


BMJ Open Identifying priority medicines policy issues for Qatar: exploring perspectives and experiences of healthcare professionals through a qualitative study

Nadeem Zia ¹, Mohamed Izham Mohamed Ibrahim,² Fathea Adheir,¹ Zaheer-Ud-Din Babar³

To cite: Zia N, Ibrahim MIM, Adheir F, *et al*. Identifying priority medicines policy issues for Qatar: exploring perspectives and experiences of healthcare professionals through a qualitative study. *BMJ Open* 2021;**11**:e054150. doi:10.1136/bmjopen-2021-054150

► Prepublication history and additional supplemental material for this paper are available online. To view these files, please visit the journal online (<http://dx.doi.org/10.1136/bmjopen-2021-054150>).

Received 09 June 2021
Accepted 25 October 2021



© Author(s) (or their employer(s)) 2021. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ.

¹Department of Pharmacy, Sidra Medicine, Doha, Qatar

²College of Pharmacy, Qatar University, Doha, Qatar

³University of Huddersfield, Huddersfield, UK

Correspondence to

Nadeem Zia;
Nadeem.Family.Pharmacist@gmail.com

ABSTRACT

Objectives To identify priority medicines policy issues, including the 'use' and 'access to medicines' in Qatar.

Design In this qualitative study, general inductive method was used and semi-structured exploratory interviews conducted.

Setting Stakeholders from a broad range of academic and healthcare practitioners in Qatar.

Participants Exploratory, semi-structured interviews were conducted with 21 stakeholders throughout Qatar. The inclusion criteria include (a) participants working or involved in the Qatar's healthcare system, (b) participants having experience or working knowledge of medicine policy documents, different facets of it, use of medicines and access to medicines, (c) as well as participants well versed in the English language. It was intended to cover stakeholders from a broad range of healthcare and policy institutions in Qatar.

Primary and secondary outcome measures All participants were involved in semi-structured, audio-recorded interviews, which were then transcribed verbatim, coded into NVivo V.12 and followed by thematic analysis to identify the common themes. Perceptions, experiences and opinions regarding Qatar's medicines policy issues were recorded.

Results This study found challenges related to the availability of pharmaceuticals in Qatar, including medicines registration process. There is no comprehensive national medicines policy in Qatar, however, there are a number of rules, regulations, policies and procedures in place. The community pharmacy services provided are mostly 'traditional' with less emphasis on pharmacists' extended roles and/or cognitive services. The study identifies several areas for improvement including extending the role of the pharmacist, improve the prescribing of antibiotics, medicines compliance and counselling for consumers, pharmacovigilance, implementation of generic medicines policies, as well as the need for a national health record database.

Conclusions The findings suggest that in the last 20 years, Qatar has moved towards advancing healthcare; however, there are gaps and opportunities. The strategies need to be developed to resolve access to medicines

Strengths and limitations of this study

- The strength of the study is that it is the first such study on the topic using a qualitative inductive approach to cover medicines policy in Qatar.
- An exploratory qualitative design is used to uncover healthcare professionals' opinions on medicines policy.
- The study emphasises the various facets of medicines policy including medicines use situation, community pharmacy practice, medicine registration, patients counselling, medicines access and medicines adherence issues.
- Sampling did not achieve the target composition of the participants. This may have limit the range of stakeholders by not including patient support groups or the pharmaceutical manufacturing sector.
- The study provides enough data and adds to our understanding of the medicines policy issues and future health challenges and opportunities for Qatar.

issues, the priority being medicines registration, import and so on. With the rise of chronic diseases and a growing population, there is also a need to work to improve medicines adherence among patients.

A national medicines policy should be developed through a consultative broad-based process in which prescribers, physicians, pharmacists and healthcare professionals be given a chance to contribute.

INTRODUCTION

As of 2020, the population of Qatar is 2.79 million.¹ Qatar has a public and private healthcare system and provides modern healthcare services to its Qataris and non-Qataris. The quality of healthcare in Qatar is very high.² The State of Qatar started its National Health Strategy 2018–2022 (Q-NHS 2018) in 2018 and the aim was to develop a comprehensive world-class healthcare system.³ It is projected that Qatar will spend QAR

18.8 billion (US\$5.2 billion) in 2020 on health.^{4,5} Wilbur *et al*⁶ reported that the State of Qatar provides healthcare services free of charge to all Qataris. The expatriates have subsidised healthcare services in the public sectors, and they only pay 20% of the cost of pharmaceuticals. Qatar's most common diseases are non-communicable diseases, including cardiovascular diseases, diabetes, cancer and chronic respiratory diseases. In Qatar, 69% of the people have cardiovascular disease, diabetes and cancer, 70% Qatari adults are overweight and 43.9% of the population have a low level of physical activities. The most common cause of mortality in Qatar is cardiovascular diseases, including hypertension, diabetes and cholesterol, and is accountable for 33.1% deaths during 2018.⁷

Qatar's National Medicines Policy

The National Medicine Policy of a country provides guidance regarding quality, safety, effectiveness, access and the use of medicines.⁸ There is a need for a generic medicines policy and guidelines in Qatar.⁹ The government is supporting the use of generic medicines.¹⁰ It seems that Qatar does not have an official document named Qatar's national medicines policy. However, there is a set of regulations, policies, strategies related to medicines. These documents govern the use of and access to medicines in Qatar.¹¹ The pharmaceutical sector and public healthcare governed by Ministry of Public Health (MoPH), including public and private pharmacies and medication warehouses.⁶ In 2019, Qatar spent QAR 2.4 billion (US\$657 million) on medicines.¹²

