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Global Vaccination

'Image by Frauke Riether from Pixabay @ https://pixabay.com/photos/globe-syringe-vaccination-vaccinate-6002422/

Contents

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IN THIS ISSUE

This issue of the journal commences with an editorial that provides some discussion about the current approaches to Covid and the tensions that exists in that context.

Gender equity in Australian health Leadership by Cohn, Hempenstall and nine other authors describes research to ascertain the gender distribution across public health boards in Australia. The research suggests further efforts are required to drive gender equity in senior leadership roles in public health boards. Our next article by Avery, Cripps and Rogers, also describes research in Australia that assesses quality of healthcare delivery when making choices, in a national survey on health consumers' decisioning making practices. The authors suggest that providers need to develop clearer communications around their technical, procedural and conduct principles so that consumers can better evaluate and make decisions about healthcare needs.

Short and colleagues provide a case for a reciprocal healthcare agreement between Australia and South Korea. While the authors see potential for an agreement, they conclude that such an initiative at the current time is unlikely. Merone and Whitehead, from Australia provides a commentary on Covid 19 and working within health systems suggesting the future is flexible and explores the context of working from home.

Our next article, a review article by Lau and Fong describes a public private partnership program between health professionals in the public and private sectors in Hong Kong. The authors are suggesting program reform to provide better coordination between these sectors is the most essential factor which can lead to success. Our second article from Hong Kong, by Yuk-Chiu Yip, Wai-King Tsui and Ka-Huen Yip, is a viewpoint article on Hong Kong's growing need for palliative care services and the role of the nursing profession and they make five recommendations for nurses to take a greater leadership role in future palliative care delivery frameworks.

Huy Van Nguyen and thirteen colleagues from Vietnam, Japan, Australia, and Korea provide a commentary article on Vietnams health care system decentralisation by asking How well did it respond to the global health crisis in the context of the Covid-19 pandemic? They conclude that the decentralisation has delivered more quality health facilities, enabling transformation from more traditional models of care, and better working partnerships.

Singh, Garg, Laha, and O'Neill from India and the United Kingdom provide a research article on public financed health insurance schemes and horizontal inequity in inpatient service use in India. They describe the impact of a publicly funded health insurance scheme (PFHI) and they suggest that there is a need for better strategies for identification of beneficiaries and ensuring that they have benefits to intended welfare effects. Also from India, Kadari, Padmaja and Rajak present a research article on the distress and quality of life among type 11 diabetics patients and the role of physical activity. This study shows the importance of physical activity among people with type II diabetes and proves that physical exercise and psychological relaxation could improve patients' QoL

Mohammad Meskarpour-Amiri, our next author provides a point of view on the achievements and challenges of Iran health system after the Islamic revolution in describing structural reforms at the second step. The article suggests a fundamental reform on of its structure and process is required. A second article from Iran is provided by Khalesi, Nodehi, Nasiripour and Dehkordi provides a research article on a strategic analysis of community participation in primary healthcare in Iran. The study was designed with the aim of strategic analysis of the internal and external environment provides a presentation of the promotion strategies to attract community participation. The study concludes that there are both internal and external threats to community participation in the field of PHC.

Our final research article by Acharya, Pokharel, Pahari, Moon and Shin, explored the utilization of healthcare services and patterns of healthcare expenditure in the rural households of Nepal. The study was conducted among 341 rural households of Tanahun District, Nepal.

This issue concludes with our regular ACHSM library bulletin.

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EDITORIAL

COVID-19: A STRIFE OF INTERESTS FOR US ALL AND WHAT PROBLEM ARE WE ATTEMPTING TO SOLVE?

DS Briggs AM
Editor in Chief

At the time of writing, nation states globally are beginning the vaccination process in response to Covid-19. There is great expectation that it will deliver effective protection to most populations. The logistic of the production and delivery of the vaccines, and use are immense and, we are fortunate, in the Australian context that the extent of the virus spread, and impact has been relatively limited and mostly contained. While everyone is wanting rapid progress, our context does allow us the opportunity to 'hasten slowly' and have a positive outcome.

This development will require the continuation of the considered and reassuring engagement of the Australian Prime Minister, his health minister, The chief health adviser, and departmental staff directly with the Australian community. This has been a feature of our national response so far. This has been a unique and innovative approach to the political governance process seen in Australia. That same approach has not been seen to be as effective across most state and territory jurisdictions, despite the innovative use of a national cabinet that is inclusive of their ability to participate in sensible decision making. In fact, it is emphasised that:

> systems for health require substantive community engagement at every step of pandemic preparedness and response, from early detection and alarm, to the dissemination of reliable information throughout a community… [5 p.23]

The state of NSW has mostly been the exception to the disarray at that level and despite some early backsteps has delivered a strong, well-resourced public health response based on testing tracing and isolating in limited fashion, with mostly limited geographic lockdown when required. That State has also shouldered a major responsibility for processing international returning travellers many of whom were residents of the others states.

States and territories in differing contexts may require different approaches but some of those have also appeared to be parochial and populist. There has been criticism and blame of others and even 'boasting' of individual state performances. The prime example in my opinion was to claim that hospitals in one state were for residents of that state only and not for others. This is a dishonest claim when hospitals, across Australia are jointly funded by the Commonwealth and States and their role, providing universal access is enshrined in healthcare agreements. In addition, Australia has signed agreements with other nation states that allows access to health systems and vice versa when our citizens are travelling in and visiting our respective countries.

That claim also ignores the data and evidence that a ten-year analysis of linked hospital data demonstrates on average that between 3% and 5% of patients within one state had hospital records in another state and that between 4% and 7% of hospital records occurring in a state can be attributed to an individual who has a record in another state. [1] This claim also ignores the extant border flows for healthcare, employment and commerce and the internal flow of patients within states and regions. While individuals and families were denied border access and denied access to care, families, births and weddings, the masses were entertained by border crossing professional sports team, complete with crowds in attendance and at least one professional sport group were deemed 'essential workers'!

While we as individuals in Australia wonder about why the debate at state/territory level with distinctions based on historical lines on a map is to say the least discordant, McKee and colleagues [2] in a European context argues that populist leaders have 'undermined the pandemic responses'. [2, p.1] They instance those elected to power on populist agendas as in the United States, Brazil, Russia, India and the United Kingdom, have tended to blame "others" While China denies evidence 'and shows contempt for organisations that generate it.' [2, p.1] These authors ask that if politicians 'wilfully ignore scientific evidence that goes against their political strategy or ideology is that lawful?'. [2 p.1] Kamran Abbasi, the executive editor of the BMJ acknowledges some two million deaths globally, takes the matter further suggesting criminality and culpability for those who have failed in their respective pandemic responses. He sees the accountability in international contexts with 'hollow responses from national and international leaders'. He further questions 'where do citizens turn for accountability?' [3, p1,2]

In defence of politicians, they could equally instance conflicting scientific advice and the good contribution of scientists in the media, properly evidences differing scientific views. They might also argue that their charter extends beyond healthcare to the wider economic wellbeing of the population and the economy.

Bollyky and Kickbusch suggests the context 'requires politicians to set aside ideology and act on a rapidly emerging and uncertain body of public-health evidence'. The context is less to do with coronavirus but what it has 'revealed about the political systems that have responded to it'. [4, p.2] While finding some democracies to be failing in their response to the pandemic, they describe the many beneficial contributions between democracies and improved healthcare outcomes. They cite lower death rates in infants and children younger than 5 years, and with longer life expectancy at birth, lower mortality from causes such as cardiovascular disease and reduced transport injuries. They emphasise that these successes in democracies depend on 'robust health infrastructure.' [4, p.1]

The Independent Panel for Pandemic Preparedness [5] found that 'the world was not prepared for the pandemic, and must do better' and goes on to suggest that:

> The public health measures which would curb the pandemic need to be applied comprehensively, the pandemic response has deepened inequalities. The global pandemic alert system is not fit for purpose and there has been a failure to take seriously the already known existential risks posed by pandemic threat. The WHO has been underpowered to do the job expected of it and the Panel believes that the COVID-19 pandemic must be a catalyst for fundamental and systemic change in preparedness for future such events, from the local community right through to the highest international levels.[5]

The Panel observed that:

> choices made at both national and sub-national levels of what policies and measures to implement, by whom, and when, have shaped the severity of the epidemic in each country… The public health measures which would curb the pandemic need to be applied comprehensively. [5, p.20,)

An editorial built around the precepts of structural interest theory [6, 7] would be remiss if it did not also recognise the role of communities and the media that are also part of the 'strife of interests' [8] which these days has emerged as a view of healthcare as 'complex adaptive systems'. [9]

As for the citizens, McKee and colleagues ask If citizens feel disempowered, how might they hold negligent politicians to account? [2 p.16] The editor is an adherent to the adage that 'the electorate usually gets it right'! Yet in a recent Australian state election the populist parochial approach won the election! Apparently that population felt that they were being well protected from Covid -19 and presumably from the rest of us. This is consistent with findings in other countries where voters 'did not blame their governments'. [4] This then goes to the psyche of communities and populations in democracies where we assume, they are resilient, independently minded and who value their freedoms and liberties.

It is said that 'populism and nationalism feed off the threat of the virus and question the reliability of science and information and is an entry point for autocratic governments to change laws and introduce restrictions'. [4, p.1] There is little evidence that supports a single characteristic of government or society ensuring better performance in a pandemic. [4] These same authors cite the German Chancellor Angela Merkel in a 2020 television address who emphasised that she spoke as the head of a democracy in which citizens 'do not live by coercion, but by shared knowledge and participation'. [4, p.1. 9]

Merkel goes on to suggest that the German response will depend on collective actions and solidarity. She further emphasises her personal history of living more than half her life in the former East Germany, behind the 'Berlin Wall' where her movements were constrained by the state. Merkel emphasises that the 'freedom to travel was a hard fought for right and such restrictions can only be justified if they are an absolute necessity'… they should never be passed lightly and only ever temporarily…but are indispensable now to save lives.' [4]

Another media perspective [10] suggests the hesitancy of populations reflects an increased aversion to risk in both social behaviour and in the words, we use to the extent that it now reflects a demand to eliminate uncertainty. This becomes a task not just for government but for 'experts' and institutional regulation in public health that has had profound implications for social attitudes. Ergas [10] concludes that 'authority once gained is not readily relinquished.'

A former Australian Foreign Minister, according to Albrechtsen [11], has a stern warning for the 'lockdowners'. Working in both the United Kingdom and Australia he has an appreciation of differing national approaches and he considers that we do not have a sensible exit plan. He concedes that Australia has done very well but warns that an 'elimination strategy will never work'. Albrechtsen [11] further quotes him as saying.

> 'he says, firmly'. "The public need to reflect on how we manage the risk of these kinds of pandemics. You have to keep - society going. You have to keep schools open. You can't keep closing things down because there is a case here and a case there."

In the article he describes his reception at Tullamarine airport on arrival as being asked by the police for them to see his 'papers'. He laments that this is Australia and people think this increased security 'is wonderful.' His 'point is that it is not sustainable. We've got to start thinking about managing the risk.' He adds 'the rise in mental health problems, the destruction of social contact," he says. 'In Australia? No debate. What explains this? Fear? complacency? Poor leadership?' [11]

Some emphasise the importance of the link between democracy and health is greater freedom of expression but at the same time cite a view that 'social media disinformation campaigns exploit the openness of democracies, erode their health benefits…' [4,p.1,12] Put more simply a post from Facebook delivered at a time when that media has wilfully determined to exclude access to news to Australians on Facebook, nonetheless a worthy quote comes from Blanca Estela Castro 'the truth is still the truth, even if no one believes it. A lie is still a lie, even if everyone believes it.' [13]

The Covid-19 pandemic presents an active case study for those interested in observing or studying structural interests in play and is an excellent opportunity for students and academics to research and inform curriculum and training of health professionals. It also is an opportunity for all of us to exercise some reflection on how we best engage the political and policy governance of health systems to invest in a civil society that values good health and personal engagement in getting it right. We need to encourage less fear 'strengthen social solidarity and address societal inequalities while strengthening legitimacy of trust and values generally'.[4]

In conclusion I suggest that the important questions to ask in these contexts is 'what problem are we attempting to solve and whose interests are being served?' [14]

DS Briggs AM

Editor in Chief

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RESEARCH ARTICLE

GENDER EQUITY IN AUSTRALIAN HEALTH LEADERSHIP

Amanda Cohn[1], *Mya Cubitt*[2], *Anita Goh*[3], *Allison Hempenstall*[4], *Rebekah Hoffman*[5], *Christine Lai*[6], *Jane Munro*[7], *Carly Silvester*[8], *Clare Skinner*[9], *Deborah Verran*[10], *Jordan Walter*[11]

1. Gateway Health VIC, Australia; University of New South Wales, NSW, Australia
2. The Royal Melbourne Hospital, VIC, Australia; The University of Melbourne, VIC, Australia
3. National Ageing Research Institute, VIC, Australia; The University of Melbourne, VIC, Australia
4. James Cook University, Queensland, Australia; Australian Institute of Tropical Health and Medicine, QLD, Australia
5. University of Wollongong, NSW, Australia
6. The Queen Elizabeth Hospital, SA, Australia
7. The Royal Melbourne Hospital, VIC, Australia; The University of Melbourne, VIC, Australia
8. Noosa Hospital, QLD, Australia; University of Queensland, QLD, Australia
9. Hornsby Ku-ring-gai Hospital, NSW, Australia
10. Ramsay HealthCare, NSW, Australia
11. Barwon Health, VIC, Australia

Correspondence: ahempenstall7@gmail.com

ABSTRACT

OBJECTIVE

To ascertain the gender distribution across public health boards in Australia.

DESIGN & SETTING

Analysis of data and information obtained from a cross sectional audit of online publicly listed health boards within Australia from October to December 2019.

RESULTS

The majority of public health boards have close to equal representation of women as board members however women are underrepresented in Chair roles. Victoria has significantly more women on health boards, whereas New South Wales has significantly less women on health boards and in Chair positions.

CONCLUSIONS

Further efforts are required to drive gender equity in senior leadership roles in public health boards across Australia.

KEYWORDS

Gender equity, health leadership

INTRODUCTION

Gender parity in health leadership positions remains a challenge. Women comprise only 12.5% of hospital chief executive officers, 28% of medical school deans and 29% of medical college board members. [1] These disparities are even greater for Aboriginal and Torres Strait Islander women, women of colour, women from other minority groups and women with disabilities. [2] It is well established that gender equity in health leadership is positively correlated with improved organisational and societal outcomes. [3,4] Furthermore, evidence is emerging that the disparity in leadership negatively affects health outcomes for women and children worldwide.[5]

Barriers to gender equity in health leadership include women's perceived capacity, capability and credibility. [1,6] Women frequently report workplace gender, pregnancy, and carer-related discrimination. [6] The often disproportionate burden of family responsibilities that women bear can also impede career advancement. [6] Women also often perceive themselves to be less capable candidates for leadership positions and are uncomfortable with self-promotion.[7] A series of hypothetical scenarios found that women candidates are more likely to be appointed to a leadership position when the position was considered risky and there is an increased risk of failure. [8] Systemic gender biases ingrained in organisational cultures promote masculine leadership values, alienating women from these positions.[1] Researchers at Yale University used different genders on two identical job applications to explore bias in the job market. They found that regardless of selectors gender, most people evaluated 'John' as significantly more competent and more hireable. 'Jennifer' was offered a 12% lower salary and less mentorship.[9]

In order to increase the representation of women in senior healthcare leadership, effective strategies to promote gender equity in health leadership can include mentorship and sponsorship, leadership education, and establishing targets or quotas for women in leadership positions.[6] A minimum threshold for women positions is necessary to reduce the negative impacts of being underrepresented. [10] In 2019, the Australian Medical Association of Victoria changed its constitution to include a 40% gender quota for its board.[11] Male allies are also vital in supporting gender-inclusive workplaces.[12,13] The aim of this audit was to review the gender distribution across public health boards in Australia in order to assess whether gender parity is close to being achieved.

METHODS

Australian public hospital and health service websites were accessed during the period Monday 21st October to Wednesday 3rd December 2019. The gender of each board member (including the Chair) was collated. As no specific information was available about which gender each member chooses to identify with, gender status was assumed on the basis of photographic appearance, name and pronoun/title used in biographic information available online. No board spills or reappointments took place during the period of the study. No information was available online regarding hospital or health service boards in Tasmania and the Australian Capital Territory, so senior health managers in both of these jurisdictions were contacted by telephone. They reported that no boards, or equivalent entities, were currently in operation. These jurisdictions were therefore excluded from analysis. Descriptive statistics (calculated in Microsoft Excel) were used to report gender proportions for board members and board Chairs. Proportions are compared to statistically expected proportions of 50% (for gender parity) using Pearson's chi square or Fisher's exact test where expected cell counts were below five. Ethics approval was not required for this study.

RESULTS

The numbers of board members and board Chairs by gender and by state are shown in Table One. Nationally, 53% of board members were women and this did not differ significantly from the 50% expected (p=0.06). The proportion of women board members ranged from 38% (p=0.03) in New South Wales (NSW) to 59% (p=0.27) in the Northern Territory (NT). Victoria was the only jurisdiction where women made up the majority of board members with statistical significance (55%, p=0.04). Nationally, 45% of board Chairs were women and this did not differ significantly from the 50% expected by chance (p=0.19). The proportion of women board Chairs ranged from 13% (p=0.04) in NSW to 67% (p=0.83) in the NT. NSW was the only jurisdiction where the representation of women was significantly less for both board members (38%; p=0.03) and board Chair roles (13%; p=0.04).

TABLE 1: BOARD MEMBERS AND BOARD CHAIRS BY GENDER AND BY STATE ACROSS AUSTRALIA IN 2019. P VALUE CALCULATED FROM CHI SQUARE EXCEPT WHERE NOTED. *FISHER'S EXACT TEST DUE TO LOW EXPECTED CELL COUNTS

STATE	NUMBER OF WOMEN BOARD MEMBERS	NUMBER OF MEN BOARD MEMBERS	WOMEN %	P VALUE	NUMBER OF WOMEN BOARD CHAIRS	NUMBER OF MEN BOARD CHAIRS	WOMEN %	P VALUE
NEW SOUTH WALES	63	102	38%	0.03	2	13	13%	0.04
NORTHERN TERRITORY	41	28	59%	0.27	2	1	67%	0.83*
QUEENSLAND	74	66	53%	0.63	5	11	31%	0.29
SOUTH AUSTRALIA	37	32	54%	0.67	3	7	30%	0.39*
VICTORIA	403	324	55%	0.04	45	36	56%	0.48
WESTERN AUSTRALIA	27	21	56%	0.61	1	4	20%	0.36*
TOTAL	**645**	**573**	**53%**	**0.06**	**58**	**72**	**45%**	**0.19**

DISCUSSION

This audit reports on the current status of gender representation in Australian public hospital and health service leadership, by describing the gender breakdown of the boards from October to December 2019. Our analysis revealed an equal representation nationally of women board members (53%) and Chairs (45%) with some variation by State. These overall results suggest that the Australian healthcare sector is performing well in gender representation on boards. These findings may be partly mediated by the gender differences found in medical and nursing leadership streams, therefore influencing the overall board compositions. Although no health boards included in this study are under federal jurisdiction, the Australian Government is committed to achieving its gender diversity target of women and men each holding at least 40% of Government board positions and women holding overall 50% of Government board positions.[14]

However, regarding the Chair positions, NSW, Western Australia (WA), South Australia (SA) and Queensland (QLD) all have less women than men (13%, 20%, 30% and 31% respectively), with this difference being statistically significant for NSW. Despite the State Governments' commitment to increase representation of women in senior leadership roles in these jurisdictions, gender inequity in health leadership persists. [15-18] In NSW, the significant difference in women in both board (38%) and Chair roles is consistent with previously documented NSW Government board and committee representation, with women holding only 41.8% of these positions.[19] If NSW is to reach their target of 50% of women in senior leadership positions by 2025, urgent change is required.

Barriers contributing to this gender inequity may include entrenched and stereotypical attitudes to women, conscious and unconscious bias that limit women's career progression and organisational systems and policies (formal and cultural) that systemically disadvantage women.[20] We encourage health boards in these States to revisit their policies and practices around board membership, ensuring that there is a strategic focus on achieving gender equity. Although NSW, WA, SA and QLD State Governments have established leadership programs to foster leadership skills and improve diversity and representation of women, this has not translated into gender parity in health boards and should be reviewed.

Victoria was the only state where women held significantly more than 50% of board positions (55% of board members and 56% of board Chairs). This year Victoria enacted the Gender Equality Act 2020 to improve workplace gender equality across the public sector.[21] Further, Victorian government policy mandates that no less than 50% of all new appointments to boards and Chairs be women.[22] This is a successful example of mandated quotas driving change and is likely contributing to our results found across Victorian health boards.

This study had several limitations. Importantly, gender was investigated in this study based on photographic appearance, name, and pronoun/title used in the biographic information available online, which may have resulted in some inaccuracies and false assumptions and (inadvertent) exclusion of people with non-binary genders. Concerns were raised about the maintenance of accurate websites for individual organisations; a central transparent government register would assist. There was no available data for Tasmania and the Australian Capital Territory. Furthermore, this study did not address other aspects of diversity including but not limited to one's culture, race, religion, age, sexual orientation or ability, all of which are vital in health leadership. Previous studies have shown that doctors' involvement in hospital governance is associated with better quality management systems and strategic decision making.[23] The authors noted a potential gender imbalance in the occupations of board members, whereby more men board members were doctors whilst women board members were nurses; however this data was not included in this audit and further review of their contribution to health boards would be of value.[24]

The primary role of a health board is to provide good governance, leadership, and overall strategy. The benefits of gender diversity in leadership are well established. [1,6] Demographic diversity, as measured by a matrix of culture, nationality, gender and experience of its directors on boards is associated with improvement on performance in decision making and financial outcomes.[14] Diversity enhances problem solving, increases creativity and raises the level of critical analysis in work groups.[21]

CONCLUSIONS

Achieving gender balance on boards has been widely recognised as an imperative in the commercial sector[24]but less so in healthcare despite the knowledge that having women in healthcare leadership roles advances healthcare quality, system performance and outcomes.1 In addition to gender parity on boards, it is essential to ensure representation by those identifying as women in senior leadership roles such as Chair, not only to reduce the gender pay gap but to improve performance across their organisations.[25] Although from this analysis, gender parity has almost been achieved in health leadership boards across Australia, women continue to be under-represented in these senior leadership roles. It is recommended that those States with substantially less Chairs that identify as women employ targeted guidelines, policies and training to encourage, mentor and inspire more diverse leadership in healthcare.

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RESEARCH ARTICLE

ASSESSING QUALITY OF HEALTHCARE DELIVERY WHEN MAKING CHOICES: NATIONAL SURVEY ON HEALTH CONSUMERS' DECISION MAKING PRACTICES

Mark Avery[1], *Allan Cripps*[1], *Gary D. Rogers*[1,2]

1. School of Medicine, Griffith University, Queensland, Australia
2. School of Medicine, Deakin University, Victoria, Australia

Correspondence: mark.avery@griffith.edu.au

ABSTRACT

OBJECTIVE

Choices and quality decisions made by consumers in relation to their healthcare have been associated with personal experience of those services, interpersonal engagement and reliance on third-party information, as well as the subsequent satisfaction with the service. The purpose of this research was to understand current information sources, determinants of quality discernment and decision-making factors by consumers in the Australian community in relation to healthcare.

METHOD

Conventional content analysis research was undertaken in the form of a national telephone survey of 200 consumers. Open-ended questions were used to elicit information from the general community.

RESULTS

Reputation and other key interpersonal and structural elements are utilised in determining quality of healthcare services as well as in deployment as key factors in decision-making regarding use of healthcare services. While most respondents valued and used key information about provider relationships, outcomes performance and performance rankings, up to 20% of respondents did not know or could not identify ways in which they would assess and evaluate the quality of healthcare services.

CONCLUSION

This research identifies that consumers use a range of information and advice relating to experience, interpersonal engagement and information from third-party sources. If healthcare providers develop clearer communications around their technical, procedural and conduct principles, consumers will be in a better position to evaluate reputation and make decisions about their healthcare needs and the health system.

KEYWORDS

consumers; consumer engagement; quality; safety; reputation; information needs; sense making.

INTRODUCTION

Australia is recognised for, and prides itself on, delivering high quality care, however, when asked, the Australian community has little guidance on how to assess quality when making healthcare choices. This research provides insight to the way Australian consumers gather and use information about health service quality and safety and what they want in the future.

Delivering effective quality care is a fundamental goal in providing healthcare services. Quality is a relatively abstract term and can be difficult to define. [1-3] Key considerations of the concept of quality must include how customers or consumers see value and how they express their attitude towards individuals and organisations offering goods and services.

Consumer sovereignty in the health sector is a particularly complex construct [4] in reviewing how consumers will make decisions about care and services for themselves and for the family unit. These decisions involve how to deal with consuming limited resources and how selection or purchasing decisions are made. [5]

Information asymmetry (an imbalance in information) is a particularly important aspect of information gathering, selection and decision-making regarding the engagement and use of healthcare services and facilities. [6] Healthcare systems in most countries are major undertakings and the complexity of those systems creates information asymmetry for consumers.

Health consumers (patients, clients, residents and the general community) have a landscape of options and issues available to support decision-making in relation to acquiring healthcare and health system support.[7,8] Key issues of experience, satisfaction and general expectations facilitate personal understanding and the building of a repertoire of individual and wider experiences.[9] Health, aged care and social care are specifically focused on individual and interpersonal relationships.[10] Engagement between consumers and clinicians forms an important relationship and therefore platform, on which to base assessment of choice for subsequent and prospective engagement with clinicians and practitioners. Consumers are aware of several third-party agents and agencies in the health sector (government, insurers, regulators and manufacturers) and take cues and have reliance on that group to inform and safeguard healthcare economics.[11] Health consumers operate on important assumptions that there are adequate safeguards, regulations and controls in place that will manage and ensure standards of care and performance in the health sector.

Access to public health system performance reporting is a critical aspect of the trust and understanding of health systems for consumers. Over time, changes in technology (communications), health literacy, rights and entitlements, as well as changes in the complexity of health service systems and delivery, means that the consumer's information sources, decision-making processes and knowledge expectations also change.[12]

In 2010, the Australian Government established the MyHospitals website [13] to provide comprehensive and consistent performance data on Australian public and private hospitals. The goal of the MyHospitals facility has been to provide an authoritative source of information delivered in a transparent way (a similar Australian Government platform – myagedcare – exists in relation to the aged care sector). A key objective aligns to the issues of accountability by the Australian health sector (hospitals) to the consumer and community generally. This facility is but one public performance reporting outlet available to Australian consumers. Others include state/territory government reported quality and safety information.[7]

A key aspect of consumers' understanding, interpreting and valuing information refers to experience of the use of health services and health systems by individuals, families and friends. Information gained through experience is a critical part of sense making [14,15] and contributes to knowledge and understanding by consumers subsequently informing their choices and decisions. Positive experiences represent an understanding and evaluation of good care and services.[16]

A critical construct in understanding needs and development opportunities for consumers' choice and decision-making objectives and success is to have a contemporary understanding of consumers' perceptions, needs and approaches to an understanding of quality health services. Similarly, current knowledge on where health consumers gather and gain information on the importance and priorities they place on variables in decision-making becomes critically important. It is crucial to improvement of the quality and safety of healthcare service outcomes that we deepen and broaden the voice and involvement of health consumers. Consumer knowledge, experience and expectations concerning the quality and safety of services require deeper skills on how to assess and articulate their requirements.

The purpose of this research was to understand current information sources, determinants of quality discernment and decision-making factors by consumers in the Australian community in relation to healthcare. This provides a benchmark on current understanding to inform an improvement and development agenda.

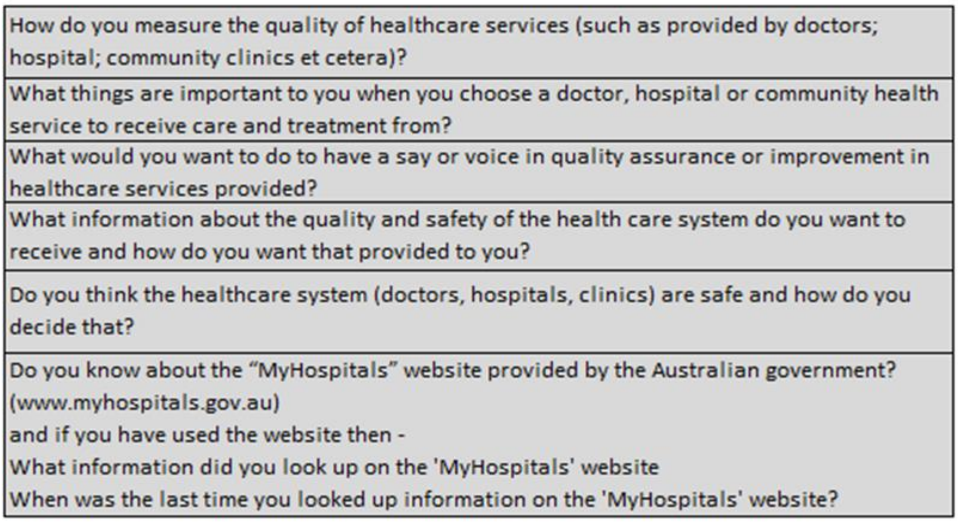
METHODS

A content analysis of transcripts from a national telephone interview survey was undertaken. A structured survey was developed to elicit information from the general community on sources of information, factors affecting quality assurance determination, indicators deployed in decision-making about obtaining services, as well as a general perception of the overall safety of the healthcare system (Table 1). Open ended questions were used to seek information from survey participants about the information sources they use for health related matters and in how they assess quality of care and services.

Computer Assisted Telephone Interviewing (CATI) provided the opportunity to administer a 15-question survey instrument in the Australian community to 200 participants aged 18 years and older. CATI (17) provides an efficient and accurate qualitative surveying method enabling wide coverage for responses from across the country by collecting responses, views and experiences from interviewees when the interviewer follows a survey script of open ended questions (Table 1). Telephone interviewing has been established as a methodologically viable and valuable data collection technique in qualitative research.[18] A series of strategies to enhance the use of CATI were developed and deployed including development of an interview script, validated questions that were previously piloted and engagement of experienced interviewers in a research and marketing call centre.[19]

For the purpose of this study, questions relating to quality assessment and information seeking were analysed. In the delivery of this survey, community members were invited to provide several responses to questions about current and suggested information and information sources relating to the healthcare system. Survey questions used are found in Table 1. First and second responses were obtained by asking all respondents to provide their main response and then the question was repeated to obtain any subsequent or second responses. Responses to these open-ended questions were grouped and summarised to provide themes and issues regarding use, experience and access to information on the healthcare system, health practitioners and health organisation providers. The survey respondent sample was similar to the population distribution by state/territory in Australia and age distribution was similar for the Australian population except the 25-34 age groups was under represented and the 65-74 and 75-84 age groups overrepresented to the Australian population (Table 2).

TABLE 1; TELEPHONE SUREVY INTERVIEW QUESTIONS – QUALITY AND INNFRMATION



How do you measure the quality of healthcare services (such as provided by doctors; hospital; community clinics et cetera)?
What things are important to you when you choose a doctor, hospital or community health service to receive care and treatment from?
What would you want to do to have a say or voice in quality assurance or improvement in healthcare services provided?
What information about the quality and safety of the health care system do you want to receive and how do you want that provided to you?
Do you think the healthcare system (doctors, hospitals, clinics) are safe and how do you decide that?
Do you know about the "MyHospitals" website provided by the Australian government? (www.myhospitals.gov.au) and if you have used the website then - What information did you look up on the 'MyHospitals' website When was the last time you looked up information on the 'MyHospitals' website?

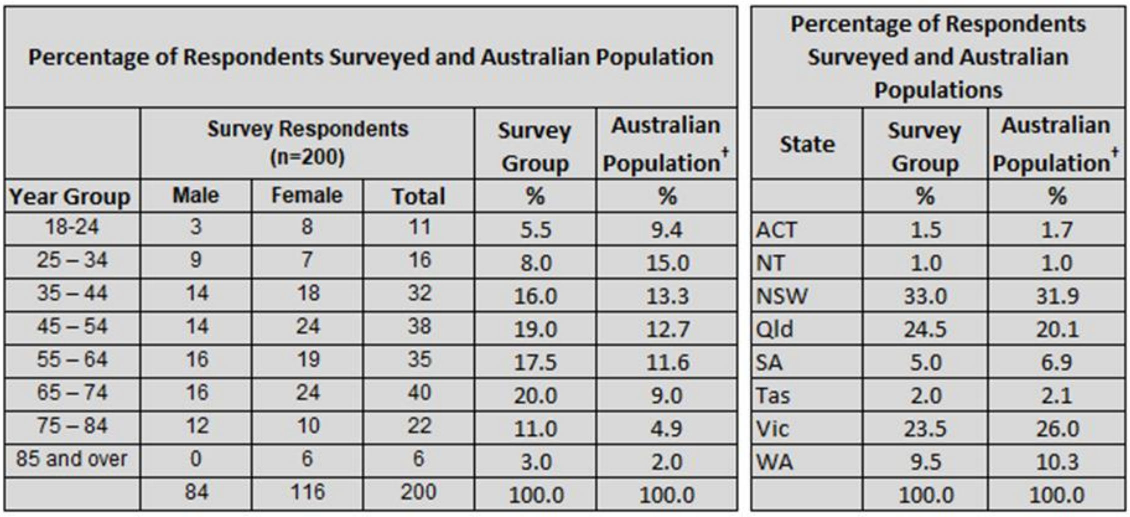
Conventional content analysis of the data was undertaken [20,21] to determine any themes or patterns across the data set obtained from the telephone interviews. A series of codes were generated by the researcher to classify and categorise respondents' responses to questions. Themes have been presented with frequency tables to provide information on the evidence provided from respondents in this national survey.

Ethics approval, in line with National Health and Medical Research Council standards, was received from an appropriate Australian university Human Research Ethics Committee (HREC 2019/554).

RESULTS

This national survey returned 200 completed telephone surveys that were analysed by the CATI survey system, SPSS software (22) and the researcher. Table 2 sets out the distribution for respondents which demonstrates representation from across all age groups, by sex and residence across all states and territories in the country. Respondents were female (58.0%) and male (42.0%); representative of Australian age cohorts aged 18 years and older; and located in all states and territories in the country. Respondents highest completed education achievements were Year 10 (24%); Year 12 (14.5%); degree (32.5%); postgraduate degree (11.5%); and 4.5% had incomplete vocational and university studies.

TABLE 2: SURVEY RESPONDENTS; AGE, SEX AND NATIONAL DISTRIBUTION

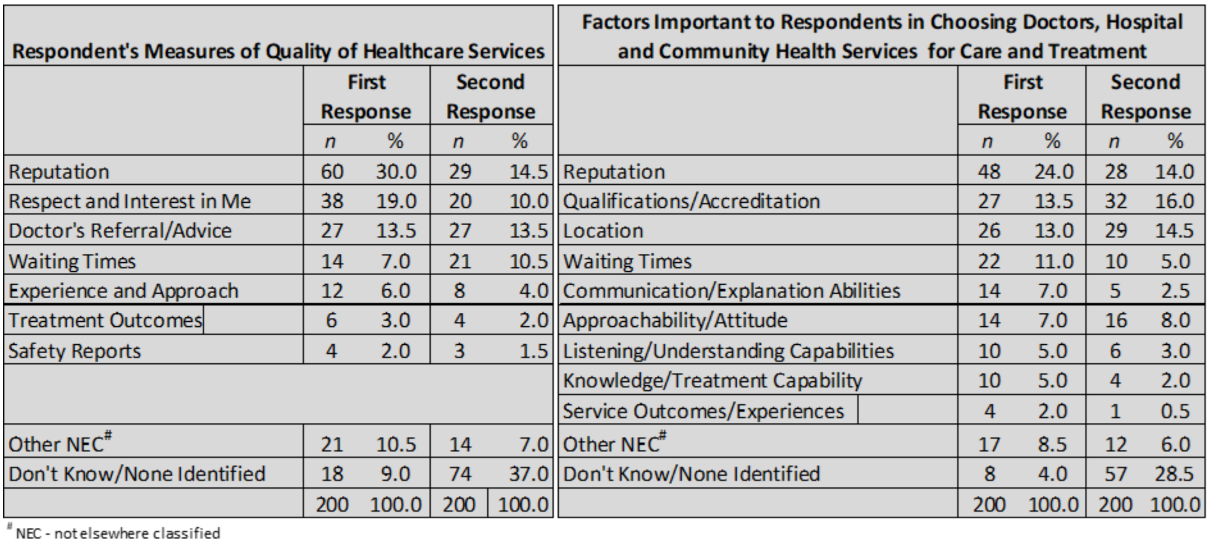


Percentage of Respondents Surveyed and Australian Population					
	Survey Respondents (n=200)			Survey Group	Australian Population[†]
Year Group	Male	Female	Total	%	%
18-24	3	8	11	5.5	9.4
25 – 34	9	7	16	8.0	15.0
35 – 44	14	18	32	16.0	13.3
45 – 54	14	24	38	19.0	12.7
55 – 64	16	19	35	17.5	11.6
65 – 74	16	24	40	20.0	9.0
75 – 84	12	10	22	11.0	4.9
85 and over	0	6	6	3.0	2.0
	84	116	200	100.0	100.0

Percentage of Respondents Surveyed and Australian Populations		
State	Survey Group	Australian Population[†]
	%	%
ACT	1.5	1.7
NT	1.0	1.0
NSW	33.0	31.9
Qld	24.5	20.1
SA	5.0	6.9
Tas	2.0	2.1
Vic	23.5	26.0
WA	9.5	10.3
	100.0	100.0

*ABS Estimated Australian resident population at 30 June 2019 (31010do002_2019912)

TABLE 3: MEASURES OF SYSTEM AND SERVICE QUALITY AND IMPORTANT ATTRIBUTES WHEN CHOOSING DOCTORS, HOSPITALS AND COMMUNITY HEALTH SERVICES FOR CARE AND TREATMENT



Respondent's Measures of Quality of Healthcare Services				
	First Response		Second Response	
	n	%	*n*	%
Reputation	60	30.0	29	14.5
Respect and Interest in Me	38	19.0	20	10.0
Doctor's Referral/Advice	27	13.5	27	13.5
Waiting Times	14	7.0	21	10.5
Experience and Approach	12	6.0	8	4.0
Treatment Outcomes	6	3.0	4	2.0
Safety Reports	4	2.0	3	1.5
Other NEC[#]	21	10.5	14	7.0
Don't Know/None Identified	18	9.0	74	37.0
	200	100.0	200	100.0

Factors Important to Respondents in Choosing Doctors, Hospital and Community Health Services for Care and Treatment				
	First Response		Second Response	
	n	%	*n*	%
Reputation	48	24.0	28	14.0
Qualifications/Accreditation	27	13.5	32	16.0
Location	26	13.0	29	14.5
Waiting Times	22	11.0	10	5.0
Communication/Explanation Abilities	14	7.0	5	2.5
Approachability/Attitude	14	7.0	16	8.0
Listening/Understanding Capabilities	10	5.0	6	3.0
Knowledge/Treatment Capability	10	5.0	4	2.0
Service Outcomes/Experiences	4	2.0	1	0.5
Other NEC[#]	17	8.5	12	6.0
Don't Know/None Identified	8	4.0	57	28.5
	200	100.0	200	100.0

[#] NEC - not elsewhere classified

RELATIONSHIP AND RELATIONSHIP BUILDING WITH CARE PROVIDER

Respondents identified several key measures to do with the importance of relationship building when they assess quality of healthcare services (Table 3). For example, one respondent highlighted the need for *"Interest and relationship with you*". Another reported on expectations as "*If it feels like they're asking the right questions and they're being thorough*". This was supported by another respondent who commented: "*Rapport, believing you're being heard, knowing there's concern about your position*".

Clearly, relationship building, good rapport and thoroughness are important characteristics when making healthcare delivery decisions.

For the first responses to the question on use of quality measures, 9.0% of respondents did not know or were unable to identify a quality measure. Almost one third of respondents (30.0%; n=60) reported the reputation of a service provider as the most significant measure of quality of healthcare services. This was followed by respondents identifying and assessing respect and interest shown by service providers and a referring doctor's recommendation and advice (19.0%; n=38 and 13.5%; n=27, respectively) as the next most important measures of quality.

REPUTATION, COMMUNICATIONS AND INTERPERSONAL RELATIONSHIPS

Reputation was also identified as the most important factor when choosing a health service provider. The next most significant criteria utilised for selecting a care provider varied from the overall measures used in quality assessment; individuals highlighted qualifications and service provider accreditation (13.5%; n=27), proximity or location (13.0%; n=26) and access waiting times (11.0%; n=22) as reasons for choosing service providers. Only a small percentage of respondents (4.0%; n=8) were unable to identify a possible reason for selecting service providers. Communications was highlighted as an important factor is choosing and accessing care as well as in considering previous service experiences. One respondent set out the importance of advanced communication skills: "How thorough they are in answering my questions". One respondent spoke of engagement as *"Interest and relationship with you" and another reiterated this citing: "Interest in me, the relationship they build"*.

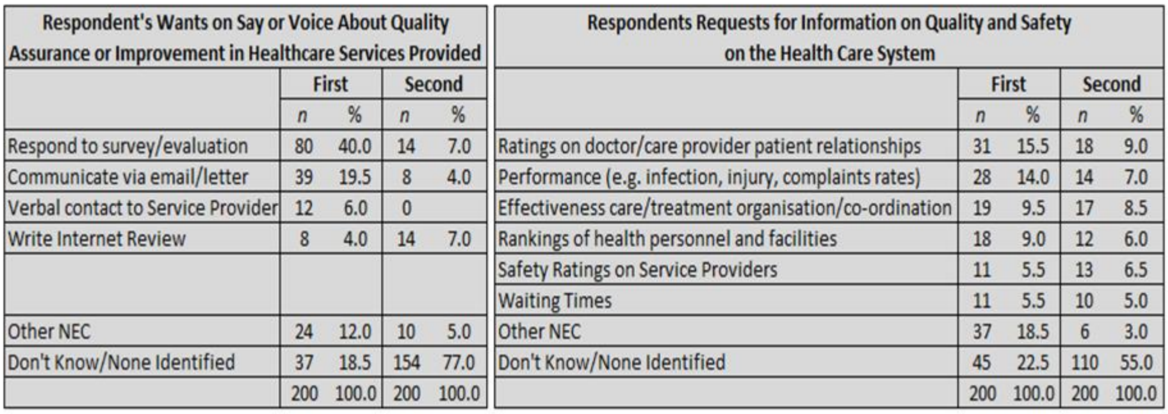
Beliefs, understanding or opinions (reputation) appear important for most survey respondents in assessing quality and effectiveness of healthcare practitioners and providers, as well as being key determining factors in choosing particular health services for individual care. Respondents formed these opinions and established reputation thoughts by gathering different information. One survey respondent stated: "*A lot of the times the references from other people that have used the same service*". Another respondent stated they looked at published materials and combined that with further follow up: "*Look for reviews online and see if there is anyone I knew and ask for their input*".

Respondents noted previous personal experiences, as well as the experiences of others, influenced their choice of healthcare practitioner. Choosing service providers also involves pragmatic decision-making factors such as waiting times and location (travel distance). Lower frequency assessment criteria (Table 3 as Other Not Elsewhere Classified (NEC)) included issues of identified efficiency, costs, reported complaints and practitioner gender. Respondent actions in combining information and advice was exhibited by one survey respondent reporting on their information gathering as: "*From their knowledge and qualifications*".

CONSULTATION AND INVOLVEMENT IN HEALTHCARE DELIVERY DEVELOPMENT

Survey respondents were questioned about their desire and requirements to be consulted on quality assurance and improvement aspects of the delivery of healthcare services. Table 4 highlights that for almost half of those interviewed (40.0%; n=80), the opportunity to respond to surveys, and evaluation tools and instruments was considered an important way to communicate their views and opinions. Almost 20% of respondents (n=39) articulated their interest and capacity to communicate directly by email or correspondence to individuals and organisations concerning their views on quality issues in healthcare. A relatively high proportion of respondents (18.5%; n=37) did not know or identify a view or position about how they would want to have a voice on quality agenda matters. In relation to the identification of the types and methods of information delivery to respondents (Table 4), the key measures requested were the availability of ratings or rankings on practitioners' and providers' relationships with patients as well as performance data such as infection, injury and complaint rates. Information about performance and outcomes by way of measures of access and service performance were seen as very important by respondents. For availability and provision of information on quality and safety, a relatively high proportion of respondents (22.5%; n=45) did not know or were unable to identify quality performance information sources. A spectrum of specific information topics including hygiene and cleanliness, financial accountability, administrative procedures and additional information on existing third-party websites were also identified within Table 4 (as Other Not Elsewhere Classified (NEC)).

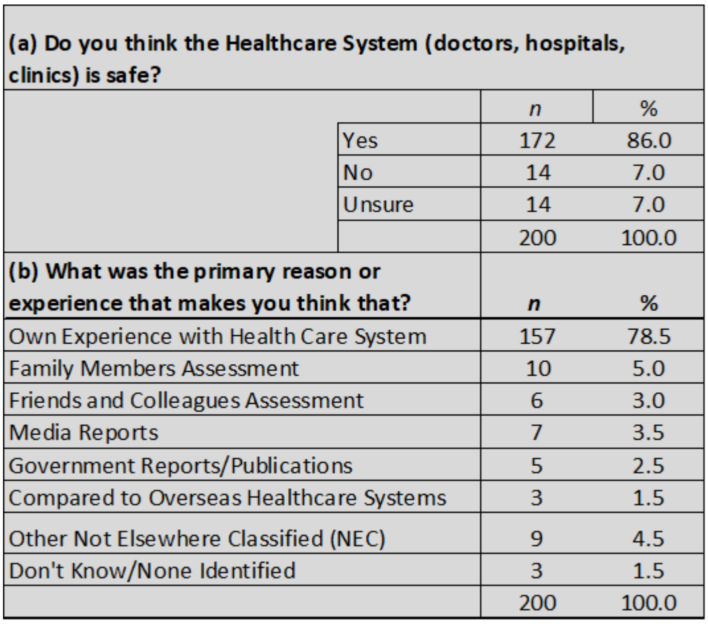
TABLE 4: OPPORTUNITIES IDENTIFIED FOR SAY OR VOKE ON QUALITY ASSURANCE AND IMPROVEMENT AND RECOMMENDED INFORMATION PROVISION TYPES AND FORMAT



Respondent's Wants on Say or Voice About Quality Assurance or Improvement in Healthcare Services Provided	First		Second	
	n	%	n	%
Respond to survey/evaluation	80	40.0	14	7.0
Communicate via email/letter	39	19.5	8	4.0
Verbal contact to Service Provider	12	6.0	0	
Write Internet Review	8	4.0	14	7.0
Other NEC	24	12.0	10	5.0
Don't Know/None Identified	37	18.5	154	77.0
	200	100.0	200	100.0

Respondents Requests for Information on Quality and Safety on the Health Care System	First		Second	
	n	%	n	%
Ratings on doctor/care provider patient relationships	31	15.5	18	9.0
Performance (e.g. infection, injury, complaints rates)	28	14.0	14	7.0
Effectiveness care/treatment organisation/co-ordination	19	9.5	17	8.5
Rankings of health personnel and facilities	18	9.0	12	6.0
Safety Ratings on Service Providers	11	5.5	13	6.5
Waiting Times	11	5.5	10	5.0
Other NEC	37	18.5	6	3.0
Don't Know/None Identified	45	22.5	110	55.0
	200	100.0	200	100.0

TABLE 5: ASSESSEMENT OF OVERALL SAFETY OF THE AUSTRALIAN HEALTHCARE SYSTEM AND PRINCIPLE DECIDING FACTOR



(a) Do you think the Healthcare System (doctors, hospitals, clinics) is safe?			
		n	%
	Yes	172	86.0
	No	14	7.0
	Unsure	14	7.0
		200	100.0
(b) What was the primary reason or experience that makes you think that?		**n**	**%**
Own Experience with Health Care System		157	78.5
Family Members Assessment		10	5.0
Friends and Colleagues Assessment		6	3.0
Media Reports		7	3.5
Government Reports/Publications		5	2.5
Compared to Overseas Healthcare Systems		3	1.5
Other Not Elsewhere Classified (NEC)		9	4.5
Don't Know/None Identified		3	1.5
		200	100.0

SOURCES OF INFORMATION ON HEALTH SERVICES

A series of open-ended questions incorporated into the telephone survey gathered information regarding respondents' primary source of information about health issues. In addition to the specific questions on quality and information seeking, 9 questions were asked about where respondents might seek information on obtaining specific services and health information or advice. Open-ended questions sought details of the main person or source of information used by consumers to find a doctor for care and treatment; information about prescription and non-prescription drugs; access to counselling services; information about health issues including smoking cessation and weight loss or gain; as well as care and treatment alternatives. An aggregation of responses to these questions showed information and access was obtained from doctors (31.3%), the internet (29.8%) and pharmacists (retail and hospital) (10.1%). A second level of information sources included friends and colleagues (3.3%), telephone helplines (1.9%) and family members (1.6%). Other identified sources, at lower levels of utilisation, included health professionals (doctors), hospital and healthcare agencies, professional health bodies, government and department agencies.

Survey respondents were asked about their utilisation of the MyHospitals website.[13] Only a relatively small percentage of those surveyed (14.5%; n=29) reported awareness of this information source where 3.0% of respondents were unsure if they had heard of the website. For those respondents who reported use of the website (n=9) this was reported as mostly occurring within the previous month or more than one year ago. Respondents who used the website stated their main reason was to find local healthcare provider details for themselves or their family, or to obtain general information about hospital services and facilities. Respondents who indicated they had used the site for general information did not report use in relation to accessing performance information on quality, safety or care outcomes.

HEALTH SYSTEM SAFETY AND TRUST IN HEALTHCARE DELIVERY

Survey respondents were asked for their overall perception of the general safety of the Australian healthcare system relating to doctors, hospitals and clinics. The majority of responses were positive towards this question with one respondent highlighting both expectations and opportunity for choice: "*Thoroughness - if I go with something and I'm not completely happy I want further treatment (elsewhere)*" and another respondent setting out international comparative evaluation was their basis for determining that the Australian system was of quality: "*In comparing to other countries*".

Table 5 highlights that the majority of respondents (86.0%; n=172) believe the system is a safe one, justified through their own experiences with different services, elements and parts of the Australian healthcare system. Respondents assessed safety across input, environment, service type and again, international comparison: "*It is safe because of the amount of money put into it. Also, we don't have much else*"; "*Depends on where you live – access to medical care*"; and a respondent said they would make international system comparisons "*Other countries compared to Australia*". One respondent reported overall in their survey responses but also included comment on their perception of quality in a particular sector or part of the care continuum with staffing levels and staff qualifications needing improvement in aged care: "*No – nursing homes and aged care facilities – in general, staffing levels and qualifications of staff*".

DISCUSSION

This research project was intended to provide an understanding on current information sources, quality discernment and decision-making factors by consumers in the Australian community in relation to healthcare services; to establish a benchmark on current understanding; and to contribute to improvement and development around consumers and quality and safety.

Results from this research highlighted similar responses to findings detailed in the literature.[23-25] Respondents in this study highlighted the importance of clinician and patient (consumer) relationships, as well as the critical nature of communications to support decision-making when using health services and understanding quality and value issues.[23] Information providers and gatekeepers of performance information are important to consumers and the impact of rapid access to information through the internet provides a vital source of communication and information sharing now and for the future.[24] An important development area is in understanding and acknowledgement that the public, or healthcare consumers, is a significant and major audience for information. Public information provision (regarding items such as current quality, performance and rankings information) is an avenue that requires particular strengthening and expansion for public consumption.[25]

Survey respondents demonstrated value and capacity in using different types and sources of information when making decisions about quality of services and access to care. Respondents reported that their experience, interpersonal engagement with care givers and third-party advice figure as important sources of information. These types of information and sources are important ways through which consumers discern both quality and performance related to service provision as well as in making direct or indirect choices about purchasing healthcare services. Consumers have capacity and appetite for information and will use it. The findings in this research provide important development areas concerning information supply including about ratings, rankings, reviews and the experience of others.

This research shows that respondents rely on the interpretations of individuals (health professionals, families and friends), the internet and a range of other information sources to build a picture and understanding of specific services and the health system generally. Respondents use discrete selection criteria (waiting times, location and interpersonal skills of practitioners) in their decision-making.

DETERMINING QUALITY

Several important themes were identified by respondents in relation to measuring the quality of healthcare services. Fundamentally, reputation is developed by providers demonstrating technical abilities, appropriateness and capacity for undertaking service delivery activities against the wider principles of proper behaviour and conduct.

It is unclear from these survey results how respondents assess reputation (Table 3). However, when considering the other explicit reported measures used in quality of service determination (interpersonal, access, care outcomes and safety assessments), the literature suggests that technical, procedural and moral elements are used. [8, 23] Respondents reported on key elements and issues regarding their use of services and perception of the health system, with one respondent saying they "*Monitor the effects of their recommendations…testing what they tell you with other sources*" and another survey response reporting on care provider experience "*Good people skills and knowledgeable enough to say when they don't know something*".

A broader set of determinants was identified by respondents when choosing doctors, hospitals and community healthcare. These included a breakdown of interprofessional engagement actions (communications and explanation capacity, approachability and attitude, listening and comprehension capabilities, as well as technical capability assessment). These findings are consistent with research reported in the literature.[16]

VOICE ON QUALITY AND INFORMATION

Respondents identified key mechanisms through which they would prefer to have opportunities for assessment and a voice regarding quality issues in relation to healthcare. Fundamentally, preferences were for responding to surveys and other evaluation or assessment instruments. This indicates that structured formats and approaches are preferred. Respondents identified their preferred mechanisms to provide feedback and assessment of healthcare quality issues. Approximately 20% of respondents indicated that they were prepared to communicate via email or written correspondence regarding their experiences and expectations.

In relation to the information required by consumers, 30% of respondents said that performance information, such as ratings of practitioner and provider performance regarding patient relationships and measurable outcomes would be valuable in their decision-making. The range of information requested covers interpersonal connections between healthcare providers and consumers, details of processes and outcomes of care and treatment, as well as access to care and waiting times. The strong preference for ratings and rankings may be indicative of consumers' desire for both information and comparison with expected performance standards. Previous research has identified need for descriptive performance information and interpretation of its meaning and value.[7]

LISTENING AND ENGAGING

A key finding from this research has been the respondents' desire for communication and interpersonal connections between care providers and consumers. These are key measures used for assessing performance and value of care, as well as being instrumental to decisions to seek out health service provision. Respondents articulated the importance of communication skills and the professional provider/consumer relationship. Issues of interpersonal connectivity by consumers with their care providers is reported in other research but what was important from this study was the high prioritisation of communications and interpersonal connectivity in evaluating and choosing health services.

LIMITATION FOR THIS STUDY

The sample size for this research was moderate but it was large enough (the study included respondents across all age groups and representation from each state and territory) to detect and identify key issues and themes regarding the behaviours, needs and wants of consumers in relation to healthcare quality and information.

Qualitative research is both context and time bound and these findings are not generalisable, but they may be transferable to different contexts in health service delivery.

Responder bias was mitigated in this study by using plain and simple language in the development of survey questions. Researcher bias has been mitigated through the use of independent telephone survey interviewers; a survey script that was validated by a panel; and the invitation to interviewees from a random national call list.

FURTHER RESEARCH

Reputation of service providers and organisations were identified as key evaluation and assessment factors for quality determination by respondents. Further research around key elements of processes associated with reputation and meaningfulness to consumers would be appropriate. This would assist to define and deepen understanding around the particular bridging factors in consumers' understanding and determination of quality of health service delivery. Comparative international studies would be useful in understanding different community and cultural perspectives of health consumers. A longitudinal study on consumer expectations in relation to healthcare quality and safety would be valuable in relation to changes in consumer engagement with required and provided information.

CONCLUSION

Reputation of individual providers and organisations figured as being of high importance to consumers in this study. This provides significant opportunities for individuals and organisations to promote appropriate technical, procedural and moral reputations to health consumers. The purpose of this research was to understand current information sources, determinants of quality discernment and decision-making factors by consumers in the Australian community in relation to healthcare.

This research advances our understanding of how Australian consumers understand and view quality and the quality assessment of health services. Personal patient relationships, communications and other interpersonal connections are not only key measures by which quality is assessed but are also preferred sources when making decisions about healthcare providers.

Consumers value third-party interpretation and commentary. Performance indicators and rankings (and associated interpretation) continue to be used by consumers when decision-making in relation to healthcare.

Reputation of individual providers and organisations figured as being of high importance to consumers in this study. This provides significant opportunities for individuals and organisations to promote appropriate technical, procedural and moral reputations to health consumers. The purpose of this research was to understand current information sources, determinants of quality discernment and decision-making factors by consumers in the Australian community in relation to healthcare.

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RESEARCH ARTICLE

THE CASE FOR A RECIPROCAL HEALTH CARE AGREEMENT BETWEEN AUSTRALIA AND SOUTH KOREA

Stephanie Doris Short[1], Hyo-Young Lee[2], Mi-Joung Lee[3], Eunok Park[4], Farah Purwaningrum[5]

1. Faculty of Medicine and Health, the University of Sydney, Australia
2. Dongseo University, South Korea
3. Faculty of Medicine and Health, the University of Sydney, Australia
4. College of Nursing, Jeju National University, South Korea
5. Sydney Asia Pacific Migration Centre, the University of Sydney, Australia

Correspondence: stephanie.short@sydney.edu.au

ABSTRACT

OBJECTIVES

This study presents the case for a reciprocal health care agreement (RHCA) between Australia and South Korea.

DESIGN AND SETTING

The research utilised a qualitative social scientific methodology. Document analysis was conducted on government reports, official statistics and media articles in English and Korean.

MAIN OUTCOMES

In Australia, the Health Insurance Act 1973 enables health care agreements with 11 nations, however, Korea has no similar legislation in place. Therefore, Korea would need to build a broader consensus on the need for a RHCA in full, based on the precedent of Australia's agreements with other nations, as well as on the Korean Pension Act, which has enabled reciprocal (equal treatment among the countries) pension agreements with 28 nations through an exceptive clause.

RESULTS

The active government commitment and involvement of the Ministry of Health and the Department of Foreign Affairs and Trade in Australia, and of the Ministry of Health & Welfare and Ministry of Foreign Affairs in South Korea, would be essential for a successful RHCA process to come to fruition.

CONCLUSIONS

While a potential health care agreement between Australia and Korea would constitute a significant step forward in strengthening people-to-people links between these two significant trading partners in the spirit of health diplomacy, the feasibility at the current time is very low indeed.

KEYWORDS

Reciprocal Health Care Agreements, Australia, Republic of Korea, Health policy analysis

WHAT ARE RECIPROCAL HEALTH CARE AGREEMENTS?

This study was initiated by Koreans living temporarily in Australia who were aware of the Reciprocal Health Care Agreements between other countries and Australia. An international team of social science, health professional and health administration academics sought and attracted support for the conduct of this social scientific research study from the Australia-Korea Foundation through the Australian Department of Foreign Affairs and Trade in 2015. The study presents the case for a reciprocal health care agreement as a policy advocacy study; as such the aim is to create an opening for social change through greater public awareness and support for the issue.[1]

Reciprocal Health Care Agreements (RHCAs) enable the provision of medical treatment between countries when the people of these countries travel or visit their counterparts. The medical service is to be provided within the country without purchasing additional travel insurance or being resident in the country party to the agreement. If there is continuity in the agreement, the exchange between the two countries can be strongly maintained, and there would be the protection of the visitors as well as the protection of their health rights. South Korea has not yet signed a mutual health care agreement with any other country, Australia currently has mutual health care agreements with 11 countries: Belgium, Finland, Italy, Malta, the Netherlands, New Zealand, Norway, the Republic of Ireland, Slovenia, Sweden, and the United Kingdom. [2] To be eligible for reciprocal benefits a visitor has to be a resident of one of the above countries. Visitors from Italy or Malta must be residents and citizens of their home country. These visitors are only entitled to Medicare coverage for the first six months in Australia. Residents from other countries are entitled to benefits for the duration of their stay in Australia. [2]

BACKGROUND TO THE STUDY: THE KOREA-AUSTRALIA FREE TRADE AGREEMENT (KAFTA)

South Korea is a significant destination for Australia's national resource exports such as coal, iron ore, and copper, in addition to a range of agricultural goods. [3] These two Governments secured the Korea-Australia Free Trade Agreement (KAFTA) in 2014, [4] as a preferential trade agreement in an attempt to ensure that Australian and Korean exporters gained a competitive edge for their exports, with nearly all import taxes (tariffs) on goods and services eliminated over time. (4) Moreover, the number of Australians who are visiting South Korea, facilitated by way of KAFTA has increased rapidly. [5] Close to 230,000 Australians visited South Korea in 2019, of which the majority of visitors were aged less than 30 years. [6] This comprised 1.3 percent of Korea's 17.5 million inbound visitors in 2019, where China was the major source country of short-term visitors.

Recent decades have generally seen an ongoing increase of visitor arrivals to Australia. The most recently available statistics on travel movements of persons arriving in Australia for short term visits, that is less than 1 year, indicate the highest number of arrivals on record in 2018-19, when Australia welcomed 9.3 million short-term visitors to Australia from overseas. [7] In 2018-19, prior to the COVID-19 pandemic, China was the largest source country, with over 1.4 million visitors. Among the top ten source countries i.e., China, New Zealand, USA, UK, Japan, Singapore, Malaysia, India, Hong Kong, South Korea, there has been particularly strong growth from Asian countries, including South Korea, which saw a 42 % increase in visitors in the last decade. [6]

In 2018-2019 the most frequently cited reason for South Korean visitors visiting Australia was holiday (47%), visiting friends and relatives (30%), business (7%) and education (7%), with women predominant in each category, except business. Those travelling for education and employment stayed the longest, with those travelling for business staying the shortest period. 'Warhol' (Working Holiday) is a system in which young people aged 18 to 30 gain experience with local culture and life through tourism, employment, and language training. Many Korean college students visit Australia as a "Warholer" or working holiday visa holders with about 18,000 Koreans staying in 2005 and nearly 40,000 in 2009. [8]

The largest number of "Warholers" in Australia are from South Korea. As of 2017, the number exceeded more than 50% of the total number of "Warholer". [8] Most working holiday visa holders work in jobs with some risk of injury, such as working in farmlands or meat processing factories in rural areas. [9] Furthermore, most of these people will return after 1-2 years to South Korea to participate in economic activities in South Korea. [5] Should their health rights not be adequately protected during their stay in Australia, they may have considerable medical needs to be addressed within the health insurance system in South Korea after returning home.

In sum, this a timely study, as comparable numbers of Koreans visit Australia compared with Australians who visit South Korea. Of particular significance for this study is the increase in the number of visitors between South Korea and Australia over the last decade. [9,10] Thus, a possible reciprocal health care agreement (RHCA) would enhance the accessibility of medical services to visitors at the same time as strengthening co-operation between these major trading partner countries. [8]

THE ACADEMIC LITERATURE ON RECIPROCAL HEALTH CARE AGREEMENTS

There is a dearth of academic literature on reciprocal health care agreements. There are three notable exceptions, one in Australia and then two case studies conducted in the context of Brexit and the European Union.

The first and most significant contribution to the literature on this topic is a study conducted by health policy analyst, Simon Barraclough from La Trobe University in Australia in 1990.[11] Thirty years later it remains the most substantial academic examination of this topic. Barraclough's study explained that provisions for bi-lateral cooperation in healthcare were initially included in the Health Insurance Act 1973 by the Labor government in Australia, with the establishment of Australia's universal publicly funded health insurance scheme, Medibank. This overseas component of Medibank, was re-introduced in 1984, with Medicare. Barraclough pointed out that public awareness was an issue at that time as the Federal government was seeking to increase the awareness of overseas travellers of these arrangements and the need to take out appropriate travel insurance. [11]

Barraclough's study pointed out that Australia's policy on RHCAs was based on two premises: first, that agreements would only be negotiated with countries with comparable national healthcare systems with centralised authority and universal health coverage; and secondly, that the arrangements would have to be 'revenue neutral'. [11] In the first regard, Australia has been unable to negotiate a RHCA with Canada, as even though we a share similar systems of universal health insurance this is not administered nationally in Ottawa, but by each individual province.

We turn now to the principle of "revenue neutrality", which obviated the need for record keeping and financial transfers. This principle allows for the administration of agreements to be simope and cost-free. It should be noted that while the two-way movements of visitors between Australia and the United Kingdom were comparable in 1990, Australia saw six times as many visitors from Sweden, as vice versa, and twice as many New Zealanders visiting Australia, as Australians heading across the Tasman Sea. [11] In this regard, Barraclough noted that Australia would be disinclined to enter into an agreement with Japan, for example, as it would have been disproportionately costly to extend reciprocal healthcare benefits to Japanese visitors; Australia's largest single source of visitors at the time, which led to an imbalance of 10:1 in terms of more Japanese entering Australia on short-term visas. Of course Barraclough's study was conducted before Australia entered into Free Trade Agreements with South Korea (12 December 2014), Japan (15 January 2015) and China (20 December 2015) which would enhance considerations of health diplomacy and strengthening trade and people-to-people links.

The other notable studies of reciprocal health care agreements were conducted in the UK within the context of Brexit. The first case study was conducted by Tamara Hervey, professor of European Union (EU) Law at the University of Sheffield, and published in the British Medical Journal in 2018. [12] Hervey's case study investigated how this policy was actually implemented in respect of EU visitors to the UK, where EU visitors enjoyed similar access to `immediately needed' National Health Service (NHS) health care available to UK residents. Prior to Brexit, in 2020, there were agreements between 27 European Union nations for nationals residing in or visiting the UK, and *vice versa*, who were entitled to healthcare under EU law. Reciprocity is reflected in this EU Law as well as in the European Health Insurance Card (EHIC) system, wherein people are entitled to medical treatment as if they were a national of the country providing it, as well as that of the "home country" where the patient has paid tax or national insurance. [12]

The other case study conducted in the UK, by Sheaff, in 1997, was also conducted prior to Brexit. This case study of policy implementation found 'In the case of healthcare access for EU visitors to the UK, '… an implementation surplus … evident rather than an implementation deficit'. [13] Hence, in the UK, the reciprocal health care arrangements were actually being implemented in a more generous way than policy-makers had anticipated.

The other conclusion to note from the academic literature is Barraclough's observation:

> 'In terms of Australia's relations with the Asia-Pacific region it is significant that not a single reciprocal health care agreement has been negotiated with countries in this region'. [11]

This is despite the fact that the top ten sources of visitors to Australia include no less than 7 Asian countries: China, Japan, Singapore, Malaysia, India, Hong Kong, and South Korea. Thus, while Australia's in-bound visitor numbers and free trade agreements are skewed towards Asia (plus New Zealand and the USA), Australia's reciprocal health care agreements remain firmly oriented towards Europe (and New Zealand). This study aims to tackle this challenge through an examination of the feasibility of a potential RHCA between Australia and South Korea.

DESIGN AND SETTING

The study utilised social scientific research methods and analysis. Quantitative and qualitative data encompass secondary data, official statistics, documents, media, and literature including grey literature on this topic.

Document analysis concentrated on official materials obtained from the Australian Ministry of Health, the Australian Ministry of Foreign Affairs, the Australia-Korea Foundation of the Australian Ministry of Foreign Affairs and Trade, the Australian Consulate and Embassy of Australia, and official documents and press releases of the Ministry of Foreign Affairs of Korea.

We analysed the data using thematic analysis. To begin with, we collected and gathered the relevant secondary data, such as immigration data and other official statistics. Then we conducted thematic analysis of reports and policy documents; in which we looked into Australia's RHCA, by country, year, who is covered, what services are covered and not covered, and how costs are reduced. We also examined media reports relevant to Australia's RHCAs. Hence, the methodology comprised secondary data analysis and document analysis,

FINDINGS

According to Barraclough [11] the preconditions for a potential RHCA are considered in the following twin terms: comparable national healthcare systems and universal health coverage; and balance of visitors between Australia and South Korea (fiscal neutrality). We address each of these considerations in turn.

Comparable national healthcare systems and universal health coverage

Australia and South Korea have similarities as regards to universal health coverage and population health amongst the two countries. [14] It is no exaggeration to say that Australia and South Korea share universal health coverage in the provision of universal access to basic affordable healthcare services. In the same vein, population health similarities are evident in the similarity in social structure and phenomena such as the age-structured population, the decreasing birth rate and extension of average life expectancy. [8] These considerations were relevant in the design and justification of the study, as the basis for a potential RHCA.

Balance of visitors between Australia and South Korea (fiscal neutrality)

The population of Australia is about 25 million, which is about half the population of South Korea. However, the size of Australia is 35 times that of the Korean peninsula. [15]

First, we need to consider the 'cost-waiver principle'. The principle refers to states as regards to what must be in line so as there is absence of administrative costs in the two countries. [16] This is a basic prerequisite of RHCAs, and it is pointed out that if the administrative burden is too much or the administrative procedure is too complicated, the feasibility of the agreement will be reduced. A related administrative cost has to do with the cost balance of pharmaceutical drugs. In this sense, should the cost balance of the pharmaceutical drugs be not correct or imbalanced, it would be necessary to use one's own contribution. However, if the equity of health care coverage cannot be achieved, it is necessary to adjust the level of coverage and the scope of the beneficiaries. [17]

Our findings show that Australians residing in South Korea comprise mainly young travellers, students, business people and teachers of English. In Australia, on the other hand, increasing numbers of Koreans in Australia, especially since the KAFTA, comprise mainly working holiday visa holders ("Warholers"), plus tourists, students and businesspeople.

The first finding is comparability of universal health coverage and national healthcare systems between Australia and South Korea. Furthermore, fiscal neutrality is feasible due to the the balance of visitors between Australia and South Korea.

DISCUSSION

The findings from this study reveal that Australia and South Korea share comparable national healthcare systems and universal health coverage. This study reveals also that there is potential for fiscal neutrality, as there is a balance of visitors between Australia and South Korea.

This study has unearthed additional considerations, in particular, in the case of "Warholers" in Australia. Most of the young working holiday visa holders in Australai do not take out travel health insurance due to the fact that there is no compulsory provision for health care insurance for them. Even in the case that they have joined such insurance, it would not be of assistance when the health-related problems arise due to inadequate coverage. [5, 17] Notably, young South Koreans who came to Australia as "Warholers" have limited access to health care services because they have insufficient economic circumstances, and hence travel health insurance. [5, 17]

In respect to the administrative and legal-technical aspects of a potential health care agreement, the process of signing and ratification of a RHCA needs to be cognisant of the relevant legislation. In Australia, the Health Insurance Act 1973 enables health care agreements with 11 nations, however, Korea has no similar legislation in place. [18] Therefore, South Korea would need to build a broader consensus on the need for a RHCA in full, based on the precedent of Australia's agreements with other nations, as well as on the Korean Pension Act, which has enabled reciprocal (equal treatment among the countries) pension agreements with 28 nations through an exceptive clause. Thus, active government commitment and involvement of the Ministry of Health and the Department of Foreign Affairs and Trade in Australia, and of the Ministry of Health & Welfare and Ministry of Foreign Affairs in Korea, would be essential for a successful RHCA process to come to fruition.

CONCLUSIONS

On the positive side of the ledger, Australia and South Korea share comparable national healthcare systems and universal health coverage. In addition, there is indeed an increase of exchanges between both countries due to the free trade agreement signed between Australia and South Korea in 2014. [4, 19] And, in terms of reciprocity there are similar numbers of visitors each year between Australia and South Korea (close to a quarter of a million visitors each year). Thus, the two major considerations outlined in Barraclough's [11] seminal study of reciprocal health care agreements have been satisfied.

This study has further unearthed two considerations however, that point to the limited feasibility of a reciprocal health care agreement between Australia and South Korea. The first concerns the significant number of "Warholers", who come to Australia every year from South Korea, as they have limited economic resources and hence inadequate coverage from their travel health insurance. This could challenge the notion of fiscal neutrality.

Furthermore, while Australia has legislation in place that supports reciprocal health care agreements with 11 countries, South Korea does not have enabling legislation in place. While South Korea has mutual social security agreements in place, for the conclusion of a RHCA, new legislation would be required. What follows afterwards would be the requirement for concerted efforts on the part of the Ministries of Foreign Affairs and Health in both countries. While a potential RHCA between Australia and South Korea would constitute a significant step forward in strengthening people-to-people links between these two significant trading partners in the spirit of health diplomacy, the feasibility is very low indeed. Moreover, as it happens, in the COVID-19 context, Australia has substantially closed its international borders. Thus, we do not anticipate Australia negotiating a reciprocal health care agreement with countries in the Asia-Pacific region, in the foreseeable future.

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LIST OF ABBREVIATIONS

AKF: Australia-Korea Foundation, Department of Foreign Affairs and Trade, Australia
EU: European Union
KAFTA: Korea Australia Free Trade Agreement
NHS: National Health Service
RHCA: Reciprocal Health Care Agreement

DECLARATIONS

In this study data were accessed and obtained from publicly available policy documents, official statistics and the media.

CONSENT FOR PUBLICATION

The authors consent for publication.
Availability of data and materials
Data and materials are publicly available.

COMPETING INTERESTS

The authors declare no competing interests.

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AUTHORS' CONTRIBUTIONS

Professor Stephanie Doris Short, the University of Sydney led the study on which this paper is based. Prof Short contributed to the design of the overall study, interviews, data analysis and writing.

Professor Hyo-Young Lee, Dongseo University contributed to the conception and design of the study and conduct of the literature review, interviews and data collection.

Dr Mi-Joung Lee Physiotherapy, the University of Sydney contributed to conduct of the interviews, data collection and data analysis.

Professor Eunok Park from Jeju National University in Korea contributed to the design of the study, conduct of the interviews, analysis and writing.

Dr Farah Purwaningrum, Sydney Asia Pacific Migration Centre, the University of Sydney, contributed to the literature review, data analysis and writing.

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COMMENTARY

COVID-19 AND WORKING WITHIN HEALTH CARE SYSTEMS: THE FUTURE IS FLEXIBLE

Lea Merone, Oscar Whitehead

University of Queensland, Australia

Correspondence: lea@doctors.org.uk

ABSTRACT

COVID-19 and subsequent lockdown of affected countries has changed the way Australia and the rest of the world do business, with online working, video/teleconferences and independent working becoming increasingly normal. Those working in primary care or in allied professions however such as administration, public health, management, human resources, radiology and mental health, have found themselves unexpectedly moving their work into their homes.

There has been much discourse surrounding the consequences and benefits of the recent work from home (WFH) mass-movement. The leading benefits of working from home are increased productivity, cost and time-savings for employers and opportunities for disabled people to work. However, there are several emerging unintended adverse consequences of WFH, including overworking, stress and fatigue.

Employee personality traits are linked with the individual's response to WFH. It is the role of a good leader to play to an employee's strengths and individual circumstances. WFH initiatives can provide huge economic savings for organisations. The future beyond COVID-19 must allow for flexibility in both workers' hours and location as far as possible, with investment in telehealth and teleworking and allowance for face-to-face meetings in accommodating office-spaces.

KEYWORDS

COVID-19, health care system

THE IMPACT OF COVID-19 ON HEALTHCARE SERVICES

The emergence and exponential spread of novel coronavirus-19 (COVID-19) has changed the way Australia does business. [1] With World Health Organisation recommending quarantine and lockdown of affected countries, scores of workers have moved from the office to their own homes; [2] online working, video and teleconferences and independent working have rapidly become the new normal.

Healthcare systems are different from other types of organisations in that healthcare workers are often deemed to be essential. Consequentially, in terms of work location and hours, little has changed for many of these employees. Those working in primary care or in allied professions however such as administration, public health, management, human resources, radiology [3] and mental health, have found themselves unexpectedly moving their work into their homes. [4,5] In the case of clinical primary care, adaptations have been rapidly made towards telehealth [5], a change which some argue is long overdue. [6]

Telehealth, particularly in rural and remote settings, comes with several benefits including: enhanced access to care, improved quality of care, lower costs and greater convenience. For clinicians, the benefits have included: access to continuing education and personal professional development (PPD), experiential learning, networking and collaboration. [7]

Whilst the benefits of telehealth are being realised, including improved cost-efficiency profiles for both organisations and patients, [8,9] there has been much discourse surrounding the consequences and benefits of the recent work from home (WFH) mass-movement and there are those who argue that WFH is probably here to stay.

Research suggests that across the USA, 37% of all jobs have the potential to be completed from home. [10] Despite this, recent survey suggests that during the COVID-19 pandemic approximately 50% of the employed US population were WFH, including 14% of these individuals who would WFH ordinarily, meaning approximately one third of workers have switched to WFH. [11] In Australia, a Gartner human resources survey demonstrated that 88% of organisations have required or encouraged employees to WFH during the COVID-19 pandemic. [12]

WORKING FROM HOME: BENEFITS AND OPPORTUNITIES

The leading benefits of working from home are increased productivity, cost and time-savings for employers and opportunities for disabled people to work [13]. Recent social media-based survey of global workers demonstrated that reception to WFH initiatives in the context of COVID-19 was resoundingly positive (73%), with employees expressing joy, anticipation and trust. Of the 27% with a negative perception of WFH, the most commonly expressed emotions were fear, sadness, anger and distrust. [2]

Employees report feeling “trusted by their manager” when allowed to WFH, [14] leading to increased morale and wellbeing. Employee morale has been linked with greater productivity, retention and overall organisational performance. [15] WFH allows employees greater autonomy over working hours, conditions and how they manage their work and other commitments. [16] Worker autonomy is known to increase life satisfaction, particularly for female employees. [17]

Studies have also demonstrated that WFH improves work-life balance, particularly amongst millennials, who make up a large portion of the workforce [18]. A study conducted over two years reported a 13% productivity increase in those who WFH and that staff turnover decreased 50%. Employees who WFH typically take shorter breaks and less sick leave. Additionally, WFH is economically preferable for employers, with reported savings of over $3000AUD per employee on lease costs. [19]

A recent *McCrindle* survey revealed that in Australia, 80% of employees would be more likely to stay longer with an organisation if provided with flexible working arrangements in terms of hours and location. This desire was strongest amongst full-time workers. Over half of employees stated they would take a pay cut for the advantage of flexible working arrangements and similarly 55% reported feeling they had increased productivity when WFH. [20]

In addition to economic costs and productivity, restricting workers to an office or workplace can be detrimental to employees’ health. This is possibly attributable to commuting; long distance travel to a place of work is strenuous and strongly associated with increased incidence of obesity. [21] A study in Sweden has demonstrated that long-distance commutes are also associated with stress and marital strain, with greater incidence of divorce occurring in couples where at least one individual has commuted to work. [22] According to data published in the Household, Income and Labour Dynamics Australia (HILDA) survey, Australian workers spend an average of 66 minutes per day commuting. [23] WFH will obliterate the commute, allowing employees a better work-life balance and more opportunity to engage in exercise, cooking and healthier lifestyles.

Personality is a factor in work-place productivity and studies have shown that those who are extroverts have distinct advantages in the workplace. [24] Despite this, introverts make up 30-50% of the population, [25] however they generally have lower-levels of wellbeing than extroverts and this may be because of their lack of person-environment fit. [26] It may be that this group is better suited to a different work environment and indeed teleworking from home was pioneered by a group of people who self-identified as introverts or 'loners'. [13]

WFH is economically optimal for organisations, research in the USA has demonstrated that each employing WFH saves their employer an average of 10,000USD in workspace and other related expenses. Additionally, remote working allows organisations to procure the talents of a wider group of workers without needing to contribute to relocation expenses. [27]

WORKING FROM HOME: THE UNINTENDED CONSEQUENCES

As boundaries between work and home life blur, research has shown that employees generally respond to WFH in one of three ways: overworking, improved planning and structure to compensate for blurring of the boundaries, or performing different tasks in the home office than the work office. [14] The blurring of boundaries and WFH can be detrimental to the mental health of some workers. A 2017 report by the European Foundation (Eurofound) for the Improvement of Living and Working Conditions determined that 41% of employees who WFH report high-levels of stress compared with 25% of employees who commute to a place of work. [28]

Organisational factors may make WFH more challenging and increase employee stress, including lack of technical and human resource support. [14] Loss of management culture and sense of guidance can also be impacted by WFH. [14] It is the responsibility of the good leader and manager to provide support and guidance in challenging, novel and extreme situations. [29] Additionally, lack of team cohesion whilst WFH may contribute to feelings of isolation and loneliness and compound employee stress. [30]

Research has demonstrated that WFH can decrease mental health and wellbeing for some workers. The Eurofound global study of employees who regularly or exclusively WFH demonstrated that 42% of respondents reported some level of insomnia, compared with just 29% of those who always worked in an external location. [28] This is highly likely to result in fatigue and decreased worker productivity.

Is it becoming acknowledged that WFH can be associated with fatigue and it is hypothesised that this lassitude is related to the strain of using unnatural communication devices such as videoconferencing. [31] Research suggests that whilst teleworking can improve the speed and quality of work, basic face-face contact is still needed to balance the potential adverse effects of isolation, stress [32] and fatigue.

Fatigue can also be exacerbated by stress and a sense of lack of control; this is particularly true in the context of COVID-19, where many workers are offered no other choice than to WFH, removing autonomy and sense of wellbeing for those who prefer the structured work environment.

The concerns about employee WFH regimes during lockdown are valid and concerning for both wellbeing and productivity, however there is emerging evidence that remote telehealth can play an important role in improving mental ill-health and help employees to manage distress during pandemic-related lockdown. [33]

MOVING TO THE FUTURE: FUSION AND FLEXIBILITY

Whilst there are arguments for and against strict WFH regimes during the pandemic and potentially positive implications for organisations beyond this, it is important to note there is significant individual difference between workers and the households in which they live, which will undoubtedly significantly factor into their suitability for prolonged WFH. Whilst some may find WFH improves concentration and reduces interruptions, others may have family commitments that drive them to the opposite view.

It is the role of a good leader to play to an employee's strengths and individual circumstances. As COVID-19 develops and societal and economic structures change, the emphasis must be on flexibility in the workplace, allowing, where possible and appropriate, the freedom and trust for employees who see improved productivity and lifestyle to WFH, whilst maintaining a workplace environment for workers who for a myriad of reasons may not be suited to WFH. In the context of pandemic, this must be conducted within the context of infection control and physical distancing, which may require innovative rostering solutions to ensure the physical and mental wellbeing of employees.

Flexibility in hours has been shown to decrease absenteeism, employee turnover and work-related stress. [34] WFH initiatives can provide huge economic savings for organisations. A balance must be struck between employee wellbeing and organisational productivity. For this to happen, the future beyond COVID-19 must allow for flexibility in both workers' hours and location as far as possible, with investment in telehealth and teleworking and allowance for face-to-face meetings in accommodating office-spaces.

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REVIEW ARTICLE

REVIEW OF PUBLIC PRIVATE PARTNERSHIP IN HEALTH CARE IN HONG KONG

Cynthia Lau, Ben Yuk Fai Fong

School of Professional Education and Executive Development, College of Professional and Continuing Education, The Hong Kong Polytechnic University

Correspondence: cynthialau1227@gmail.com

ABSTRACT

Public Private Partnership Programme is a cooperation between different healthcare professionals in both public and private sectors in Hong Kong. Over the decades, many programmes have been developed which cover various diseases, including chronic conditions and surgery for cataracts, as well as vaccinations. However, these programmes are not successful because of the unsatisfactory service charges in the private sector, overlapped aims and resources and wrong estimation of needs. To become successful, programmes reform is required by rearranging resources, annual reviews, more financial support and extending the coverage of diseases. Promotions of programmes are beneficial to all stakeholders. Overall, better coordination between both sectors is the essential factor which can lead the programme to success and maintain a better health care system in Hong Kong.

KEYWORDS

Public Private Partnership, Health Care System, Coordination, Reform, Hong Kong.

1. HEALTH CARE SYSTEM IN HONG KONG

There are elements of both the public and private sector involved in the delivery services in the Hong Kong Special Administrative Region (SAR)

1.1 PUBLIC SECTOR

The Food and Health Bureau is responsible for making policy decisions and allocating resources to maintain the operations of public services of the health care system in Hong Kong. Two organisations are responsible to manage the public health care facilities. The Department of Health of the government manages services related to public health and primary care, supported by the Centre for Health Protection and other respective units, including infection control, social hygiene and prevention of communicable diseases and non-communicable diseases. The Department of Health also provides health education, assessment of children and supervision of elderly homes and family health. [1] The Hospital Authority (HA), a statutory body, manages all of the 43 public hospitals of a total of 28,000 beds, 49 specialist 0ut-patient clinics (SOPCs), and 73 general out-patient clinics (GOPCs). With a staff of 79,000, the HA provides inpatient and outpatient services, as well as community outreach services for patients who are disabled or have difficulty accessing the hospital for follow up. Public hospitals are grouped into seven clusters based on the geographic locations to make it easy for people to continue the treatment within or near their living area. [2]

1.2 PRIVATE SECTOR

In the private sector, there are 12 private hospitals and many private clinics in both general practice and clinical specialties. Elderly homes, medical laboratories, community pharmacies and diagnostic imaging centres are also part of the services in the private sector. They are self-financed and give alternative choices for people according to their ability to pay. [3] In the dual-track health care system in Hong Kong, the private sector has been expanding because in the past two decades more patients are coming from Mainland China and the demand by local people also keeps increasing. Patients can choose the doctors and the waiting time is shorter. They can also participate in decisions about the treatment such as the need of hospitalization and the mode of surgery. [4] There are insurance schemes to encourage people to use private health care services. In addition, the government also offer health care vouchers to the elderly for use in the private sector. The pressure on the public sector is expected to be reduced and people can receive better care services. The government has been promoting cross-sector cooperation between the two sectors for over 20 years, known as the Public Private Partnership (PPP).

2. PUBLIC PRIVATE PARTNERSHIP

2.1 DEVELOPMENT OF PUBLIC PRIVATE PARTNERSHIP IN HONG KONG

Public Private Partnership (PPP) is an arrangement of cooperative institutions operating between the private and public sectors. To provide public projects and services, private organisations use their complementary techniques with different levels of responsibilities, including financial commitment, expertise and involvement in the projects in the areas of transport, like the tunnels across the harbour, and housing development, the home-ownership scheme. [5,6] The government announced a series of pilot measures to promote public private partnership in health care services in the 2008-2009 policy address. The private sector is subsidised to provide preventive care to the public. Private hospital and primary care services are purchased, and some medical centres are being set up, including in the specialties of neuroscience and paediatrics. [7] Over the years, both the Department of Health and HA have implemented a number of programmes of public private partnership through the Electronic Health Record Sharing System. Private providers can access past medical history of patients when they manage public patients.

There are now 10 public private partnership programmes launched by the Department of Health and the HA, including PPP in general outpatient clinic; a project on enhancing radiological investigation services through collaboration with the private sector; the cataract surgeries program; the haemodialysis PPP; the patient empowerment program; the provision of infirmary service through PPP; colon assessment PPP; glaucoma PPP; colorectal cancer screening pilot program; Elderly Healthcare Voucher Scheme and the Vaccination Subsidy Scheme. They target patients who are suffering from end-stage kidney failure, chronic diseases, cancers and eye diseases including glaucoma and cataract. Some programs aim at prevention and early detection such as screening of colorectal cancer, and some provide infirmary care and healthcare services to the elderly. [8, 9, 10]

2.2 ELEMENTS OF SUCCESS IN PUBLIC PRIVATE PARTNERSHIPS

To make public private partnership successful, there are five attributes involved. [11] These are addressing the needs of the health system, being sensitive to the context, recognising the patients as a key party, problem solving, sharing the risks.

The first attribute is to address the needs of the health care system. The government should know the current needs and what may be required in the future so that they can focus and respond to the system. Once they have prioritized the needs, they find stakeholders to support and join the plans. The planned programme should aim at the right group and achieve the goals.

The second attribute is being sensitive to the context. The different factors in Hong Kong should be considered for all the stages of development. For example, the market situation and share of health care, capability, capacity, transparency, etc. The challenges should be assessed, and resolutions planned. An accurate view on how to work within a set of circumstances should be in place to lower the risks. The third attribute is to recognize patients as a key party. Patients' wants and needs are important. Better outcomes will be derived from incentives and in-depth understanding of the collaboration in a patient-centred approach. For example, there is a small number of patients who have high usage of healthcare service. If the partnership programme can support them with early intervention, the government can reduce some costs and make better use of the resources.

The fourth attribute is problem-solving. During the promotion of the programmes, there may be many problems. New solutions and emerging technologies can help to minimize and solve the consequences. The last attribute is to share the risks. Both the public and private sectors have the responsibilities in the process of risk management, which cannot be transferred to the others. Therefore, a successful public private partnership programme should consider and assess all factors related to the capabilities and structure of participating entities, achieving a synergistic and complementary leverage [11].

To give particular emphasis to the Hong Kong SAR contexts similar health systems in other national contexts are reviewed.

3. EXAMPLES OF PUBLIC PRIVATE PARTNERSHIP IN SINGAPORE AND UNITED KINGDOM

Health care delivery in Hong Kong is similar to the systems in Singapore and the United Kingdom (UK) arising from historical reasons. PPP in both countries are good illustration of such programs in the health care system because of their longer history and success.

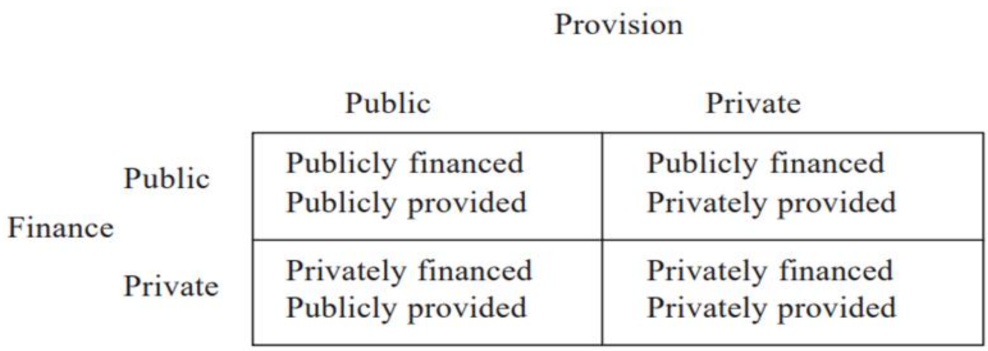
3.1 SINGAPORE

The healthcare system in Singapore is managed by The Ministry of Health. The public sector provides 72% of hospital beds while the private sector provides the remaining 28%. [12] 80% of patients choose outpatient services in the private sector but they use inpatient services in the public sector. [13]

Public private partnership of Singapore is concerned about health services provision and health care financing. There are four combinations of health care provision as shown in Figure 1. [14] Health care financing comes from government subsidy and co-payment by citizens. Although citizens should pay when using healthcare services in either public or private sector, and the charges can be covered by their private insurance, self-insurance, social insurance or taxes. [13]

In 1984, a health financing system, known as "3M" was introduced to promote medical saving. There are 3 schemes in the system. "Medisave" is a compulsory individual medical savings account. The fund comes from deductions from employee payroll. It can be used in hospitalization, outpatient services and surgery. "Medishield" is a low-cost insurance plan on a voluntary basis. It protects all permanent residents and Singapore citizens, including those of old age, those with pre-existing medical conditions and, those who suffer from financial losses during sickness. It also covers disastrous illnesses which are not covered by "Medisave". "Eldershield" is developed under this scheme and covers long-term care for serious disabilities. Besides, the whole programme of "Medishield" provides free upgrade for amenities from private insurance providers. The "Medifund" is government-funded scheme for the poor people. It is operated by voluntary welfare organizations and helps to cover the charges which patients cannot afford. The interest derived from the capital set up in 1993 is distributed to the non-profit and public hospitals. It also sets up the "ElderCare" fund to assist the elderly and "Medifund Silver" to support the elderly who cannot pay the public hospitals under "Medifund". [15]

FIGURE 1: FOUR COMBINATIONS OF HEALTH CARE PROVISIONS [14]



		Provision	
		Public	Private
Finance	Public	Publicly financed Publicly provided	Publicly financed Privately provided
	Private	Privately financed Publicly provided	Privately financed Privately provided

Public-private partnership in Singapore is successful partly because the government promotes self-responsibility of health among the people. This can decrease the over-utilisation, check abuses of health care services and prevent over reliance on insurance and welfare. The basic health care services can also be maintained with high quality and affordability.

3.2 UNITED KINGDOM

The health care system in United Kingdom is managed by the Department of Health of the government, which is responsible for the National Health Service (NHS). The NHS works with values and principles in which, like Singapore, all citizens have their own responsibilities to help to make sure that the services can run effectively and fairly. [16]

The NHS has established over 130 PPP projects in the past 20 years and they cover acute, community, mental and primary health services. [17] They are part of New Public Management (NPM) introduced in the 1980s and 1990s. As the government would like to enhance the service management and delivery in the public sector, they have cooperated with the private sector by employing the market-type mechanisms and neoliberalism. This approach can also breakdown the financial challenges for the government. [16]

The United Kingdom adopts a socialized medicine model which provides healthcare services by the government and funded by taxation. They control the organization of health service and finance in a capitalist economy and pay the healthcare providers directly. They own most of the equipment and facilities and allow some private care at patients' own expenses. They also pay and recruit healthcare professionals and operate the hospitals. These expenditures are funded by the NHS. [18]

The success of PPP programmes in UK is due to the well-developed rules and regulations as well as the management of the health care system by the government. The NHS keeps modifying the rules and regulations and improve the service of the programmes to provide effective services to the public. The NHS has the power to monitor the performance of the private sector and offer reasonable charges which people can afford. Such structure and arrangement are beneficial to the NHS, private sector and citizens by providing the best health care service. [19]

The use of PPP in Singapore and the UK provide lessons for the approach in Hong Kong that are know reviewed.

4. REVIEW OF LOCAL HONG KONG PROGRAMMES UNDER PUBLIC PRIVATE PARTNERSHIP

According to the HK Legislative Council's paper in 2015, there were near 100,000 patients participating in different programmes, mostly in the Patient Empowerment Programme which provided more knowledge and self-care prevention of chronic diseases. [20] General outpatient clinic PPP Programme also had 90% of enrolled patients participating in it, which expanded the service to all 18 districts in 2018. [21]

The programme is not effective because it aims at patients with chronic diseases, but integrated care is not being provided to them, especially for those who suffer from more than one type of chronic diseases. Although it can decrease the working pressure in the public sector, patients still go back to the accident and emergency departments of public hospitals for consultations during the non-working hours of private clinics.

Another concern is the cost charged by participating private doctors for non-regular items not covered by the programme, including medications. This practice has affected the enrolment in the PPP programme because patients need to pay the extra co-payment themselves. Service quality management is also a major issue of concern since private doctors are independent contractors although they are bound by the code of professional conduct. In order to provide better service to patients, the government should collect opinions from the patients on the satisfaction of services, the health conditions and the habit of consultation. Such data may be useful in planning for the further directions of the PPP programs. [22]

5. RECOMMENDATIONS

The authors make the following recommendations.

5.1 PROGRAMME REFORM

Programmes of similar nature can be re-developed or combined to avoid duplication or waste of resources, so that public money is spent more efficiently and effectively to meet other needs of the community. Simplification of procedures for both the users and health services providers is also important in the operations of PPP programmes. Health technology can be employed to streamline registration and consultations.

5.2 IMPORTANCE OF ANNUAL REVIEW

Annual review of all PPP programs is recommended. Feedback and opinion of both the patients and providers are important in the planning, implementation and delivery of appropriate and quality services, more so since the expectations and requirements of health services keep changing over time. The government, private health sector, and non-government organizations, which are also potential "private" service providers, should be innovative and sensitive to the context of the services and the needs of patients, and expand the programmes to cover more services, particularly when there is a surge of demand in the public sector, like during the annual seasonal influenza.

5.3 ENHANCEMENT OF PUBLICITY

Enhancement of publicity with strategic activities in social marketing is instrumental in promoting the PPP programs. The Department of Health and HA can do more by creating media such as posters, leaflets and videos targeted at the patients and service providers. The Department can draw the attention of the public to start considering the alternative choices of health service in the private sector, in meeting their health needs for the health conditions they have.

5.4 FINANCIAL INCENTIVES

Financial incentives to private health practitioners are essential considerations in order to encourage them to participate and stay in the programs. Private providers expect reasonable returns. Feasible and practical charges schedules help to recruit more participating providers from the private sector. PPP programs cannot be sustained if there are not enough panel service providers, particularly when the PPP is run on a voluntary basis.

5.5 PROFESSIONAL TRAINING TO PUBLIC AND PRIVATE SECTORS

There is inconsistency in the standards and quality of services by the private sector. Thus, professional organisations of healthcare disciplines, the HA, private sector and tertiary institutions can organise induction briefs and training to standardize the common practices and promote service quality. In addition, short courses, discussion forums and technical exchange workshops on common issues of public health in the community such as non-communicable diseases, outbreak management, emergencies, health promotion, can be conducted. Such programmes can enhance the skills and knowledge of the providers and keep them abreast of the latest professional development.

5.6 BETTER COORDINATION OF PUBLIC AND PRIVATE SECTORS

Both the public and private sectors should have better coordination to attain smooth operations of PPP programs. Currently, service providers can access patients' medical history from e-health records through the eHR sharing e-Health system (eHRSS), provided that both service providers and patients have already registered in the eHRSS. Service providers can then keep track of the situation of patients even when they change to other providers. In time of unexpected or unusual public events, like natural disasters and the COVID-19 outbreak, providers in the private sector can help in the management of selected patients, who are in stable conditions. The PPP will help to maximise the utilisation and effectiveness of social resources.

6. CONCLUSION

Public Private Partnership programmes are the cooperation between the public and private sectors in the health care system. Throughout these decades, the government in some countries, like Singapore and UK, have developed different programs but some of them are limited by resources. To improve the services, it is the time to review and reform these programmes by adopting the five attributes: (i) to address the needs of the health care system; (ii) to be sensitive to the context of the services; (iii) to recognize patients as a key party; (iv) to attend to problem-solving; and (v) to share the risks between the two sectors. Furthermore, there should be appropriate resources reallocation, annual reviews, enhanced promotion and social marketing, increase in financial support, and coverage of more common conditions. Most importantly, both sectors should work closely and have better collaboration so that the programmes can benefit the community.

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VIEWPOINT ARTICLE

HONG KONG’S GROWING NEED FOR PALLIATIVE CARE SERVICES AND THE ROLE OF THE NURSING PROFESSION

Yuk-Chiu Yip, Wai-King Tsui, Ka-Huen Yip

School of Health Sciences, Caritas Institute of Higher Education, Hong Kong, China

Correspondence: jeffreyycyip@gmail.com

ABSTRACT

This viewpoint paper explores the growing emphasis and social need for palliative care from a global perspective, juxtaposed against the Hong Kong status quo and its increasing need for such services. It further highlights that the role of nursing within palliative care is central to patients receiving the best quality of care. Hong Kong’s current delivery models are generally insufficient and can be improved by the adoption of five recommended policy changes, which reinforce the position of nurses as vital to creating a better service. These recommendations will enable nurses to take the lead in future palliative care delivery frameworks, enabling more efficient planning of future management of patients’ pain and other symptoms, social, spiritual, or emotional needs that arise during assessment. Its value may extend to other countries and settings.

KEYWORDS

Palliative care, Quality of life, End of life, Hospice, Recommendations, Health outcomes

INTRODUCTION

Palliative care was first conceptualized nearly 50 years ago as an approach to health care delivery, underpinned by the core values of empathy and compassion for both patients and their caregivers. The World Health Assembly recently issued a call for its place within comprehensive lifetime health care to be reinforced. This paper responds to that call by investigating whether current means and modalities of delivering palliative care services meet the increasing need for such services in Hong Kong.

A Quality of Death (QOD) report prepared in 2015 revealed that the quality of End of Life (EOL) care in Hong Kong trails behind comparable countries and regions. [1] The report assessed palliative care across eighty regions, including several in the Asia-Pacific. Taiwan was ranked 6th place, Singapore 12th, Japan 14th, South Korea 18th ,and Hong Kong was ranked 22nd . Multiple factors contributed to this relatively low ranking including insufficient spending, flaws in policy, under-capacity, and lack of engagement with and knowledge of such services in the wider community. [2] The QOD report findings suggest that palliative and EOL care services in Hong Kong are due for reevaluation and overhaul.

In this paper, we formulate recommendations for changes to the palliative health care policy and provision in Hong Kong in response to the above-mentioned appeal by the

World Health Assembly (WHA) to cement palliative care within the health care continuum. [3]

THE GROWING EMPHASIS ON AND SOCIAL NEED FOR PALLIATIVE CARE

A recent review of global studies on palliative care needs and experiences conducted on over 1.2 million older individuals found that non-beneficial treatments had been administered to 33% to 38% of patients during their last six months of life. [4] This situation aligns poorly with the World Health Organization (WHO) definition of palliative care as:

> an approach that improves the quality of life of patients [adults and children] and their families facing the problem[s] associated with life-threatening illness through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial, and spiritual. [5, p. 5]

Hong Kong's first hospice services were established in 1982, and the model of hospice care has since served as a launchpad for a wider palliative care provision. Over the past few decades, palliative care in Hong Kong and elsewhere has left behind the EOL bunker and widely permeated the health care system. It is now a routine part of the treatment of disease at an earlier stage. [6]

According to WHO estimates, only 14% of the 40 million current EOL patients requiring palliative care receive it. [5] In this context, the WHA resolved in 2014 that greater emphasis should be placed on palliative care within the comprehensive health care that is delivered "throughout the life course". [7] The Assembly called on member states to study the development, reinforcement, and implementation of palliative care at all levels of health care delivery, a call for action reflected in the "Strategic Service Framework for Palliative Care" drawn up by the Hospital Authority (HA) of Hong Kong in 2017. [8]

Improvements in the provision of palliative care differ across health care systems. The US health care system, for example, has overseen a rapid improvement in provision of palliative care services for EOL patients: whereas palliative care teams were employed by only 25% of US hospitals with over 50 beds in 2000, that proportion had risen to 75% by 2015. [9] Data on terminal cancer patients in Hong Kong for 2012 and 2013 show that around 68% were given palliative care [8] and palliative programs have been systematically made available to patients in the advanced stages of other diseases since 2010, principally those with neurodegenerative conditions (e.g., motor neuron disease), heart failure, end-stage renal failure, and advanced chronic obstructive pulmonary disease. Similarly, findings of a cohort review commissioned by the Central Committee on Palliative Care of the HA suggest that 44% of end-stage renal-failure patients were offered palliative care. [8] Despite these encouraging figures, however, gaps remain in provision. In particular, patients suffering illnesses that are non-malignant but nevertheless life-limiting (for example, advanced heart failure) have little access to such care—a serious consideration given the aging population.

THE CONTEMPORARY SYSTEM OF PALLIATIVE CARE SERVICE IN HONG KONG: AN OVERVIEW

Presently approximately 360 hospice beds across 16 HA-run hospitals offer the full range of palliative care programs, from symptom control through counseling for EOL patients and their caregivers and family members. [9] Given that the population of Hong Kong was 7.41 million in 2017, this provision works out to approximately 4.8 inpatient hospice beds per 100,000 residents. The number of HA beds is almost matched by those provided by voluntary and charitable organizations. The Haven of Hope Christian Service runs 124 palliative-care and hospice beds, while a further 30 mixed public/private beds are sponsored by the Jockey Club Home for Hospice and run by the Society for the Promotion of Hospice Care. The largest non-HA provision is made by the Hong Kong Anti-Cancer Society Jockey Club Cancer Rehabilitation Centre, under whose auspices 180 beds are made available for cancer or other seriously ill patients. [10]

As of 2011, the palliative care sector in Hong Kong employed approximately 300 nurses. [11] Palliative care nursing is not a compulsory module in nurse training programs, so nurses who wish to take up this specialization are required to take postgraduate or diploma courses, such as the program in palliative care nursing accredited by the HA Institute of Advanced Nursing Studies, a diploma in oncology and palliative care for health care professionals, or a higher diploma in community health care for older patients. Other organizations working in the sector, such as the Hong Kong Anti-Cancer Society, the Society for the Promotion of Hospice Care, and the

Federation of Medical Societies of Hong Kong, also run palliative care training workshops. [12]

Palliative care is categorized by setting, with the four principal types being inpatient, outpatient, home, and day care [13], each of which is recommended for particular patient groups.

- Patients with symptoms ranging from moderate through serious/unstable are recommended for inpatient care in the form of daily treatments carried out in hospitals or, when resources permit, nursing homes or other facilities. Rehabilitation treatment is part of inpatient palliative care programs for patients in the later stages of illnesses, aimed at enabling them to maintain daily living activities for as long as possible. Inpatients in acute units are visited by medical staff from the specialist palliative care team for support and consultation.
- Post-discharge outpatient care can be provided for patients whose symptoms are stable, as well as for late-stage patients who require specialized treatment and those with psychological issues.
- Home care is for patients who are too weak to attend outpatient clinics, and is delivered by teams who visit the patient's home to offer consultancy, therapy, and monitoring, while also giving sensitive support and counseling to caregivers and other family members preparing for a death at home. This aspect of the service continues after the patient's death, when necessary.
- Day care is for patients whose symptoms are stable but require daily monitoring, and encompasses counseling, psychological support, and social activities aimed to promote QOL. Day care facilities frequently operate as resource centers for caregivers seeking information or medical equipment.

Palliative care provision in Hong Kong is growing, both in terms of the number of beds available and the range of services delivered. However, Hong Kong continues to trail behind to comparable regional economies. The QOD Index, which was developed by the Economist Intelligence Unit, further observed that Hong Kong's spending on health care and policy evaluation was relatively low. Moreover, public awareness remains limited. Yet, given the demographic changes whereby the proportion of older adults within the population is continuing to grow, as well as the prevalence of chronic diseases, there is a clear requirement for long-term palliative care planning from all stakeholders, including the government, hospitals, hospices, palliative specialists, and the community.

Moreover, the above overview has highlighted the fragmentation of the current system of palliative care in Hong Kong: care is provided by a range of individual organizations with limited capacity, with little cooperation noted between public- and private-sector providers. It is therefore recommended that policies be formulated addressing issues including financial support, training, how to engage the community, and the wider culture within which palliative care is embedded in order to facilitate improvement and standardization in provision.

RECOMMENDATIONS FOR CHANGES TO PALLIATIVE HEALTH CARE POLICY: STRENGTHENING THE ROLE OF NURSES IN THE DELIVERY OF PALLIATIVE CARE

The fundamental principles of palliative care involve both multi- and interdisciplinary approaches to holistic care. Palliative teams consist of diverse professionals who possess specialist skills. They operate under the shared goal of enhancing the quality of life of patients who are suffering from serious illnesses by providing psychological, medical, and practical assistance. They work closely with both the patient and his or her family members and caregivers. While the composition of a palliative care team will vary from region to region, the majority of teams consist of the patient and his or her family and caregivers, palliative care nurses, physicians, social workers, pharmacists, appropriate religious representatives, health clinicians and complementary therapists.

Palliative care nurses facilitate a multi-disciplinary approach to caring for the patient. First, they instruct, expedite, and model thorough palliative care evaluations, making sure that the goals of care, any advance care planning requirement, and the end-of-life care planning is performed in a timely manner. In addition, they assist in synchronizing suitable and well-timed care in the locations at which the care needs to be delivered; for instance, in a hospice, home, residential, or hospital setting. Palliative care nurses undergo dedicated training to develop enhanced communication skills and have the expertise required to administer complex symptom management. They spend the majority of their working time directly caring for a patient. As such, they are ideally placed to offer additional members of the palliative care team informed insights into the needs of the patient and the family.

Palliative nurses are also able to foster a strong relationship of trust and support between medical professionals and the patient and his or her family members and caregivers. This can serve to enrich the quality of life in various care settings. Nurses can also delineate which patients may require hospital admission to assist with the management of symptoms. By collaborating with professionals from various medical fields, palliative care nurses ensure that any modifications to the care plan are documented, and all relevant professionals are kept informed of any changes. This helps to ensure the patient's condition is managed in a smooth and consistent manner.

Reinforcing the professional, advocacy, and communication skills of nurses within the provision of palliative care will be a vital part of ending fragmented service delivery. Moreover, nursing practice within palliative care delivery already draws on the ethical principles and values embedded in the code of the American Nursing Association. Inter-setting, inter-disciplinary, and inter-level collaboration among nurses and their partners in multi-disciplinary care teams must be encouraged and leveraged, given the abundance of expertise available in the nursing profession. Nursing care, like palliative care, takes a holistic approach to patients' and caregivers' needs, which encompasses physical, emotional, and spiritual aspects of wellbeing. Furthermore, due to the nature of their practice, nurses are positioned to note changes in health status, which suggest palliative care should be initiated. The recommendations laid out in the next sections will enable nurses to take the lead in future palliative care delivery frameworks.

Establishing guidelines to assess palliative care need

Several steps are necessary to develop and implement a new and improved delivery framework for palliative care, including public consultation and the approval of high-level directives. Specifically, screening criteria must be formulated to guide nursing teams in drawing up palliative care plans in anticipation of need. It is recommended that assessment should be carried out twice: first, when patients are admitted and again, during hospitalization. [14] Guidelines for these assessments are necessary, with screening criteria classified as primary (basic needs) and secondary (high probability of requiring palliative care).
During the initial assessment under primary criteria, nurses must assess: inter alia, frequency of hospital admissions, complexity of care requirements, and decline in body function. Secondary criteria call for assessment of: inter alia, age and cognitive function, whether patients have been admitted from a long-term care facility, social background to determine support available, and presence of chronic disease.

During the second assessment, primary criteria must include: whether patients struggle to control physical and psychological symptoms, whether they have been admitted to intensive care and for how long, and the occurrence of professional or familial conflict or uncertainty in patients themselves or their caregivers. Secondary criteria during this later assessment range from organ transplantation through emotional or spiritual distress displayed by patients and their loved ones.

Devising robust guidelines of this nature will enable nursing teams to take timely action when issues are identified in triage patients according to their palliative care needs, including referrals to specialists. This will allow for more efficient planning of future management of patients' pain and other symptoms, as well as any social, spiritual, or emotional needs and issues that come to light during assessment.

Given the nature of their role and practice, and the fact they are present across most health care settings, nurses are the natural advocates of palliative care. Indeed, they are already professionally trained in advocacy, being the representatives and communicators of patients' needs and wishes within multi-disciplinary teams, a role which increases in importance the more serious the condition of the patient concerned. Equally, they are frequently the members of the care team who explain and discuss treatment options with patients and caregivers. Knowledge of advance care is not yet widespread among patients or in the wider community, and nurses are best placed to inform patients and their families of the options available, discuss their relative benefits, and talk through any concerns about medical, practical, social, or psychological issues.

Expanding professional education and training

It is also recommended that a palliative care module should be made a compulsory part of nursing training. Currently, health care workers interested in working in this field must take diploma courses or training workshops run by the University of Hong Kong School of Professional and Continuing Education and the School of Continuing and Professional Studies of The Chinese University of Hong Kong. The Hong Kong College of Gerontology Nursing and Hong

Kong Association of Gerontology certificate programs offer a model for hospice and palliative care nurse training which should be expanded. Moreover, a government-approved register of specialized palliative care nurses should be created to replace the current system of lists of diploma and certificate holders. This professionalization of the sector would make it more attractive to health care personnel and thus aid its expansion and further development.

Moreover, on-the-job training courses are recommended, which should focus on communication skills and advise on how service providers can most sensitively address the issue of death with patients and their families. Nurses should be trained to initiate and guide discussion with patients and families on EOL issues, including the provision of palliative care services, when patients are first hospitalized, rather than leaving such discussions until the illness has reached a very advanced stage. Moreover, training should equip nurses to identify the right moment for referral to palliative care specialists, and clearly explain the care options available. This type of training would be of particular value to those specialist areas and care units that currently show little engagement with or knowledge of palliative and EOL care.

Improving public knowledge and enhancing patient education

It is necessary to engage the public in discussions of palliative care in order to deal with any fears and misunderstandings and encourage earlier and wider engagement with the sector. To this end, government-level promotions are encouraged, which could take the form of public talks and workshops in the community and disseminate information and messaging via social media. A prominent display of posters, educational leaflets, and links to further resources at community hospitals would be a useful first step to ensuring that necessary information reaches patients and their relatives.

It should be remembered that relatives are frequently involved in discussions about health care options and may well press for medical treatment in an attempt to prolong their loved one's life. Making palliative care training a compulsory part of nurse training and publicizing palliative care options in community settings may encourage both nursing trainees and the wider public to elicit and respect patients' own wishes and priorities around EOL care. It can also help shocked or grieving loved ones accept that death is a part of life, and that medicalizing the process of death, or prolonging life at all costs, is not necessarily the best option. "Death Cafes," which are organized non-profit organizations in many regions and countries, invite participants to talk openly about death and grief, and to voice their concerns and fears. Organizing public talks on other cultures' approaches to bereavement and death can also foster discussion and widen perspectives on the place and value of palliative care.

Communication lies at the heart of palliative care provision and nurses offer a pool of skilled communicators who can bring empathy and knowledge to discussions with patients and their loved ones regarding prognoses, care options and goals, advance care planning, and other issues raised by advanced disease and the prospect of death. Leveraging the intimate knowledge of patients that they gain through their practice and the sphere in which they work, nurses are the best practitioners to communicate supportively, conveying difficult and complex medical information in the most appropriate and sensitive way and listening to the concerns and values of all involved. Hence, nurses able to assess palliative care needs in advance are well placed to initiate the necessary discussion of goals and treatment options.

Increasing funding for palliative care services

In 2017/2018, health care funding in Hong Kong across both public and private sectors amounted to only 5.8% of Gross Domestic Product (GDP) [15], in contrast to the 10.7% and 9.6% of GDP respectively devoted by Japan and the UK to health care. Moreover, the proportion of health care expenditure in Hong Kong allocated to palliative and EOL care is small. This paper proposes that this type of specialist care should be made a policy priority and its proportion of funding should be increased to enable the expansion of specialist personnel and facilities.

It is recommended that all private and public hospitals should have a special palliative care department to oversee patient referrals, manage communication among multiple medical and social care stakeholders, and deploy the necessary infrastructure, including transport for patient transfer. HA provision of palliative care services should be complemented by non-profit organizations as well as the private sector, and funding must be made systematic and system-wide, rather than ad hoc and small-scale. These changes could enable the various actors involved to provide sustainable services to care for and bring comfort to patients at home and in hospital or other health care facilities.

Promoting nursing research on palliative care

A final area of improvement within palliative care is nursing research, which should be actively encouraged and incentivized. Currently, there is scant data on the effects of both palliative and EOL care on patients and caregivers, and much of the limited research available has been conducted in contexts where findings may not be generalizable to Hong Kong. Hence, it is recommended that the Hong Kong government funds and encourages systematic local research into supply, demand, and impact, with a view to enhancing current service delivery, and fostering innovative change to enable improvement.

CONCLUSION

The centrality of nursing within palliative care rests on the nurse being a skilled coordinator across all levels of the health care system. The nurse communicates between and connects all medical practitioners involved, as well as the patient and their caregivers, hence playing a vital role in ensuring each patient receives the best quality of care. Although a range of nursing skills is called on in the provision of palliative care, it is this central position and skillset which suggest that nurses are best situated to deliver its primary aspects, such as communication, advocacy, and symptom management.

Given the growing proportion of older adults in the population and the prevalence of chronic disease, nurses' position must be reinforced as a key element in the provision of palliative care. As Hong Kong's provision of such care expands to include more patients at earlier stages and with more types of disease, the current delivery models are insufficient. With the current delivery system flawed by fragmentation across multiple small-scale operations and both public- and private sector provision, reinforcing the vital role played by nurses can boost positive health outcomes and create a better service. This development can be promoted by adopting these policy recommendations: (1) establishing guidelines that will ensure that palliative care needs are appropriately and accurately assessed; (2) expanding and enhancing the professional education and training that is currently available in this area; (3) developing and implementing a campaign designed to enhance public knowledge and education; (4) ensuring adequate funding for palliative care services; and (5) promoting and supporting nursing research in palliative care.

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CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

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COMMENTARY

VIETNAM'S HEALTHCARE SYSTEM DECENTRALIZATION: HOW WELL DOES IT RESPOND TO GLOBAL HEALTH CRISES SUCH AS COVID-19 PANDEMIC?

Huy Van Nguyen[1,2,3], Joseph Debattista[4], Minh Duc Pham[5, 6], An Thi Minh Dao[3], Stuart Gilmour[1], Hoa Lan Nguyen[2], Tien Van Nguyen[7,8], Phuong Mai Le[1], Phuong The Nguyen[1], Anh Thi Ngoc Tran[9], Kien Duy Vu[10], Son Thai Dinh[3], Minh Van Hoang[11,12]

1. Graduate School of Public Health, St. Luke's International University, Tokyo, Japan
2. Department of Population and Quantitative Health Sciences, University of Massachusetts Medical School, MA, USA
3. Institute for Preventive Medicine and Public Health, Hanoi Medical University, Hanoi, Vietnam
4. Metro North Public Health Unit, Metro North Hospital and Health Service, Queensland Health, Brisane, Australia.
5. Burnet Institute, Melbourne, Australia
6. Department of Epidemiology and Preventive Medicine, Monash University, Melbourne, Australia
7. Faculty of Public Health, Thai Binh University of Medicine and Pharmacy, Thai Binh, Vietnam,
8. Department of Preventive Medicine, Tokushima University Graduate School of Biomedical Sciences, Japan
9. Graduate School of Cancer Science and Policy, National Cancer Center, Korea
10. OnCare Medical Technology Company Limited, Hanoi, Vietnam
11. Hanoi University of Public Health, Ha Noi, Vietnam
12. National Institute of Health Sciences, Bach Mai Hospital, Ha Noi, Vietnam

Correspondence: tiennv@tbump.edu.vn

ABSTRACT

This article discussed Vietnam's ongoing efforts to decentralize the health system and its fitness to respond to global health crises as presented through the Covid-19 pandemic. We used a general review and expert's perspective to explore the topic. We found that the healthcare system in Vietnam continued to decentralize from a pyramid to a wheel model. This system shifts away from a stratified technical hierarchy of higher- and lower-level health units (pyramid model) to a system in which quality healthcare is equally expected among all health units (wheel model). This decentralization has delivered more quality healthcare facilities, greater freedom for patients to choose services at any level, a more competitive environment among hospitals to improve quality, and reductions in excess capacity burden at higher levels. It has also enabled the transformation from a patient-based traditional healthcare model into a patient-centered care system. However, this decentralization takes time and requires long-term political, financial commitment, and a working partnership among key stakeholders. This perspective provides Vietnam's experience of the decentralization of the healthcare system that may be consider as a useful example for other countries to strategically think of and to shape their future system within their own socio-political context.

KEYWORDS

Healthcare system; Global health crises; Covid-19 pandemic; Low- and middle-income countries (LMICs); Public health responses; Vietnam

INTRODUCTION

Effective healthcare is provided in the context of appropriate health policy and a well-functioning health system. The Vietnamese health system comprises the two main components of curative and preventive medicine. Over previous decades, the country has succeeded in improving many health indicators relative to its socio-economic status. However, to be more effective, the health system needs to be adaptive to new contexts. Since

2015 the Vietnamese health system has begun decentralizing from a pyramid to a wheel (Hub and Spoke) model of service organization and delivery. [1, 2] This process of change has raised a number of questions regarding the system's fitness to the globalized context, complex disease pattern and ability to respond to global health crises such as the current Covid-19 pandemic. The objective of this commentary is to provide insights into these issues to better understand a unique health system in its decentralization. We focus our discussion on the public curative system (also known as the public healthcare system) rather than on the preventive medicine component of Vietnam's healthcare system.

CONCEPT OF PYRAMID AND WHEEL MODELS

The pyramid model of organization is best defined as a triangle structure, starting with a single point at the top - the highest level, gradually spreading out towards the base – the lowest level. [3] A pyramid model is used to refer to a hierarchical system of ascending levels (from the base) of organization where each level medically and technically complements the preceding level, and the capacity of the lower level is less than the upper (Figure 1). In this model, interventions implemented at lower levels are designed to target broader segments of society with less intensity of resources and medical technology, which may improve their effectiveness in the context of limited resources available to low- and middle-income countries. [4]

On the other hand, the wheel model is represented by a circular "Hub and Spoke" framework, starting from a central hub and spreading out along "spokes" towards surrounding nodes (Figure 2). Under this model, the surrounding nodes provide high health care services for residents living in catchment areas as well as those from the other regions at the user's choice. The central hubs serve the general population nationwide with highly advanced technology and facilities. Both the central hub and surrounding nodes are linked so as to mutually support the overload of patients and the central hubs providing technology transfer to the surrounding nodal services. Thus, there is little technical demarcation in the circle model as compared with the pyramid model. The effectiveness of public health interventions in a wheel model has been demonstrated in nursing practice, health education, and administration. [5]

DECENTRALIZATION FROM PYRAMID MODEL TO WHEEL MODEL IN VIETNAM

Figure 1 shows the current public healthcare system organization model in Vietnam. According to this model, the healthcare system follows a pyramid framework and organized with four administrative levels at central, provincial, district, and commune levels. The central-level hospitals, located at the apex of the framework, typically provide specialist services, technical support and training for the lower levels. [6] Provincial and district health facilities provide general, less technical services. At the lowest commune level, community health stations (CHSs) deliver primary health care. Although this organizational structure has been gradually improved over the past decade, it still has several limitations. As Vietnam enters an epidemiological transition with increasing complexities of disease – i.e. a triple-burden pattern of slowly declining communicable diseases (CD), rapidly increasing non-communicable diseases (NCD), and intermittently remerging diseases, the gaps in healthcare services across different levels are becoming wider. [7] Since the lower health service levels (district and commune) are not allowed and sometimes not able to perform complex medical care or better treat common health conditions, patients tend to bypass CHSs or district health units to seek services at higher service levels (provincial or central), creating a significant patient overload at the provincial or central levels and under-utilization of services at lower levels. [8, 9]

Recently, in an effort to address the above challenges, Vietnam has started to shift from a pyramid model to a wheel (Hub and Spoke) model (figure 2). First, at an annual health review conference hosted by the Vietnamese Ministry of Health (VMOH) in 2014, directors and managers of the district and provincial hospitals requested that their hospitals be re-designated as regional rather than district and/or provincial hospitals and to receive more investment from the government and the VMOH to improve their facilities comparable to the central level.

Second, hospitals have undergone a process of being reclassified as per hospital ranking standards by VMOH. Hospitals are now ranked at four quality levels, with grade 1 represents the highest standard, inclusive of 39 central hospitals, 69 provincial hospitals and 1 district hospital. [6] At the district level, lower grade 3 and 4 hospitals are required to merge as Centres for Disease Control and Prevention (CDC) to provide both prevention and treatment, whilst higher-grade hospitals (1 or 2) are allowed to be separate from CDC. [7] Higher-grade hospitals receive more finance for healthcare from the government and are allowed to perform high tech services. This new reclassification placed lower-grade district hospitals (grade 3 or 4) under increased pressure to improve and upgrade services to a higher grade. It also improved the integration of health facilities for treatment, disease control and prevention as lower-grade hospitals become as part of CDC.

Third, there are several policy documents with specific regulations which have allowed cross-district linkage of health insurance payments at the district level since 2016, and future linkage at the provincial level from 2021. [10] These policy initiatives enable more freedom for patients to choose their own services at the district or provincial levels, rather than restricted referral to the district or provincial service within the patient's residential areas. Under this new linkage policy, most patients choose high quality hospitals. These policies of patient choice have also created a competitive environment among hospitals leading to quality improvement, so patients have more options to utilize high quality services right at district hospitals.

SUITABILITY OF THE REFORMED SYSTEM FOR GLOBAL HEALTH CHALLENGES

Any health system organization (and its transformation) should reflect the socio-economic development of a country and address the needs of its population as they change with changing epidemiology. In Vietnam, this health system decentralization helps address three objectives:

(1) to strengthen system capacity for quality of care improvement, particularly at primary level,

(2) to improve patient/user satisfaction, providing more freedom to choose providers and services

(3) to improve system efficiency with limited resources to better respond to more complex disease patterns (e.g., the double burden of communicable and non-communicable diseases) and public health emergencies (e.g., SARS, Covid-19 or other pandemics).

In this decentralization, the establishment of "regional hospitals" with the Government's investment in both facilities and human resources is expected to improve the system capacity to provide high-tech, high-quality services at the district and provincial level. Such services have previously been only available at the central level. This approach has provided patients more options to receive services at a facility near their residence, avoiding overwhelming demand placed upon central hospitals. In the current setting, this approach has created a wider network of more localized hospitals capable of treating patients with Covid-19. Vietnam's success of containing the Covid-19 pandemic has been internationally well-recognized with 1343 confirmed cases and 35 deaths by November 30, 2020. [11] Although this achievement has been the result of a range of public health responses, Vietnam's success stems from its ability to strategically implement those responses and enabled by its process of health system transition and adaptation. The intensive training and capacity building introduced for lower-level hospitals as part of this decentralization process, established more localized facilities for the management of Covid-19 patients. Similarly, the establishment of CDCs, not only generated more integrated and multi-function facilities, but also improved the system to address local needs while maintaining strong and timely responses to future public health emergencies as observed in the current Covid-19 pandemic.

CHALLENGES AHEAD

While it has been appreciated for ongoing efforts and positive signs of decentralisation, Vietnam has been facing several challenges. Despite the fast economic growth since the early 1980s known as Doi Moi policy, it hasn't lasted for long perhaps due to a lack of strategic and sustainable socio-economic development plans. [12, 13] This unstable growth not only affects the resource allocation for different sectors and industries, but also does so for process of health system decentralization. The process of economic transition and healthcare system decentralization, while bringing more benefits to both economy and health sector, has also created more elites and access to and use of high-quality health services among the high social class due to widened social inequality. [12, 14] This means that the country also needs to address other emerging issues as a result of this process. Noticeably, the most critical error for decentralization is to define it as a managerial exercise rather than a political mechanism. [15]

FIGURE 1. PUBLIC HEALTHCARE SYSTEM ORGANIZATION MODEL IN VIETNAM

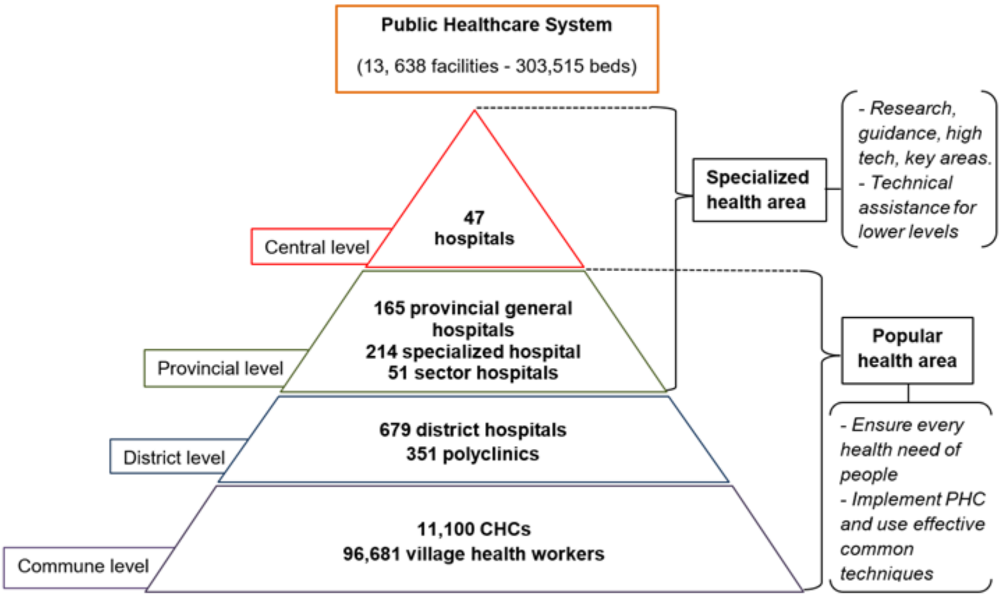
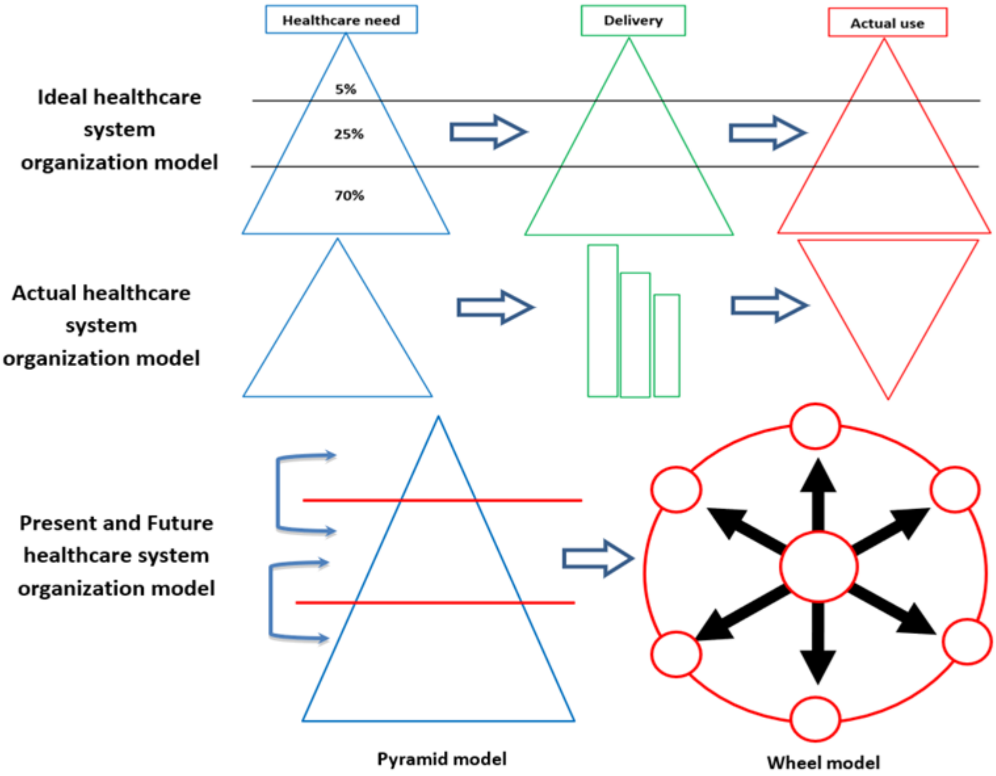


FIGURE 2. THE TRANSITION FROM THE PYRAMID MODEL TO WHEEL MODEL IN THE PUBLIC HEALTHCARE SYSTEM IN VIETNAM



Notes: The ideal pyramid model (at the top) represents a perfect matching between healthcare need, delivery and actual use where most clients (70%) use the lower-grade services (commune and district hospital services) and few (about 5%) seek the topic-grade services. However, the model of actual healthcare use is reversed in the middle pictures.

CONCLUSION

The pyramid model has clearly shown its limitations in Vietnam, with significant gaps emerging across different healthcare system levels leading to an overwhelming of capacity of centralized hospitals and underutilization of hospitals at district/provincial levels. The system organization and service delivery models were in need of decentralization, and this process has been initiated in Vietnam for a long time and now is still ongoing. The available evidence suggests that the country is on the right track. However, this decentralization will be challenged, take time and require long-term political and financial commitment, and effective collaborative processes among local authorities, the VMOH, hospitals and public health agencies at various levels. The success of this decentralization, therefore, remains to be seen but the future will inevitably belong to a patient-centred healthcare system with the ultimate goal of health care for all. The decentralization of the healthcare system in Vietnam may provide much insight for other low- and middle-income countries reshaping their system to handle the new complexities of the epidemiological transition and new emerging global health crises. Both opportunities and challenges are ahead. The time to reflect, imagine and act is now.

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RESEARCH ARTICLE

PUBLICLY FINANCED HEALTH INSURANCE SCHEMES AND HORIZONTAL INEQUITY IN INPATIENT SERVICE USE IN INDIA

Vanita Singh[1], Amit Garg[1], Arnab K. Laha[1], Stephen O'Neill[2]

1. Indian Institute of Management, Ahmedabad, India
2. Health Economics and Econometrics, London School of Hygiene and Tropical Medicine, United Kingdom

Correspondence: vanitas@iima.ac.in

ABSTRACT

Equity is a major policy objective of health care reforms across nations. Publicly Financed Health Insurance (PFHI) schemes are one major health care reform that have been adopted across developing countries to address inequity. Existing literature on the effect of PFHIs focuses on out-of-pocket expenditure and utilization of health services, while the effect of PFHIs on equity in health service use remains under-studied, particularly in the Indian context. This study addresses this knowledge gap.

In 2008 India launched a PFHI scheme with an aim to achieve horizontal equity, that is the equal treatment for equal needs, in the utilization of health services. Using data from the National Sample Survey Organization (NSSO), we analyze the extent of inequity in the utilization of inpatient services before (2004) and after (2014) the implementation of the PFHI.

The annual hospitalization rate increased from 2.4 per cent in 2004 to 4.4 per cent in 2014 and the increase is higher for rural population. The proportion of population covered by any health insurance scheme increased from 0.5 per cent to 15.3 per cent post-PFHI implementation. The study finds that PFHIs were associated with reduced inequalities in inpatient service use, but the extent of reduction varied across states and across urban/rural areas. Our inter-state analysis shows that the States with higher concentration of PFHIs among richer quintiles, a possible leakage and exclusion errors, have failed to ensure the needed access for their poor population. This failure reflects in their higher levels of income-based inequity in inpatient service use. This study has implications for the implementers of social security programs adopting targeted approach. There is a need for better strategies for the identification of beneficiaries and ensuring that they receive scheme benefits to have intended welfare effects.

KEYWORDS

PFHI, RSBY, inequity, inpatient use, effective targeting.

INTRODUCTION

Publicly Financed Health Insurance (PFHI) schemes are one major health care reform that have been adopted across developing countries, including India, to address inequity in healthcare service utilization. Studies from India, as well as other developing countries, report socio-economic inequalities in the utilization of health services. [1-4] PFHIs can help reduce these inequalities by targeting poor people and ensuring need-based access. [5] Inequality and inequity are often used interchangeably in the literature; however, inequity is defined as the inequality that remains after accounting for legitimate factors driving inequality. [6] Legitimate factors might include, [1] age, sex, and presence of illness. In this study, we assess inequity in inpatient service use in the pre and post PFHI period in India after accounting for the legitimate factors.

In the year 2008, India launched Rashtriya Swasthya Bima Yojana (RSBY), a publicly financed health insurance programme for poor people. Recently, in the year 2018, the Indian government rechristened and expanded RSBY as World's largest health insurance scheme, popularly known as Pradhan Mantri Jan Arogya Yojana (PMJAY) covering about 100 million poor families and providing insurance coverage up to 7000 USD. [2] The main aim of PFHIs in India is to increase access to inpatient services for poor people and reduce healthcare inequalities, thus this study focuses on the effect of PFHIs on inequalities in inpatient service use. [3,4]

PUBLICLY FINANCED HEALTH INSURANCE SCHEMES IN INDIA

India's engagement with PFHIs dates to the late 1940s when the central government implemented the Employees' State Insurance Scheme (ESIS) for the private sector workers. Later, in the year 1954, the Central Government Health Scheme (CGHS) was launched to provide comprehensive health care facilities for the central government employees and pensioners and their dependents. [5,6] Both, CGHS and ESIS, provides comprehensive medical coverage including ambulatory care (OPD based care), diagnostics, medicines, surgical and medical care. These schemes are popularly known as social health insurance schemes under which the funds are pooled through employer and employee contributions and supplemented by government subsidies. [7] Though these schemes provide comprehensive medical cover, the population covered under these schemes, even after more than six decades of their presence, is very small. All these central government schemes together cover about 23 million families comprising 82 million persons, which is 6.5 % of India's population. [8] The deficient public health system and very high OOP expenditure in the private sector mandated the Indian government to arrange for the health service provisioning for the poor population and those working in the informal sector. With the global push for UHC and the agenda of protecting the poor families from impoverishing health care expenditures, emerged a new generation of PFHIs for the informal sector workers and poor families.

In India, the first state to launch a PFHI, popularly known as Aarogyasri, was Andhra Pradesh in the year 2007. In the subsequent year, the central government launched Rasthriya Swasthya Bima Yojana (RSBY) across all the states. The RSBY scheme was launched in the year 2008 as a social security scheme by the Ministry of Labor and Employment, later in the year 2015, it was transferred to the health department. RSBY is a centrally-sponsored social program aimed at providing cashless hospitalization services amounting up to rupees 30,000 to poor people.[9] The scheme was rolled out in a phased manner and states had discretion in implementing the scheme. In the following years, a number of states, including Tamil Nadu, Karnataka, Kerala, Chhattisgarh, Rajasthan, Maharashtra either extended RSBY coverage or started their own state-specific PFHI. [3].

As per the recent estimates by National Health Accounts, Government of India, the share of Out-of-expenditure (OOP) expenditure in total health expenditure for India is 69% (Government of India, 2017), which is very high in comparison to other developing countries such as Brazil (25%) and China (31%).[10] The implications of higher levels of OOP expenditure include inequalities in accessing healthcare, contribution to household poverty, and negative impact on demand for health care. [3] PFHIs cover the full cost of hospitalization expenditure for the procedures covered under the schemes, thus removing access barriers for poor people. The objective of PFHIs scheme was to increase access to inpatient care for the poor people and address horizontal inequity in health service utilization. [11] Accordingly, the aim of this study is to analyze the reduction in inequity, if any, in the post-PFHI period. Further, the study aims to explore the inter-state differences in the reduction of horizontal inequity. For the state-level analysis we focus on 21 major states of India (out of 29 states and 7 union territories) constituting 98.44 per cent of the population of India.

DATA AND METHODOLOGY

DATA

We use individual level data (excluding deceased members) from the 60th round (Morbidity and Healthcare - 2004) and 71st round (Social Consumption: Health - 2014) of the National Sample Survey Organization (NSSO). NSS rounds are conducted under the Ministry of Statistics and Programme Implementation (MOSPI), Government of India. The data for each round is comparable as both rounds collected information on 'whether the person was hospitalized in the last 365 days' and record the ailment for which treatment was taken. Both rounds collected information on morbidity, particulars of inpatient and outpatient treatment in the last year and last 15 days respectively. This information was collected from a nationally representative sample of 383,338 individuals in the year 2004 and 333,104 individuals in the year 2014. Both rounds used a multistage stratified random sampling method. The details of the sampling methodology, questionnaire, definition of variables and initial findings can be found in reports prepared by MOSPI. [12]

STUDY VARIABLES

The study variables are presented in Table 1. Our dependent variable in the logit model was "Annual Inpatient Service Use". As suggested in the existing literature, [14,15,18,19] we have categorized our independent variables as need and non-need factors. We define need based on the individual's age, sex and presence of Non-Communicable Diseases. We chose NCDs as WHO (13) reports that 61% of the mortality in India is attributed to NCDs and it is mainly due to a lack of access to health services. The non-need factors include variables that have been found to consistently affect health service utilization, [14,15] including, state identifiers, rural/urban residence, literacy level, occupation of the head of household, marital Status, health insurance status, income (proxied by consumption expenditure).

TABLE 1: STUDY VARIABLES

TYPE OF VARIABLE	FACTORS	STUDY VARIABLE	DEFINITION
Dependent Variable	Inpatient Service Use	Actual	Use of any health facility for taking in-house treatment in the previous 365 days preceding the survey as reported
		Need-predicted	The utilization predicted from the logit estimation equation
Independent Variables	Need factors	Age	Dummy variables created for each of the five age categories (0-14, 15-29, 30-44, 45-59, 60+)
		Sex	Sex was dichotomous variable with Male=1 and Female=2
		Self-reported presence of Non-Communicable Diseases	Self-reported presence of NCDs a dichotomous variable with yes=1 and No=0
	Non-Need factors	Income Quintile	The sample population was divided into five quintiles (poorest, poor, middle, rich, richest) based on their per capita monthly consumption expenditure

	Residence	Residence was recorded as a dichotomous variable: Rural: 0 and Urban: 1
	Education Status	The education status was categorized into five categories: Illiterate, Primary, Secondary, Higher Secondary, Graduate and Above. A dummy variable was created for each of the category.
	Marital Status	Dummy variables created for each of the category of marital status: Unmarried, Currently Married, Widowed, Divorced/Separated.
	Social Category	Four dummy variables created for SC/ST, OBC, General, Others
	Health Insurance Status	A dummy variable created for “any health insurance scheme”.
	Occupation of the head of household	Four dummy variables created for categories: Self-employed, Salaried employee, Casual Labor, and Others.

ANALYTICAL STRATEGY

Data was analyzed using the Stata 15 statistical software package and estimates were weighted to account for the multistage stratified sampling design [16]. We used bivariate analysis and multivariate logit regression to study the income-based inequity in the utilization of health services. We used concentration curves (CC) and concentration indices (CI) to assess the degree of inequity in the health care use [17] and compared these across two time-periods (before and after the introduction of PFHIs).

We adopt indirect standardization method to standardize our health variable, inpatient service use, as suggested by Wagstaff and Doorslaer [18]. The generalized relationship between inpatient service utilization, and need factors and control variables is represented by equation [1] and depending on the nature of health variable G can be any functional form. We use logit regression as our health variable, inpatient service use, is dichotomous in nature.

$$y_i = G\left(\alpha + \sum_j \beta_j x_{ji} + \sum_k \gamma_k z_{ki}\right) + \epsilon_i \qquad [1]$$

where y_i is health care utilization variable; i denotes the individual, α, β and γ are parameter vectors; x_{ji} are individual values of the *J (j=1,…J)* confounding variables (need) and z_{ki} are individual values of the *K (k=1,…K)* non-confounding (control) variables. The indirectly standardized utilization $\hat{y}_i^{IS}$ is given by the difference between actual utilization (y_i) and need-based expected utilization $\hat{y}_i^{X}$, plus the mean of actual utilization $\bar{y}$

$$\hat{y}_i^{IS} = y_i - \hat{y}_i^{X} + \bar{y}$$

The Concentration Curve (CC)

We plot Concentration Curve (CC) [17] to visualize the inequality in the utilization of inpatient services. The CC plots the cumulative percentage of the inpatient utilization (on y-axis) against the cumulative percentage of the population, ranked by household per capita monthly expenditure, from poorest to the richest (on x-axis). If everyone, irrespective of his or her income has exactly the same value of the health variable, the concentration curve will lie along a 45-degree line, known as the line of equality. If the health variable is more concentrated among poorer (richer) people, the concentration curve will lie above (below) the line of equality.

Concentration Index

Concentration indices are commonly used for measuring socio-economic related inequality in health. [16,19] The standard concentration index as proposed by Kakwani, Wagstaff and van Doorslaer 1997 [17], can be written as:

$$C = \frac{2}{N\mu}\sum_{i=1}^{n} h_i r_i - 1,$$

where N is the sample size, $h_i$is the health variable for person i, μ is the mean of the health variable, and r_i is the fractional rank in the income distribution of the ith person.

Horizontal Inequity Index

We measure horizontal inequity index (HI) for inpatient services utilization pre and post PFHI period, to assess the effect of PFHIs on equity in in-patient service use. The Horizontal Inequity Index (HI) indicates health inequality attributable to illegitimate factors and is given by the difference between the concentration indices for actual utilization (C_a) and need standardized utilization (C_n). [16]

$\mathrm{HI} = C_a - C_n$

The HI ranges between -2 to 2 and a value of zero indicates utilization is according to need, i.e. there is no inequity. A positive (negative) value of HI indicates presence of inequity which is pro-rich (pro-poor) after controlling for need.

Inter-State Analysis

As PFHIs target poor families we expect that the states with effective targeting under PFHIs would have lower inequity in inpatient service use. For the purpose of our study, we define effectiveness of targeting as ‘concentration of PFHIs among poorer households’. We analyze the effectiveness of targeting under PFHIs using concentration index methodology. We expect that States with lower values of CI (negative is pro-poor) for PFHI would exhibit lower inequity in inpatient service use.

RESULTS AND DISCUSSION

DESCRIPTIVE STATISTICS

Descriptive statistics are presented in Table 2. The mean age of our sample population increased from approximately 26 years in the year 2004 to 29 years in the year 2014. The economically active population (15-59 years) has increased from 58 % in the year 2004 to 63 % in the year 2014 while the dependent age group (0-14 years) has considerably reduced from 35 % to 29 % in the year 2014 (see Table 1). The increased life expectancy is represented by increase in the proportion of the population aged above 60 years (7% in 2004 to 8% in 2014). The sample age-sex distribution is similar to that reported in the census reports of 2011 by the Government of India (2011), supporting the representativeness of our study sample. The proportion of males is higher in both years (51.2 % in 2004 and 51.4 % in 2014) and the majority of the population (75 % in 2004 and 70% in 2014) resides in rural areas, though this reduced somewhat by the year 2014. The persons reporting the presence of NCDs has shown significant increase from 3.2 percent to nearly 6 per cent during 2004 to 2014. The increased reporting of NCDs can be attributed to increased awareness about NCDs, increased access to diagnostics and also the shift in disease pattern from communicable to non-communicable diseases [13]. The variables that have shown significant increases between the periods include the proportion of persons with health insurance (increasing from 0.6 percent to 15.1 per cent), the proportion completing higher secondary education (increasing from 3.5 per cent to 7.4 per cent) and the proportion of salaried persons in the sample (increasing from 10 per cent to 18 per cent). In the analysis of equity differences between the two study periods, we control for all these differences while estimating horizontal inequity index.

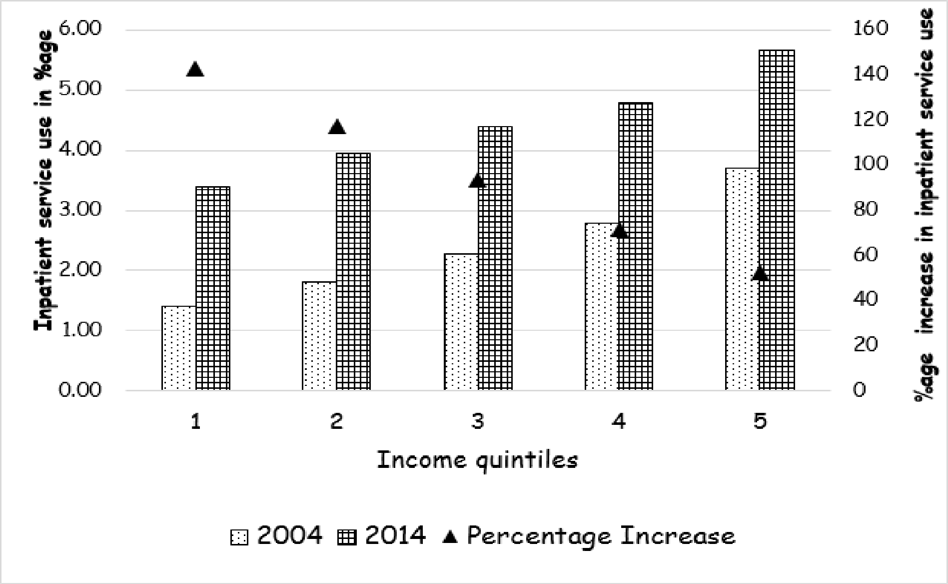
Table 2: Descriptive statistics of the study variables

VARIABLES	YEAR 2004		YEAR 2014	
	N	PERCENTAGE	N	PERCENTAGE
Total sample size	383338	100	3,33,104	100
Utilized inpatient services in last 365 days	29,036	2.4	49,823	4.4
Need Variables				
Age (years)				
0-14	1,33,622	34.86	96,590	29.00
15-29	1,00,704	26.27	90,045	27.03
30-44	76,231	19.89	72,032	21.62
45-59	46,246	12.06	48,419	14.54
60+	26,535	6.92	26,018	7.81
Gender				
Male	1,96,384	51.23	1,71,445	51.47
Female	1,86,954	48.77	1,61,659	48.53
Self-reported presence of NCDs	12,556	3.28	19,637	5.9
Control Variables				
Residence				
Rural	2,85,859	74.57	2,33,227	70.02
Urban	97,479	25.43	99,877	29.98
Employment (Head of household)				
Self-employed	1,97,114	51.42	1,73,067	51.96
Salaried employee	37,397	9.76	60,414	18.14
Casual Labor	1,16,810	30.47	84,313	25.31
Others	32,017	8.35	15,310	4.6
Marital Status				
Unmarried	1,88,792	49.25	1,53,346	46.04
Currently Married	1,73,981	45.39	1,61,785	48.57
Widowed	19,057	4.97	16,891	5.07
Divorced/Separated	1,508	0.39	1,082	0.32
Educational Status*				
Illiterate	1,62,576	42.45	105032	31.53
Below Primary	62411	16.28	54720	16.42
Primary	53478	13.96	46351	13.92
Middle	51576	13.47	45627	13.70
Secondary	24422	6.38	35439	10.63
Higher Secondary	13520	3.53	24747	7.39
Graduate and above	15275	3.98	21284	6.38
Household size (number of members in the house)				
1 to 3	50,096	13.07	53,248	15.98
4 to 7	2,45,167	63.95	2,22,564	66.82
8 to 10	60,373	15.75	45,169	13.57
More than 10	27,702	7.23	12,124	3.61
Health Insurance				
Government Funded (RSBY etc)	NA		41,027	12.3
Employer supported	1,669	0.44	4,230	1.3
Private Insurance	1,016	0.27	4,332	1.3
Others	NA		645	0.2
Not covered	3,80,653	99.3	2,82,868	84.9
Social Category				

Scheduled Tribe	31,332	8.17	30,841	9.26
Scheduled Caste	76,848	20.05	62,754	18.84
Other Backward Classes	1,54,609	40.33	1,47,392	44.25
General Category	1,20,548	31.45	92,117	27.65
Wealth quintiles				
Poorest quintile 1	77,269	20.16	68,268	20.49
Quintile 2	76,752	20.02	64,996	19.51
Quintile 3	77,779	20.29	79,745	23.94
Quintile 4	75,255	19.63	56,061	16.83
Richest quintile 5	76,284	19.9	64,035	19.22

For all children 0-14 years of age, the education status is reported for head of the household

FIGURE 1: INPATIENT SERVICE USE BY INCOME QUINTILES, YEAR 2004 AND 2014



INCOME INEQUALITY IN THE UTILIZATION OF INPATIENT SERVICES

The annual inpatient rate (defined as the percentage use of inpatient services at the individual level over last one year) has almost doubled from 2.4 (in the year 2004) to 4.4 percent in the year 2014. Figure 1 displays the proportion of the sample population reporting inpatient service use (IP) in last one year by income status in the year 2004 and 2014. It also reports percentage increase in the IP across income quintiles. Though, the annual inpatient rate is higher for the richest quintiles in both the years (2004: 3.7 %; 2014: 5.9%), the increase is higher for the poorest quintile (57 %) in the post-reform period, indicating possible increase in the access to IP services for poor people.

The analysis of CC (figure 2) also reflects the presence of income inequality and the use of inpatient services concentrated among rich, though reduced in the post PFHI. Figure 2 compares the concentration curves of actual inpatient service use for the year 2004 and 2014. It reflects a reduction in inequality however, utilization remains pro-rich as the curve lies below the line of equality. A dominance test [16] confirms that the distribution of the inpatient service use is less pro-rich in the year 2014 than it was in the year 2004. Figure 3 clearly suggests that though urban areas are more equitable (the curve is closer to line of equality for both the years) but the reduction in inequality is higher for rural areas. At the same time, the mean of inpatient service use has also increased and the increase is higher for rural areas. Analyzing these two changes together we can say that the increased utilization over time has disproportionately benefitted the poor in rural areas relative to urban areas. Studies that have looked at impact of PFHIs/RSBY in India also report positive impact of PFHIs on health service utilization for rural areas but not for urban areas. [20]

Table 3 presents the values of CI for urban and rural India. In the year 2004, the CI for actual utilization was 0.165 for India (mean of actual utilization: 0.024), which reduced to 0.121 (mean of actual utilization: 0.044) in 2014, suggestive of reduced, but not eliminated, pro-rich inequality. When we compare rural India and urban India, we find that though the rural areas are more inequitable (higher CI values) the reduction in inequality is higher for rural areas. In the year 2004, the CI for rural areas was 0.165 (mean = 0.022) that significantly reduced to 0.136 (mean = 0.042) while for urban areas the CI reduced from 0.082 (mean = 0.03) to 0.069 (mean = 0.043). These CI values suggests that the proportion of people utilizing inpatient services tend to be less concentrated amongst the rich overtime and the reduction in concentration is larger for rural areas.

INCOME INEQUITY IN INPATIENT SERVICE USE

The inequality observed may be legitimate [1] if it is driven by need factors alone, thus we analyze inequity. Horizontal inequity is the difference between the concentration of actual and need-standardized use. The horizontal inequity analysis (see Figure 3) for India suggests that inequity in inpatient service use has become less pro-rich post-PFHI implementation (2004 HI: 0.158; 2014 HI: 0.112), and the reduction in inequity is greater for rural areas (2004 HI: 0.157; 2014 HI: 0.119).

INTER-STATE ANALYSIS

In figure 4, we compare the HI index across states. There are significant variations across states in the level of horizontal inequity in inpatient service use. States which show significant increase in inequity includes Chhattisgarh, Jharkhand, Madhya Pradesh, Odisha (see figure 4). The inter-state differences in the levels of inequity reduction could be explained by the differences in their public health infrastructure and health outcomes. The inter-state disparities in the health system performance are well highlighted by stark differences in the Infant Mortality Rate (IMR), considered as a sensitive indicator of health system performance. [21] The IMR in better performing states such as Kerala and Goa are as low as 9 per 1000 live births, while, for the poor performing states such as Uttar Pradesh, Bihar, Madhya Pradesh, Chhattisgarh, Rajasthan, Orissa, Jharkhand, Assam it lies in the range of 50-65 per 1000 live births. [22] These are the states that have very high levels of inequity even post PFHI (see figure 4). Similar differences have been observed between rural and urban areas in India [23,24] which perhaps explain the higher levels of inequity in rural areas. This discussion highlights the need to address inter-state differences and urban-rural differences in healthcare access as implementing PFHIs without a well-functioning health system would be a challenge and waste of resources.

Further, the existing studies have highlighted that poor performing states not only lack public health infrastructure but also efficiency to use increased funds [25,26]. All these factors taken together could explain the higher levels of inequity in poorer states. PFHIs provide access to private health system for the poorer population, thus they have the potential to reduce access inequalities only if they serve the poorer population. The existing studies have highlighted issues of mistargeting under PFHIs. [24] We hypothesize that states with effective targeting (concentration of PFHIs among poorer population) would have lower levels of inequity.

To test our hypothesis, we examine the correlation between the level of horizontal inequity and the concentration index of PFHIs. The results show significant ($p<.000$) positive effect of targeting effectiveness on the level of equity (figure 5). Almost 70% of the variation in HI index is explained by concentration index of PFHI. These results support our hypothesis and helps us explain the inter-state variation in inequity reduction.

Figure 2: Concentration Curve (CC) for inpatient service use, by year

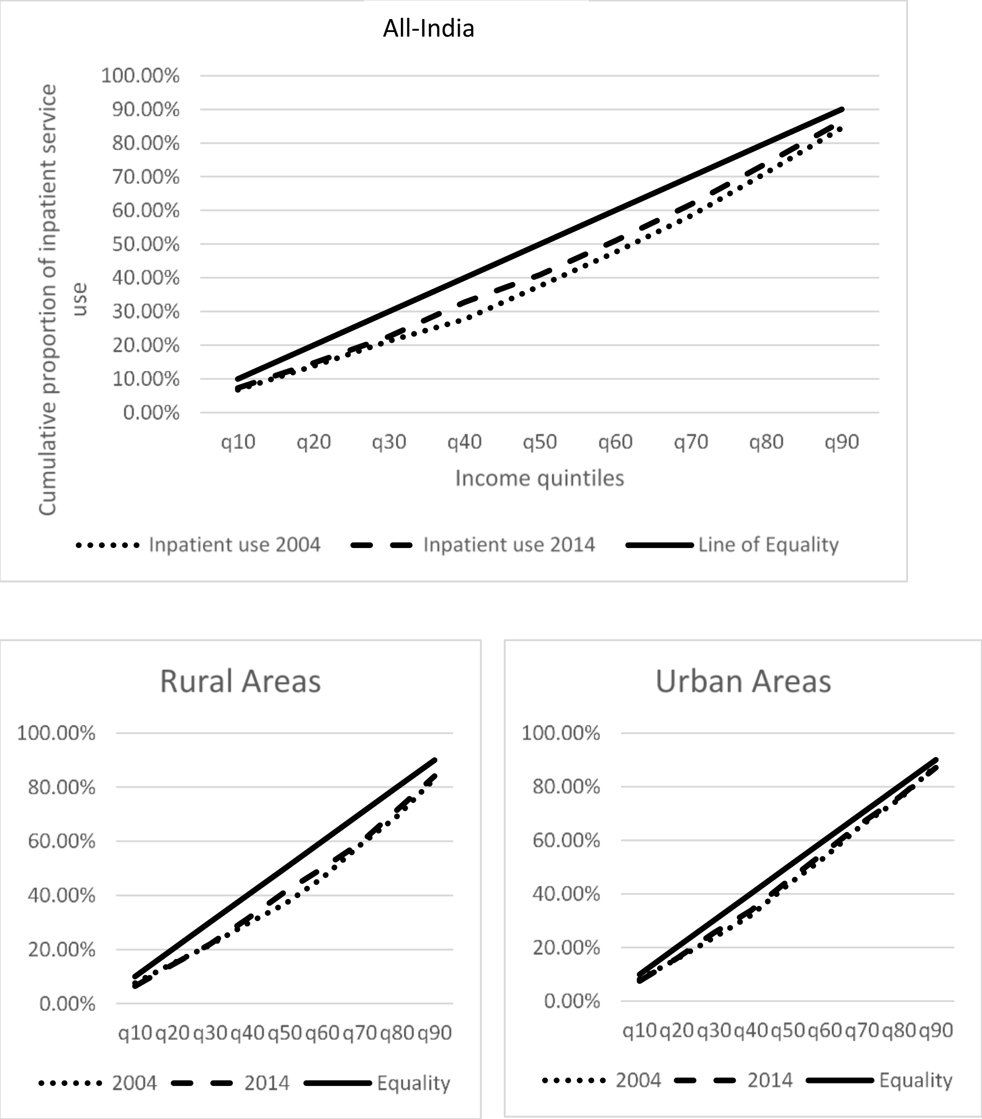


TABLE 3: CONCENTRATION INDICES (CIS) FOR ACTUAL AND NEED STANDARDIZED UTILIZATION, 2004 AND 2014

	Index value	Robust std.	Index value	Robust std.	Test of significance for difference between 2004 and 2014 (p-value)
ACTUAL CI					
India	0.165	0.007	0.121	0.007	0.0
Rural	0.165	0.009	0.136	0.010	0.0
Urban	0.082	0.011	0.069	0.011	0.3
NEED STANDARDIZED CI					
India	0.007	0.000	0.009	0.000	0.013
Rural	0.008	0.000	0.017	0.000	0.0
Urban	0.009	0.001	0.032	0.001	0.0

FIGURE 3: HORIZONTAL INEQUITY INDEX IN THE YEAR 2004 AND 2014 BY RURAL-URBAN

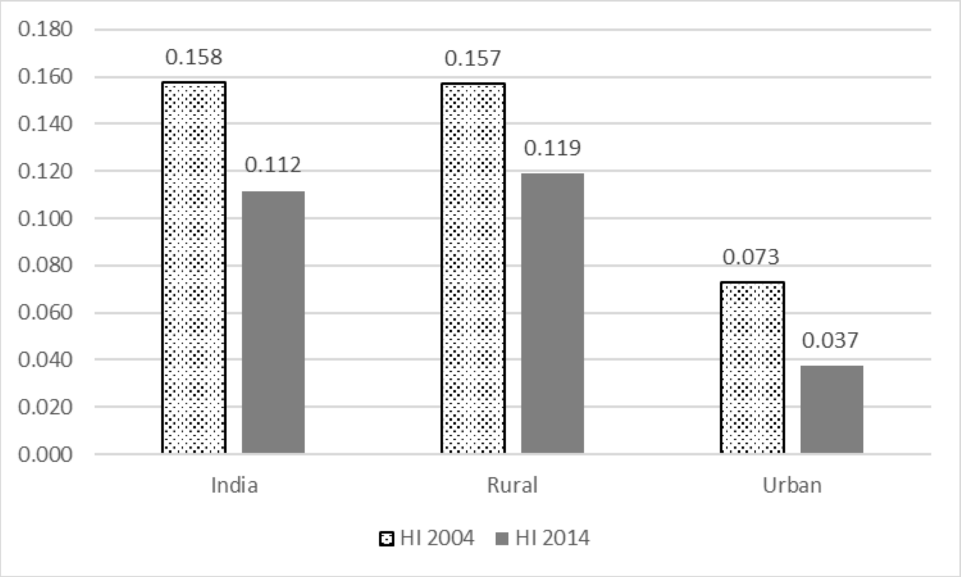


FIGURE 4: COMPARING HORIZONTAL INEQUITY INDEX ACROSS STATES BEFORE AND AFTER PFHI

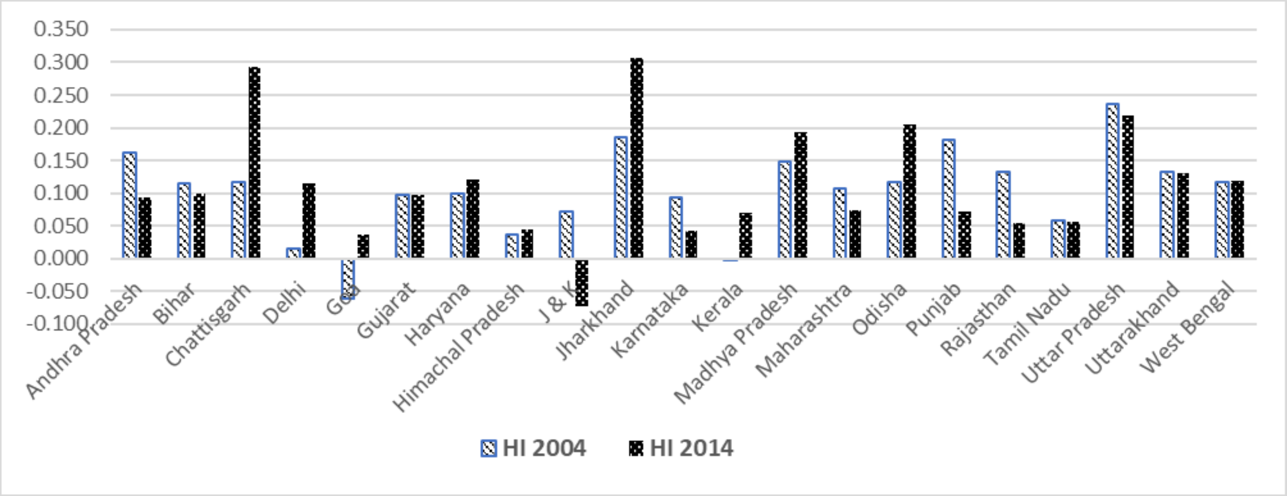
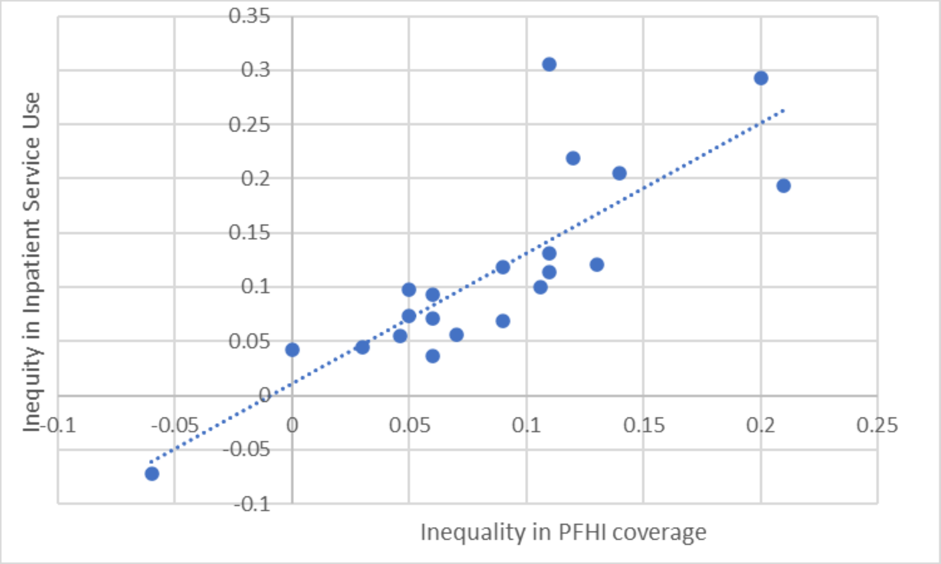


FIGURE 5: RELATIONSHIP BETWEEN INEQUALITY IN PFHI COVERAGE AND INEQUITY IN INPATIENT SERVICE USE



The issues of targeting and leakage in social security schemes have been reported by a number of researchers. [11,27] Studies analyzing the performance of RSBY/state-run PFHIs found that targeting is weak, as the list of eligible beneficiaries (below poverty line households) is either not updated or manipulated by socially advantaged people. [11] Such targeting issues and leakage could also explain the persistent pro-rich inequity in the utilization of inpatient services post RSBY/PFHI. There is need for the Indian government to fix such issues and achieve equity, as a huge amount of tax-money is directed to finance these schemes within limited fiscal space.

LIMITATIONS OF THE STUDY

Though the study results have major implications in current Indian context, few limitations are acknowledged. Firstly, the need-standardized utilization is based on self-reported morbidity and the utilization itself may have been affected by the perception of need. There could be bias in the measurement of inequality due to differences in the conception of illness across income levels. However, researchers have found that poor people report morbidity less often when compared with the rich, [17] suggesting our estimates of the degree of pro-rich inequity may be conservative. Secondly, we have used two time periods, 2004 and 2014, to capture the association of inequity with PFHIs. Post 2004, there have been many reforms in sectors other than health care, which coupled with economic growth can also explain the reduction in inequity, therefore we do not make any claims of causality, such claims may best be supported through natural experiments.

There is need to analyze the reduction in inequity using latest data available. Moreover, the inter-state differences in the reduction of inequity could be explained by the differences in implementation/ and or governance structure of PFHIs. There is need for future studies to study the inter-state implementation differences.

CONCLUSION

PFHIs were launched with the main objective of improving access to inpatient services and reducing inequities in the utilization of health services. Our findings indicate a positive effect of PFHIs on the equality of utilization of inpatient services. There is an overall increase in the utilization of inpatient services, which is higher for the poorer quintiles and rural areas, which is consistent with a positive effect of PFHIs as these schemes target poor people and remove access barriers for them. This study has highlighted the role of effective targeting and responsive public health system in reducing inequity. There is need for sustained efforts to reduce health care access inequity by ensuring access to poor people either through PFHIs or through strengthened public health system. Perhaps, the recent launch of PMJAY, India's latest PFHI by Indian government is one step towards sustaining the efforts towards inequity reduction, the results of which are yet to be seen. This study findings provide two critical insights for the success of PMJAY one is effective coverage of poorer population under PMJAY and other is the need to address inter-state variations in the health system functioning. Perhaps the poorer states need greater implementation support and managerial capacity to run PFHIs as they are already struggling with a poor public health system. The effectiveness of targeting approach for PMJAY, including identification of beneficiaries, preventing exclusion errors and leakage would determine the success of this flagship program of Indian government.

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RESEARCH ARTICLE

DISTRESS AND QUALITY OF LIFE AMONG TYPE II DIABETIC PATIENTS: ROLE OF PHYSICAL ACTIVITY

Devaraju Kadari[1], Gadiraju Padmaja[2], Binod Rajak[3]

1. Department of Psychology, Osmania University, India
2. Health Psychology, University of Hyderabad, India
3. School of Management Studies, University of Hyderabad, India

Correspondence: binodkumarhr@gmail.com

ABSTRACT

This study measures the distress and Quality of Life (QoL) among people with type II diabetes in relation to physical exercise. The study was conducted using diabetic participants chosen from various hospitals, aerobic centres, playgrounds, and gyms in India. The participants were divided into two groups – group 1 comprising people who did not adopt physical activity as part of their diabetes management strategy and group 2 comprising people who engaged in physical activity. A non-equivalent control group design study was performed on both groups employing purposive sampling methods. Pearson r showed that distress is negatively correlated with QoL among type II diabetics in both groups. Independent t-test indicated that participants in group 2 showed better QoL and lower levels of distress compared to their counterparts in group 1.

KEYWORDS

Distress, Quality of Life, Type II Diabetics, Physical Activity, India.

INTRODUCTION

Diabetes mellitus, a serious ailment of the 21st century, is a predominant cause of morbidity and mortality and imposes a significant economic burden on the health care system worldwide. [1] Diabetes has been categorized as a chronic disease [2] and could be life-threatening because of the dangerous and inevitable complications that arise due to it. [3] The Director-General of WHO has declared diabetes to be a disease that no longer only affects rich nations but is becoming prevalent among developing and underdeveloped nations worldwide. [4]

Earlier studies have suggested that diabetes leads to many severe health conditions, including kidney failure, retinopathic blindness, lower-limb amputations, cardiovascular problems, and even death. Diabetes results from an imbalance in the body's ability to metabolize glucose, the body's primary source of energy, through disruptions in insulin action, the pancreatic hormone responsible for transporting glucose into cells for the release of energy through various biochemical cycles.

Diabetes is of three types, viz., type I, type II and gestational diabetes. Type I diabetes caused by the pancreas' failure to produce insulin: due to faulty auto-immune response. Type II diabetes occurs due to insulin resistance of the cells in the body. In such condition, body cells cannot use insulin, and over time, the pancreas reduces the production of insulin, resulting in insulin deficiency. Type II diabetes is also known as "non-insulin dependent diabetes mellitus" or NIDDM. [5] Type II diabetes is the most commonly occurring type and accounts for 90% of total diabetic cases worldwide. Nearly 4.63 billion adults (20-79 years) have diabetes worldwide, and the number expected to exceed 7 billion by 2045. [6] It also projected that India would have about 57 million diabetic people by 2025.

India is the diabetic capital with the fastest prevalence rate of type II diabetes. [7, 8, 9] This situation burdens individuals, their families, and the Indian healthcare system significantly. [10] The objectives of the study are to measure the distress and Quality of Life (QoL) among type II diabetic participants, analyse the relationship between distress and QoL of type II diabetic participants and compare the differences between distress and QoL in two groups of participants, one engaging in physical activity as a complementary management technique, and the other not following complementary management.

REVIEW OF LITERATURE AND HYPOTHESES DEVELOPMENT

Type II diabetes and psychological outcomes (Diabetes-related Distress)

Diabetes-related distress as the patient's concerns about his/her self-management of diabetes, perception of support, emotional burden, and access to quality health care. [11] The second version of Diabetes Attitudes, Wishes, and Needs (DAWN2) study was conducted in 17 countries through a global partnership initiative involving four continents. [12] The study showed that Diabetes-related Distress (DD) is found in all countries, with 44.6% of diabetes patients being affected by it. DD was also found to disrupt daily lives of patients through disturbed social interactions and emotional states. [13] Numerous studies have shown that anxiety, depression, distress and decreased QoL are the common psychological problems among people with type II diabetes. [14] Recent studies suggested that emotions play a significant role in an individual's life. [15] Researchers have also shown that the mere presence of DD as a comorbid condition is likely to decrease QoL among type II diabetics. [16] High DD has been shown to result in poor glycaemic control [17, 18] and psychological distress might also hamper QoL. [19, 20, 21]

Type II diabetes and quality of life

World Health Organization defines QoL as an "individual's perception of their position in life in the context of the culture and value systems in which they live and about their expectations, standards, concerns and goals". [22] QoL among people with diabetes provides a varied perception that encompasses the emotional, physical, and social functioning. [23] Type II diabetes gradually affects an individual's physical, mental, spiritual, and sociocultural dimensions, which compromise patients' QoL. Generally, patients report low QoL levels when they are suffering from one or more than one comorbid condition, i.e., diseases like type II diabetes, cardiovascular diseases and cancer are more strongly related to poor QoL than other chronic diseases. [24] The previous study suggested that diabetic patients and QoL negatively associated with each other. [25] The QoL of diabetics could be negatively affected by complications such as obesity, hypoglycaemia, depression, and ageing. [26] A study has shown that patients of type II diabetes have poor QoL due to depression. [27]

Physical activity (PA) and its benefits for type II diabetics

Recent studies have shown that regular physical exercise is associated with better QoL among type II diabetes patients. [28, 29] Health and quality of life outcomes impair quality of life in type II diabetes mellitus. [30] Physical activity categorizes into several types: walking, resistance exercise, flexible exercise, aerobic exercise, muscle-strengthening, bone-strengthening, and stretching. [31] A combination of exercises such as walking, dancing, and weightlifting on most days of the week can help control blood glucose levels. Regular physical activity helps lower blood glucose levels with type II diabetes. [32] Better social life and physical activity have higher satisfaction in men than women. [33] The promotion and adoption of lifestyle changes such as healthy diet, regular physical activities, reducing smoking and maintaining healthy body weight have universally acknowledged acceptable diabetes management practices. It has also shown that community-wide approaches that facilitate physical activity could reduce chronic problems of diabetics in the community. [34] Numerous studies that correlate exercise and QoL have that people who engaged in more physical activity have better QoL and overall health than those who do not engage in physical exercise. [35]

The American Diabetes Federation (ADA) suggests that patients with type II diabetes must engage in at least 150 minutes of any physical activity such as walking, running, cycling, swimming, resistance training, stretching, and strengthening every week, or a minimum 90 minutes of energetic aerobic related exercises per week. [36] An earlier study has suggested that physical activity related exercises must prescribed to all people with diabetes as part of their glycaemic control management. [37] Healthy lifestyle interventions must include regular physical activity, brisk walking, or light resistance exercises. [38, 39, 40] Regular physical activities like walking 10,000 steps a day also appear to help prevent and manage type II diabetes. [41] Literature suggests the reducing sedentary time improves the glucose control in type II Diabetic patients. [42] Following a healthy lifestyle reduces the risk of type II diabetics. [43] Recent research revealed that PA significantly affects Diabetics type II patients. [44, 45] Walking ten thousand steps helps improve people with diabetes type II patients. [46]

Given the proliferation of type II diabetes worldwide, there is a need to understand the various parameters related to this illness. QoL plays an essential role in health, significantly because diabetic distress can affect type II diabetic patients' health. However, literature linking type II diabetes and distress, QoL is scarce, more so in the Indian setting. This study has conceptualized to find the links between these three variables and proposed following hypotheses.

> **H1**- There is a significant difference between group1 (participants not engaging in any physical activity) and group 2 (participants engaging in physical activity as a complementary diabetes management technique) in quality of life and distress.
>
> **H2**- There is an association between distress and QoL of patients with type II diabetes.

METHODOLOGY

Plan and design

The present study used a non-equivalent control group design. [47] The participants divided into two groups. "A" was our control group 1, in which participants did not adopt any complementary management technique involving physical activity. "B" was our group 2, in which, participants followed a complementary management technique of physical activity such as walking, aerobic activity, resistance exercises and other strengthening exercises. The participants remained unaware of their categorization into two different groups, and English is the language in which the tools administered. Results were analysed using IBM SPSS 20. The independent variable was the complementary management technique used, i.e., walking, aerobic activity, resistance exercises and other strengthening exercises, and the dependent variables were distress and quality of life.

Participants

The purposive sampling method was used for a sample of 200 people diagnosed with type II diabetes. [48] The sample comprised 114 men and 86 women with type II diabetes since the last six months—one hundred participants placed in each group. The participants of group1 were the out-patients from various hospitals and playgrounds, gym centres and aerobic centres in south India. People diagnosed with type II diabetes adhering to medication in group 1 and adhering to medication and physical activity in group 2. The participants were in the age group of 29 – 80 years. The mean score of age and standard deviation score for group 1 were 60.27 and 7.99; those for group 2 were 61.20 and 9.79; those for the overall sample were 60.74 and 8.93, respectively. Group 1 participants were on medication alone, while group 2 participants in addition to medication, following a physical exercise regimen for at least six months. Physical exercises included walking, running, cycling, swimming, resistance training, stretching, and strengthening and aerobic exercise. Type II diabetic participants following alternative forms of management techniques to control their diabetes like yoga and faith-based yoga are excluded from the study.

Measurement tools

The Diabetes Distress Scale, English (DDS17E) comprising 17 items were used to measure the distress among Type II diabetics. [49] Each question score on a 1 to 6 scale range, where 1 indicated 'not a problem' and 6 denoted 'serious problem'. This scale measured four dimensions of distress, namely Emotional Distress (ED) (5 items), Physician-related Distress (PD) (4 items), Regimen-related Distress (RD) (5 items) and Interpersonal Distress (ID) (3 items). Scores range from 17 to102. Diabetes 39 scale consisting of 39 items and two overall rating scales, was used to measure Type II diabetic participants' QoL. [50] It is a multidimensional scale that assesses five domains of QoL including diabetes control (12 items), energy and mobility (15 items), anxiety and worry (4 items), social burden (5 items) and sexual functioning (3 items). The 39 items were measured using a five-point Likert scale, and score ranged from 39 – 273. