process, enabling more timely and efficient delivery of responses to policymakers and senior health managers. (2) Lack of technical expertise. Given the variety of the questions, it was a challenge to ensure the required technical expertise within teams. The challenge remains, and the committee has worked to expand the range of expertise. (3) Finding appropriate evidence to address knowledge gaps due to the novelty of COVID-19. To address this issue, relevant sources were regularly monitored and primary data were generated. (4) The current mode of knowledge-sharing in the NIHR is based on a pull platform, which involves policymakers and senior health managers sending their queries to the committee. However, it has been recognized that this approach has limitations and there is a need for a more collaborative exchange platform. To address this challenge, a national framework was developed for consideration by the Ministry of Health and Medical Education. The framework aims to facilitate the exchange of knowledge and expertise between stakeholders through the establishment of a collaborative platform. The proposed exchange platform will enable stakeholders to share information and best practices, engage in discussions and debates, and collaborate on research projects. By moving from a pull to an exchange platform, the NIHR aims

to create a more collaborative and inclusive environment for knowledge sharing, which will facilitate the implementation of evidence-based policies and practices. This shift will also help overcome the limitations of resources and expertise, by enabling stakeholders to work together towards a common goal. Overall, the proposed exchange platform has the potential to enhance the quality and relevance of research and policymaking in the field of health.

Key lessons learned

The most important lessons learned were as follows: (1) A national body should take responsibility for management of the COVID-19 rapid response system in order to provide timely evidence. Consideration should be given to strengthening the capacity of its potential members under various situations. (2) Development of a structured format for receiving queries will facilitate the process by streamlining the flow of information. A format tailored to the needs of knowledge users will prevent dispersion of queries and ensure a clear and concise understanding of the information sought. (3) To consider the dissemination of responses in the form of policy briefs or factsheets. The use of mass media will make rapid response efforts more visible. (4) Policy dialogue is recommended to foster mutual understanding between policymakers and respondents and to close any knowledge gaps. This will involve exchanging information, perspectives, and experiences among stakeholders to promote a more informed approach to policymaking. It will also enable stakeholders to collaborate, identify common goals and challenges, and develop potential solutions and strategies. (5) Establishment of the COVID-19 rapid response system could be promoted at subnational levels to enhance the culture of evidence-informed policymaking.

Conclusion

We aimed to explain the process involved in the institutionalization of a national COVID-19 rapid response system in the Islamic republic of Iran. The timely response to the questions of policymakers was challenged by the rapid spread of COVID-19. The establishment of a national system that is supported by senior health policymakers is indispensable. It is imperative to develop the capacity to generate and synthesize reliable evidence in a timely manner to ensure its effective utilization. In order to maintain the effectiveness of the COVID-19 rapid response system, periodic evaluations should be conducted to assess its structural and functional capabilities and make necessary modifications.

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Pertinence du système de riposte rapide à la COVID-19 pour l'élaboration des politiques de santé publique en République islamique d'Iran

Résumé

Contexte : La pandémie de COVID-19 a renforcé la prise de conscience de la nécessité de disposer de bases factuelles de qualité et produites en temps utile pour soutenir l'élaboration des politiques et la prise de décisions dans les situations d'urgence.

Objectif : Décrire l'expérience de l'Institut national de recherche en santé (NIHR) de la République islamique d'Iran en matière d'élaboration de politiques reposant sur des bases factuelles pendant la pandémie de COVID-19.

Méthodes : Durant cette pandémie, le NIHR a institutionnalisé un système de riposte rapide appuyé par une élaboration des politiques et une prise de décisions fondées sur des bases factuelles. Les activités mises en œuvre comprenaient la création d'un comité de gestion de la préparation et de la riposte, la collecte et la fourniture en temps utile d'informations sur la pandémie aux responsables de l'élaboration des politiques, l'établissement d'un calendrier des actions et des activités, et l'utilisation d'un système de rétroinformation pour gérer les réponses et les demandes liées aux politiques.

Résultats : Le comité chargé d'organiser la riposte rapide à la COVID-19 a répondu aux questions de 40 responsables de l'élaboration des politiques en synthétisant et en analysant les données factuelles et en les mettant à la disposition des parties prenantes concernées. Il a élaboré et diffusé des supports de connaissances afin de fournir des informations pertinentes. Pour gérer la pandémie, nous avons constaté qu'il fallait disposer de données plus opportunes ainsi que de données de recherche plus fiables.

Conclusion : Les institutions nationales qui répondent à des situations d'urgence sanitaire doivent assumer la responsabilité de la mise en place et de la gestion d'un système de riposte rapide robuste, capable de fournir des données factuelles valides et opportunes aux responsables de l'élaboration des politiques. Au fil du temps, leurs capacités devraient être suivies, évaluées et renforcées en vue de s'adapter et de riposter convenablement aux

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pandémies, flambées et épidémies.

أهمية نظام الاستجابة السريعة لكوفيد **-19** في رسم سياسات الصحة العامة في جمهورية إيران الإسلامية

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الخلاصة

الخلفية: ساهمت جائحة كوفيد-19 في زيادة الوعيَ بالحاجة إلى دلائل عالية الجودة، وتتاح في الوقت المناسب لدعم رسم السياسات واتخاذ القرارات في حالات الطوارئ.

الأهداف: هدفت هذه الدراسة الى وصف تجارب المعهد الوطني للبحوث الصحية، جمهورية إيران الإسلامية، في اعتماد عمليات رسم السياسات المسترشدة بالدلائل خلال جائحة كوفيد-19.

طرق البحث: خلال جائحة كوفيد-19، أضفى المعهد الوطني للبحوث الصحية الطابع المؤسسي على نظام الاستجابة السريعة الذي تدعمه عمليات رسم السياسات واتخاذ القرارات المسترشدة بالدلائل. وشملت الأنشطة إنشاء لجنة لإدارة التأهب والاستجابة، وجمع المعلومات عن الجائحة وتقديمها في الوقت المناسب إلى راسمي السياسات، ووضع جدول زمني للإجراءات والأنشطة، وإنشاء نظام للمعلومات الارتجاعية بشأن استجابات السياسات والاستفسارات المتعلقة بها.

النتائج: تناولت لجنة الاستجابة السريعة لجائحة كوفيد-19 أسئلة 40 من راسمي السياسات من خلال توليف الدلائل وتحليلها وإتاحتها لأصحاب المصلحة المعنيين. وطورت منتجات معرفية ونشرتها لتوفير المعلومات ذات الصلة. وقد حددنا الحاجة إلى ضرورة توافر البيانات في الوقت المناسب على نحو أكبر، بالإضافة إلى دلائل بحثية أكثر موثوقية لإدارة الجوائح.

الاستنتاجات: تحتاج المؤسسات الوطنية التي تستجيب للطوارئ الصحية إلى الاضطلاع بمسؤولية إنشاء نظام قوي للاستجابة السريعة قادر على تقديم دلائل صحيحة وفي الوقت المناسب إلى راسمي السياسات. وبمرور الوقت، ينبغي رصد قدراتها وتقييمها وتعزيزها للتكيف مع الجوائح والفاشيات والأوبئة والاستجابة لها على النحو المناسب.

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