Use of medicines and access

WHO recommends that the effective implementation of a medicines policy could increase the responsible use of medicines.¹³ This could have a positive impact on medicines spending, patient health outcomes and medicines adherence. The use of medicines is an essential element of a country's national medicines policy.¹³ Aljayyousi *et al*¹⁴ report the significant inappropriate antibiotic use in Qatar. Eighty-two per cent of the consumers were using medicines without a prescription, 45% did not complete the antibiotic course and 23% were taking antibiotics from the pharmacy without a prescription in Qatar.¹⁴ Abdulrhim *et al*¹⁵ concluded that collaborated pharmaceutical care services and pharmacists' interventions would improve clinical outcomes in type 2 diabetes mellitus patients in Qatar.

Access to medicines is an essential element of pharmaceutical policy, including equitable access, availability, affordability of medicines, as well as cost-effective use of medicines.¹⁶ Qatar's public hospitals and clinics provide free healthcare services for Qataris and subsidised healthcare and pharmaceutical services for non-Qataris.⁶ There are few challenges with regard to the registration and licensing of medicines in Qatar. This includes tender regulations, procurement processes, unpredictable consumption trends and physicians' preferences.¹⁷

The availability of medicines is also effected by the time required to imports medicines in Qatar.

Objectives

The research aims to identify priority medicines policy issues for Qatar. The specific objectives are as follows:

1. To explore and identify key challenges affecting Qatar in terms of priority medicines policy issues, including medicines use and access.
2. To explore the futuristic approach in terms of overall medicines access and use in Qatar.

METHODS

In this qualitative study, a general inductive method was used and semi-structured exploratory interviews were conducted to carry out the research. It involved recorded interviews from stakeholders and the transcriptions were done followed by a thematic analysis. The interviews were designed to explore participants' opinions regarding priority medicines policy issues in Qatar.

The researcher contacted 55 stakeholders in Qatar by face-to-face meetup, email, WhatsApp and phone calls. The recruitment method involved meeting with key stakeholders and using a snowball sampling procedure. There were 21 participants selected for exploratory, semi-structured individual interview throughout Qatar using the selection criteria. The participants had been living in Qatar or the Middle East for more than 5 years. The inclusion criteria included: (a) participants working or involved in Qatar's healthcare system, (b) participants having experience or working knowledge of medicine policy documents, different facets of medicines policy, use of medicines and access to medicines, (c) participants well versed in the English language. It was intended to cover stakeholders from a broad range of healthcare and policy institutions in Qatar. The participants' details are listed in [table 1](#).

Development of semi-structured interview guide

The semi-structured interview guides were adapted from the study by Babar and Francis.¹⁸ Also, from the literature synthesis and informal meetings with the key stakeholders, changes, adaptations and amendments were made to this guide. This guide is available in online supplemental appendix for questions details. This was to cater for the Qatar's healthcare system's local needs. The final interview guide has four key themes: (a) priority medicines policy issues, (b) access to medicines in Qatar, (c) use of medicines in Qatar, (d) future of overall health and medicines use in Qatar.

Interviews and data analysis

A snowball sampling procedure was used to recruit participants. In snowball sampling, participants identify further participants.¹⁹ The recruitment of the stakeholders was carried out by an email invitation, through follow-up emails, or call or through WhatsApp messages. The stakeholders were contacted, and the initial briefing was done

Table 1 Participant's characteristics: participants n=21

Participants	Number	Area(s) of practice	Profession
Public sector academic	1	Medicine	Academic physician
	2	Pharmacy	Academic pharmacist
Private sector academic	1	Supervisor of pharmacy technician	Academic pharmacist
Distributors and wholesalers	1	Pharmaceutical distributor	Pharmacist
Community pharmacy	1	Pharmacy manager	Pharmacist
	1	Pharmacy manager	Pharmacist
Private hospitals	1	General practitioner	Physician
Public sector	1	Intensive care unit, HMC	Physician
	3	Pharmacy administration, research, drug utilisation evaluation (DUE), pharmacy, HMC	Pharmacist
	1	Registration and drug pricing manager, regulatory—MoPH	Pharmacist
Semi-private sector (hospital)	1	Senior nurse manager	Nurse
	3	Paediatrician, operation theatre (OR) physicians	Physicians
	1	Pharmacy manager	Pharmacist
	1	Pharmacy quality	Pharmacist
	1	Drug supply manager	Pharmacist
	1	Drug supply supervisor	Pharmacist

HMC, Hammad Medical Corporation; MoPH, Ministry of Public Health.

on the research project for the introduction and seeking consent. If they showed interest and provided consent, then the invitation letter was sent through email. Fifty-five stakeholders were approached, from which 24 did not reply, 3 referred to their colleagues and 2 replied that they are not confident to participate in the research study. Twenty-one contacts agreed to participate in the study. All stakeholders were contacted and their characteristics for the study are presented in [table 2](#).

Patient and public involvement

There were no patients or public involvement in this study. This has been included.

All interviews were done by face-to-face meeting, as one-on-one, with privacy. The interviews were conducted between September 2019 and March 2020. Before the interview, an email was sent to all participants, which includes an invitation letter and an interview guide. There was no financial compensation offered to participants.

Table 2 All stakeholders contacted and invited for the study

Stakeholders	Stakeholders contacted and invited (55)	Stakeholders who accepted the invitation (21)
1. Academic institutions—medicine, pharmacy, nursing, allied and others	8	4
2. Pharmaceutical industry—local and international	4	0
3. Distributors, wholesalers and suppliers	3	1
4. Retail—independent and chain	3	2
5. Public hospitals	22	12
6. Private hospitals	3	1
7. Regulatory—Minister of Public Health (MoPH); Pharmacy and Drug Control Department (PDCD)	5	1
8. Consumer group	2	0
9. Programme—Qatar diabetes	1	0
Total stakeholders	55	21

Of 55 stakeholders contacted, 21 agreed to participate; response rate 38%.

Table 3 Outline of the participants' area(s) of practice and professions

SN	Healthcare sector	Area(s) of practice and professions	Designated in the thesis
1	Academic physician and pharmacists	Academic physician	AcPhy1
		Academic pharmacist	AP1
		Academic pharmacist	AP2
		Academic pharmacist	AP3
2	Distributors and wholesalers	Pharmaceutical distributor	PD1
3	Community pharmacy	Pharmacy manager	PM1
		Pharmacy manager	PM2
4	Private hospitals	Physician	Phy1
5	Public hospitals	Physician	Phy2
		Physician	Phy3
		Physician	Phy4
		Physician	Phy5
		Senior nurse manager	SNM1
		Pharmacist	P1
		Pharmacist	P2
		Pharmacist	P3
		Pharmacist	P4
		Drug supply manager	DSM1
Drug supply supervisor	DSS1		
Pharmacist	P5		
6	Regulatory—MoPH, Qatar	Registration and drug pricing manager	RDPM1

MoPH, Ministry of Public Health.

All interviews were conducted in the English language. Each interview lasted for about 40 min. During the interviews, only the questions relevant to the study were asked. Formal consent was asked from the participants before starting the interview questions. All interview audio recordings were made on SONY ICDPX470 Stereo Digital Voice Recorder and saved in the password-protected computer, and all files were named using a code number for further protection of confidential information. The alpha numeric coding format was used and the details are shown in [table 3](#).

All interviews were transcribed verbatim. The coding was performed after reading the transcribed document, followed by the identification of themes and subthemes for the thematic analysis. The analysis was performed by using the NVivo V.12 software application.¹⁸ The semi-structured interviews provided spontaneous and natural conversation between participants and researcher.^{20 21} All stakeholders were contacted and their characteristics for the study are in presented in [table 2](#).

RESULTS

This study aimed to understand priority medicines policy issues for Qatar and to identify the related opportunities and challenges. For this research, we were invited 55 stakeholders from all healthcare sectors. [Table 3](#) shows participants' healthcare sector, area of practice, profession. The following themes in [table 4](#) appeared after the analysis of the transcriptions. The themes and subthemes are (a) priority medicines policy issues for Qatar, (b) access to medicines in Qatar, (c) use of medicines for Qatar, (d) future overall health and use of medicines for Qatar.

The following themes appeared after the analysis of the transcriptions.

Priority medicines policy issues for Qatar

The participants had differing opinions on medicines policy issues. However, the two most common issues were where to find the policy as well as issues regarding medicines registration processes in Qatar.

Most participants felt it was a challenge to find, understand and follow the medicines policy in Qatar. A pharmacy manager replied about the medicines policy in the following manner.

I think there is no strict policy for medicine in Qatar. So, maybe this makes it like not much clear for every health care provider; you know, there are some issues that I am not clear, maybe regarding some of the rules for some medicines. Just some issues, prescribing issues, I am not sure about, not everything is clear, maybe this is because it is not stated. Because I think reason for that, it is not created. There is no medicine policy clear for everyone. (PM1)

Also, a drug supply manager said about the medicine policy in Qatar:

it would be better to have one policy that covers everything. (DSM1)

An academic pharmacist emphasised the importance of the medicines policy, and regulators were aware that there is a need for a written national medicines policy:

Priority medicine policy issues are very, extremely, incredibly important and definitely this comes as part of medicine policy in the country under the umbrella of national medicine policy. Unfortunately, we do not have the national medicine policy, that does not

Table 4 Themes and subthemes

Themes	Subthemes	Details
Priority medicines policy issues for Qatar	Understanding of priority medicines policy issues	Description of priority medicines policy Availability of a national medicines policy in Qatar
	Current medicines policy issues	Issues in finding and following the medicines policy Medicines registration for Qatar
	Procurement of medicines and medicines supply chain	Import of medicines Manufacturing of medicines in Qatar
Access to medicines in Qatar	Process of high-cost medicines for Qataris and non-Qataris	
	Current issues about access to medicines	
	Need for further research	
Use of medicines for Qatar	Use of medicines	
	Present issues related to the use of medicines	
	Challenges and opportunities regarding the use of medicines	
	Future research on the use of medicines	
Future overall health and use of medicines for Qatar	Overall health issues in the next 3–5 years	
	Future access and use of medicines	
	Research ideas for the future	

mean in the state of Qatar. We do not have issues from the regulatory authorities and other healthcare institutions related to the priority medicines. I think the policymakers are fully aware about the priority medicine issues, but a written policy because of the lack of national medicine policy. So also, there is no any kind of priority medicine policy that is written. (AP2)

Here is the statement of a registration and drug pricing manager related to medicines policy in Qatar:

We do not have like such one bundle of documents, which is called Medicine policy but to have it in different documents. Yeah, but it is not like a one booklet, which is known as Medicine policy to be available in one document. (RDPM1)

On the other hand, participants believed that the medicines policy was not available Here is the opinion of an academic pharmacist on Qatar's medicine policy.

The state of Qatar does not have any written medicine policy. This is to the best of my knowledge. There is lack of National medicine policy in the state of Qatar, but in place, of course, there are some Unwritten regulations and rules related to access to medicine. So issues to access, availability, affordability, there are some written documents, even with the Pharmacy and Drug Control, but there is no consolidated national medicine policy that covers all this aspect as well as aspects related to generic medicines, which are also part and parcel on national medicine policy. (AP2)

Access to medicines in Qatar

Process for high-cost medicines for Qataris and non-Qataris

All medicines are paid for by MoPH in all public sector hospitals and primary care clinics. This payment is in full for Qataris and up to 80% for non-Qatari. The 20% medicines cost for non-Qataris is paid by either employer insurance or private insurance, including for high-cost medicines. In the private sector, all medicines cost is paid by MoPH for Qataris, but all non-Qataris have to pay the full cost of medicines. Here is what an academic pharmacist had to say about access to medicines in Qatar:

Well, as far as I know, there is no differentiation. If an expat needs like an expensive chemotherapy medicine, they are not denied access to it. So, if that particular drug is needed and it's in stock and available in this country, the patient will receive it, and you know this is the big benefit about living in this country is that the Expats are not denied medical care. (AP1)

The following is a statement from a registration and drug pricing manager about the cost of medicines:

For Qatari, no problem as they are not paying. But the good thing also for the expats. Government always paying 80% of the bill. They only pay the 20% and even for the chronic diseases such as cancer and diabetic patients and cardiac patients, paying only 10%. (RDPM1)

Additionally, a pharmacist in the hospital stated the following on high-cost medicines:

So our organization, there is a high-cost committee, so that reports to the pharmacy and therapeutics committee. They provide some conceptual structure around a high-cost medicines and some clinical governance on when and how they should be used. So we do have some, you don't have to be national. Whether it is national or the expat in terms of the patients, there is no beyond distinction between the two. Some of the organizations do. We don't. (P1)

For non-Qataris, the high-cost medicine prices or copayment can also be financially managed by their insurance and/or other societies in Qatar. Here is what the pharmacist at the public hospital stated about the insurance:

The insurance has not been there, so I would emphasize insurance. The country looked at the insurance before, and they're still working on the insurance now. So once the insurance comes, then probably it should not be a problem with a higher cost, even at this point. It's not a problem at all. But for private sectors, there are many insurance companies which is covering that cost, but in HMC (Hamad Medical Corporation), the price is not a problem. (P2)

Current issues about access to medicines

Transportation from the manufacturing country to Qatar is a concern because sometimes this could delay the medicines. The manager of registration and drug pricing stated this as follows:

We are trying to encourage local manufacturing plants to manufacture this kind of product locally. Because other issue is waiting for the transportation issue, you know, have the medication timely. It takes time. Yeah, it takes time. Sometimes you are not receiving at the time we need. (RDPM1)

Also, the senior nurse manager talked about medication supply issues:

We have good and easy access for the drugs that are available in the country. You know, again, I know that limits are what the prescribers can offer to some patients based on, you know, what is available in-country and this goes down even both to the type of the drugs and the formulation. So I know those are the same challenges, and we don't have a consistent access to drug supply. (SNM1)

Additionally, a physician in the hospital stated the following regarding availability:

One thing I noticed over the last couple of years of working here in Qatar is that range of medicine availability, range of medicine is an issue. Again, there is a limited range of available medicine in some areas, so that is ... and especially the narcotic, analgesic and their prescription of the patient and availability of patient for taking home is an issue. (Phy4)

The pharmacist in acute care highlighted issues including access to medicines without a prescription, repeat supplies of narcotic medicines and holding medicines in stock, as availability is uncertain.

A lot of things are built, or they are made for sale without a prescription, which means that people can access them but we are not sure if they are using them properly. Because you can just buy it without a much control. (P1)

Other access issues are narcotics and psychotropics because of the prescription length. That can cause a bit of a problem because patients have to return to the pharmacies quite often to pick up the medications. Yeah, it's a five day supply. So as per the policy, it is a limited number of days. Also, medications that need more than that you have to return again. So it's quite strict laws on narcotics mainly but also on psychotropics. (P1)

The availability of a national medicines policy and the use of generic medicines were also some of the issues described by an academic pharmacist:

The issues surrounding around access to medicine ... the issue of the national medicine policy, because when there is national medicine policy, national medicine policy was clearly state all that is needed in terms of giving access to the medicine and so on, and when it does not exist, it creates a kind of disparities or differences or inconsistencies in terms of how different organizations operate in terms of giving access to the medicine. (AP2)

They are barriers in terms of access to medicines, and those who will understand when you talk about most of the institution, there is kind of misconception, for example, about the use of generic medicines. So because of these misconceptions, the clinicians don't trust, and the patients also they don't trust if you give them anything. This is a huge expenditure on health and therefore, there are ... there could be also barriers from that perspective. (AP2)

On the other hand, access to medicines without prescription emphasises the pharmacist's role at community pharmacies. This should be to educate and optimise medicines use. The following was stated by the academic pharmacist.

We have too much access actually, and with that in any one of the public can now go to the pharmacy and buy antihypertensive that you know, without any prescription. So we have too much access that has to be restricted honestly on some drugs, yes. (AP3)

The pharmacist is not really offering a good advice to the patient. Since the majority of the medications are available over the counter, pharmacist should have a role in that more in educating the public about the optimal use of medications. (AP3)

Need for further research

The following section elaborates thoughts on areas for future research. For example, a pharmacy manager at the community pharmacy stated that research is needed on leftover medicines at patients' homes:

Yeah, probably, what people do with the incomplete medications or unused medicines. One of my concerns. I would love to have a research done on that so that there is no left-over medicines at home which can harm another person. (PM2)

A registration and drug pricing manager stated that there is a need to develop a comprehensive national medicines policy:

Like further research and to compile these [medicines policy] documents in one document together ... Because most of the practitioners are coming from abroad expect the same thing from the home country but this country is very unique for the medicine access. (RDPM1)

This view was echoed by a hospital pharmacist:

I would be interested to know about over the counter sales and the clinical effectiveness of doing that, so where you are frequently selling products without having much guidance from the physician or the prescriber and then a pharmacist too. What is the impact of that and how does it compare to some of the standards around the world? (P1)

Use of medicines for Qatar

As shown earlier in [table 4](#), four subthemes were observed within this theme. These include 'general description on the use of medicines', 'present issues with regards to use of medicines', 'challenges and opportunities with regards to use of medicines' and 'future research on the topic'.

Use of medicines

There were differences of opinion regarding the use of medicines. An academic pharmacist made an interesting point:

This seems to be a very broad question, and I don't know where to start, in fact. So, the use of medicine from the perspective of utilization, from the perspective of healthcare institutions or from the perspective of regulatory authority or from the consumer perspective; I think if you talk about use of medicine, you should look at it in different perspective. (AP2)

An academic pharmacist described this from a patient's point of view:

If I will say from the patient's perspective, it's how the patient is using the, basically, the medication, so proper or not proper according to the direction or not direction. Is it the right drug dose, not a right dose, for there is good duration or not a good duration? Yes. (AP3)

Present issues related to the use of medicines

The study participants stated concerns about a number of issues related to patients using medicines; these also include prescriber issues and broader medicines policy issues. An academic pharmacist emphasised the need to educate patients regarding the appropriate use of medicines:

Well, I think the biggest thing has to be that the general public has to know more about how they should be using the medicines properly. They get the prescription, they don't get much of the information from doctor, and they go to the pharmacist at the pharmacy, and the pharmacist tells a bit of an information, but still, they don't know much that much, and that leads to a big problem. (AP1)

The registration and drug pricing manager at MoPH described this in the following manner:

We realized that patients are misusing this medication. For this, we added it to one of the controlled drugs, which is done once in a month only in order to avoid this kind of misuse. (RDPM1)

Because medicines are free or subsidised, patients have more medicines, which increases misuse and harmful effects of the medicines. He explained that.

Issue is that the medicines, although is coming from abroad very expensive, and registry is free and being dispensed to patients, some of them are free and some are highly subsidized. This affects the use of medication. (RDPM1)

Challenges and opportunities regarding the use of medicines

The participants suggested that a computerised patient's health record system for all healthcare providers would resolve prescribing and medication management issues. A pharmacist would like to have a national health record database system in place:

A unified health record system, national health record system for the whole country, should be implemented in this country, so that every health care provider knows what medications are being used by each one. (P1)

Healthcare providers face challenges including patient education and awareness. This is the view of a physician working in a private hospital:

Challenges for the physicians are that they face because they have to restrict the excessive medication usage. In this regard, physicians face challenges. So it just needs some sort of education and proper continuous education, public awareness. (Phy1)

A pharmacy manager suggested that there is a need to educate society on the proper use of medicines:

Probably the need to educate more the society about the importance of the right usage of medication and

honest medical fraternity, physicians, pharmacists to ensure that this education reaches the society. Probably there can be outreach methods, joining the universities and the community pharmacies, community medical facilities, where the patient medical personal interaction is more. (PM2)

Future research on the use of medicines

A number of participants suggested more research should be done on various issues. An academic pharmacist stated this in the following manner:

They should do more research on what are the barriers that are preventing the advancement of pharmacy practice in community pharmacies. What is it that causing the barriers, and how those barriers can be overcome, because this is got to be one of the biggest areas where it can be improved in community pharmacy practice. (AP1)

Another hospital pharmacist also stated the need to research areas such as patient counselling and the use of medicines:

I would like to understand better on what the information is given to the patients on the use and how is that information is given in quality of that; so we talked little about the things like labelling and counselling and advice, like how do we capture some data or not to understand how about the work and what can be done differently. (P1)

DISCUSSION

The objectives of the study were to identify priority medicines policy issues for Qatar. The specific objectives were to explore and identify key challenges affecting Qatar in terms of priority medicines policy issues, including medicines use and access, and to explore what the future approach should be in terms of overall health and medicines use in Qatar.

Access to medicines policy

The research also showed that most participants were not aware of Qatar's medicines policy and suggested that a medicines policy may be available from the MoPH. However, the literature shows that Qatar's national medicines policy is neither available nor published. However, there is a National Health Strategy 2018.²² It was observed that Qatar's national medicines policy is not available as one single document, but is an amalgamation of a set of regulations, procedures, rules, strategies, control processes and standard operating procedures regarding the use of and access to medicines.¹¹

Medicines registration in Qatar

The findings showed that some participants could not find a written policy for the registration of medicines. Another issue is that due to the blockade, it took some

pharmaceutical companies at least 9 months to register a medicine. Moreover, even post-Qatar blockade, it may take four to 6 months, although there is fast-track registration for specialised medicines, including blood products and any medicines required urgently. The research also revealed that a pharmaceutical product must be registered in Qatar every time someone decides to bring the product into Qatar, and the detailed registration procedure and requirements are available on Qatar's MoPH website. All pharmaceutical product registration is under the MoPH in Qatar. The registration process includes the registration of a company and the manufacture of pharmaceutical products.²³

Process of high-cost medicines for Qataris and non-Qataris

The research reveals that both Qataris and non-Qataris have access to the healthcare system and medicines. Qatari citizens do not pay for their medicines, while non-Qataris pay only 20% of the medicine's price in the public sector and Qatar's government pays 80% of it. For cancer medicines, non-Qataris pay only 10% of the price of medicine. The non-Qataris pay for medicines from their health insurance coverage or from their own pocket. There is a National Health Insurance Scheme for all Qataris, which pays for all their healthcare services and medicines in the public and private sector. The government of Qatar is planning to offer the National Health Insurance Scheme to non-Qataris too.

Additionally, there are support systems available for non-Qataris to pay for medicines, including expensive medicines; non-profit organisations, for example, the Multiple Sclerosis Society, Red Crescent and other charity organisations support non-Qataris. The medicines pricing method in the public sector is not publicly available, but medicine prices in the public sector are noted to be considerably lower than in the private sector.¹¹

Issues with access to medicines in Qatar

The participants have the opinion that overall, consumers and patients have access to a large number of medicines in Qatar, though there are issues with a few medicines. Specifically, the public sector in Qatar has a satisfactory level of availability of medicines,²⁴ but the issues mentioned included inconsistency of the medicines supply, limited range of some classes of medicines, and the fact that not all registered medicines are available. The research revealed that many companies are not registering their medicines due to the small market size. However, the MoPH is working to formalise the National Formulary. Additionally, the participants revealed during interviews that labourers have a different level of access to medicines in the private sector because of the different copayment method for health insurance plans.

Challenges and opportunities for the use of medicines

The results suggest that there are policies and guidance with regards to the use of medicines in Qatar public sector institutions, including Hammad Medical Corporation,

Sidra Medicine, and others; however, not all private institutions have clinical guidelines. Also, there is no national health record database for all patients' health information which can be accessed by healthcare providers, public and private institutions, hospitals, clinics and pharmacies. A national medical database would help to improve the use of medicines. It would also help to improve and build prescribing policies for medicines. Awaisu *et al* concluded that a nationally organised project should be started to develop a generic medicines policy, guidelines and a comprehensive national medicines policy in Qatar.²⁵ Regarding generic medicines use and prescribing, a study by Awaisu *et al* found that 89% of Qatar's pharmacists agreed that bioequivalence data should be available before marketing a generic medicine. Most also agreed that community pharmacists should be authorised to dispense generic substitution of medicines in Qatar.²⁵

Community pharmacy in Qatar

The community pharmacy services provided are mostly 'traditional' with no extended pharmacist roles or cognitive services in Qatar. Community pharmacy has not developed the essential steps to be recognised as an essential source for public health and primary healthcare.⁶ Babiker *et al* also concluded that pharmacists need more education and training for medicine use reviews in Qatar.²⁶ Babar explains that to improve community pharmacy, training in clinical skills and patient-oriented pharmacy services is needed.²⁷ Private community pharmacies in Qatar also need to be involved in the government health coverage system to improve the affordability and access of medicines.²⁷ In developed countries, most pharmacists are remunerated for pharmacy services they provide; however, this is not the case in many countries including Qatar.²⁸ More research is needed in Qatar to identify challenges in developing community pharmacy and how to overcome those difficulties, as well as how to improve communication with patients.

A conceptual model has been built to identify and synthesise priority medicines issues arising from this work (figure 1). 'Healthcare practitioners' and 'academics' are feeding into this model and their thoughts, ideas and knowledge are shaping the model. As shown below, the outer circle of the model represent 'broader healthcare' and 'public policy'. The main issues arising from this model include (a) extended community pharmacy services; (b) antibiotics use, medicines compliance and counselling; (c) access to high-cost medicines for Qataris and non-Qataris; (d) issues related to medicines registration, import and availability of medicines; (e) forming a comprehensive national medicines policy for Qatar and (f) centralised health data for patients, pharmacists and healthcare professionals.

CONCLUSION

The research concludes that though there is no comprehensive national medicines policy in Qatar, there are a

number of rules, regulations, policies and procedures in place. There are challenges in following and understanding these policies, as they are not available as a single document. The access issues identified include availability of medicines, inconsistency of medicines supply, limited range of some classes of medicines, and the fact that not all registered medicines are available. There are misconceptions about the use of generic medicines among clinicians and the public. There are instances when clinicians are reluctant to prescribe and patients do not trust generic medicines, resulting in increased cost for patients. The challenges with regard to medicines use include prescribing of antibiotics, pharmacovigilance system implementation, and generic medicines availability and prescribing. The community pharmacy services provided are mostly 'traditional', with no extended pharmacist roles or cognitive services. There is a need to extend the role of the pharmacist and this can be done by providing financial incentives, education and training for pharmacists, as well as improvement in policies, procedures and regulations. This also includes authorisation to dispense generic substitution of medicines. There is also a need to have a national health record database for all patients' health information, which can be linked to healthcare providers, public and private institutions, hospitals, clinics and pharmacies.

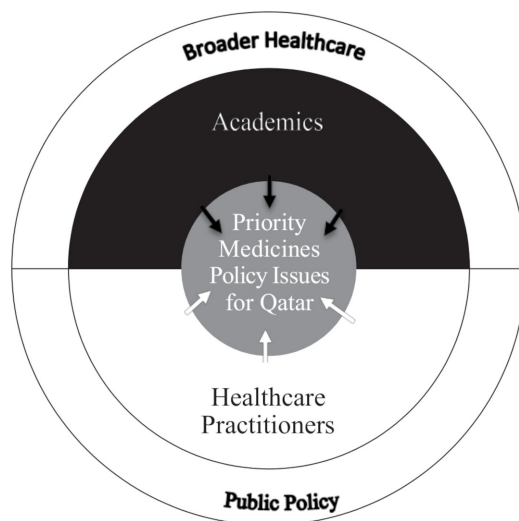
Future research areas to focus on include quality of clinical consultations, pharmacists providing counselling and advice to patients, and reassessing clinical and therapeutic guidelines. Other research areas could be outcome research, use of medicines among Qataris and non-Qataris, and availability of over-the-counter medicines at community pharmacies in Qatar.

Implications for policy and practice

This study has achieved its objective by identifying vital issues related to medicines policy, access and use of medicines, future overall health and use of medicines. The study has identified empirical data points, which have formed and fed into a conceptual model. Vital research points are coming from medicines use and access, if implemented these can improve patient health outcomes and can improve the use of medicines in the country.

Limitations of the study

For many of the participants, English was not their first language. In addition, of the 55 stakeholders who were contacted and invited, only 21 participated in the interviews. This may have limited the range of stakeholders by not including patient support groups or the pharmaceutical manufacturing sector, who did not participate in this study. However, despite these limitations, the study provides enough data to portray an overall picture in terms of medicines use and access. These data add to our understanding of the medicines policy issues, and future health challenges and opportunities for Qatar.



Issues:

- i. Extended community pharmacy services
- ii. Antibiotic use, medicines compliance and counselling
- iii. Access to high-cost medicines for Qataris and non-Qataris
- iv. Medicines registration, import and availability of medicines
- v. Forming a comprehensive national medicines policy for Qatar
- vi. Centralized health data for patients, pharmacists and healthcare professionals

Figure 1 A conceptual model deriving priority medicines issues for Qatar.

Recommendations

- ▶ The findings suggest that in the last 20 years, Qatar has moved towards advancing healthcare; however, there are gaps and opportunities. These are quite pertinent with regards to improving medicine use, access and developing a medicines policy in Qatar.
- ▶ A national medicines policy should be developed through a consultative broad-based process in which prescribers, physicians, pharmacists and healthcare professionals be given a chance to contribute. A framework should also be developed regarding the implementation, monitoring and evaluation of this medicines policy.
- ▶ Based on these study findings, strategies need to be developed to resolved access to medicines issues, the priority being medicines registration, import and so on.
- ▶ With the rise of chronic diseases and a growing population, there is also a need to improve adherence to

medicines among patients. The strategies need to be developed on patient counselling. There is also a need to improve professional training and continuing education for pharmacists to advance pharmacy practice. This would help to improve medicine use among patients and consumers.

Acknowledgements We are thankful to Dr Faraz Masud, Attending Physician at Sidra Medicines, Doha, Qatar, and Dr Syed Shahzad Hassan, Senior Research Fellow at the University of Huddersfield, UK.

Contributors NZ and ZUDB conceptualised and designed the study. NZ and ZUDB contribution to the analysis and interpretation of the data and writing the study for submission. FA substantial contribution to the acquisition of the data for the study. All authors interpreted the results, contributed to writing the article and approved the final version for submission. Nadeem Zia is the guarantor of this study.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Not applicable.

Ethics approval This study was approved by the University of Huddersfield Ethics Research Committee Reference Number SAS-SREIC 14.5.19-2. Ethics approval was also obtained from Sidra Medicine, Qatar, Reference Number IRB-A-SIDRA 2019-0029, and ABHATH Research Center of Hamad Medical Corporation, Qatar.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement All data relevant to the study are included in the article or uploaded as supplementary information. We provide the de-identified participant data.

Supplemental material This content has been supplied by the author(s). It has not been vetted by BMJ Publishing Group Limited (BMJ) and may not have been peer-reviewed. Any opinions or recommendations discussed are solely those of the author(s) and are not endorsed by BMJ. BMJ disclaims all liability and responsibility arising from any reliance placed on the content. Where the content includes any translated material, BMJ does not warrant the accuracy and reliability of the translations (including but not limited to local regulations, clinical guidelines, terminology, drug names and drug dosages), and is not responsible for any error and/or omissions arising from translation and adaptation or otherwise.

Open access This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: <http://creativecommons.org/licenses/by-nc/4.0/>.

ORCID iD

Nadeem Zia <http://orcid.org/0000-0003-4754-9554>

REFERENCES

- 1 Planning and Statistics Authority. *Population and social statistics*. Qatar: Planning and Statistics Authority, 2019.
- 2 Al Hail M, Elkassem W, Hamad A, *et al*. Overview of pharmacovigilance practices at the largest academic healthcare system in the state of Qatar. *Int J Clin Pharm* 2018;40:769–74.
- 3 Ministry of Public Health (MoPH), State of Qatar. National Health Strategy 2018 - 2022. Available: <https://www.moph.gov.qa/Style%20Library/MOPH/Files/strategies/National%20Health%20Strategy%202018%20-%202022/NHS%20EN.pdf> [Accessed 15 May 2020].
- 4 FitchSolutions. Qatar pharmaceuticals & healthcare report - Q3; 2020.
- 5 Qatar Pharmaceuticals. Healthcare Report - Q3 2020. London Fitch Solutions Group Limited; 2020: 1–74.
- 6 Wilbur K, El Hajj MS, Kheir N. Pharmacy Practice in the Gulf States. In: Babar Z-U-D, ed. *Encyclopedia of pharmacy practice and clinical pharmacy*. Oxford: Elsevier, 2019: 526–34.
- 7 PSA. Births & Deaths in the State of Qatar. Qatar Planning and Statistics Authority; 2018: 1–37.
- 8 World Health Organization. How to develop and implement a national drug policy 2003.
- 9 Awaisu A, Mohamed IMI, Kheir N, *et al*. Promoting quality use of generic medicines: knowledge, attitudes and practices of community pharmacists in a middle Eastern country. *Value Health* 2014;17:A412–A12.
- 10 MlbM I. Generic medicines policy in Qatar. *Generics and Biosimilars Initiative Journal* 2015;4:8–.
- 11 Abdel Rida N, Mohamed Ibrahim MI, Babar Zaheer-Ud-Din. Pharmaceutical pricing policies in Qatar and Lebanon: narrative review and document analysis. *Journal of Pharmaceutical Health Services Research* 2019;10:277–87.
- 12 FitchSolutions. Qatar Pharmaceuticals & Healthcare Report - Q1. London Fitch Solutions Group Limited; 2020: 1–71.
- 13 WHO. *How to develop and implement a national drug policy*. 2nd edn. Geneva: World Health Organization, 2001: 1–24.
- 14 Aljajjousi GF, Abdel-Rahman ME, El-Heneidy A, *et al*. Public practices on antibiotic use: a cross-sectional study among Qatar university students and their family members. *PLoS One* 2019;14:e0225499.
- 15 Abdulrhim SH, Saleh RA, Mohamed Hussain MA, *et al*. Impact of a collaborative pharmaceutical care service among patients with diabetes in an ambulatory care setting in Qatar: a multiple time series study. *Value Health Reg Issues* 2019;19:45–50.
- 16 Ibrahim MIM, Z-u-D B, Wertheimer A. *Social and administrative aspects of pharmacy in low- and middle-income countries: present challenges and future solutions*. 388. Saint Louis, US: Elsevier Science & Technology, 2017.
- 17 Alhajri M. WHO model list of essential medicines and countries health response during embargo 2018.
- 18 Babar Z-U-D, Francis S. Identifying priority medicines policy issues for New Zealand: a general inductive study. *BMJ Open* 2014;4:e004415.
- 19 Herrera H. *Qualitative methods in pharmacy practice research*. Elsevier Inc, 2019: 29–38.
- 20 Austin Z, Sutton J. Qualitative research: getting started. *Can J Hosp Pharm* 2014;67:436–40.
- 21 Tauqeer F, Saleem Z, Babar Z-U-D. Meta-Synthesis of Qualitative Research in Pharmacy Practice. In: Babar Z-U-D, ed. *Encyclopedia of pharmacy practice and clinical pharmacy*. Oxford: Elsevier, 2019: 39–45.
- 22 Ministry of Public Health, State of Qatar. National health strategy 2018-2022; 2018.
- 23 Ministry of Public Health. Guidance for eCTD submission. Qatar Pharmacy & Drug Control Department, Ministry of Public Health; 2019: 1–18.
- 24 Rida NA, Mohamed Ibrahim MI, Babar ZUD. Relationship between pharmaceutical pricing strategies with price, availability, and affordability of cardiovascular disease medicines: surveys in Qatar and Lebanon. *BMC Health Services Research* 2019;19:1–14.
- 25 Awaisu A, Kheir N, Ibrahim MIM, *et al*. Knowledge, attitudes, and practices of community pharmacists on generic medicines in Qatar. *Int J Clin Pharm* 2014;36:394–404.
- 26 Babiker AH, Carson L, Awaisu A. Medication use review in Qatar: are community pharmacists prepared for the extended professional role? *Int J Clin Pharm* 2014;36:1241–50.
- 27 Babar Z-U-D. Ten recommendations to improve pharmacy practice in low and middle-income countries (LMICs). *J Pharm Policy Pract* 2021;14:6.
- 28 Babar Z-U-D, Scahill SL. Medicines Access, Use and Pharmaceutical Health System Issues: Reflections, Thoughts and Points to Consider. In: Babar Z-U-D, ed. *Global Pharmaceutical policy*. Springer Nature, 2020: 345–65.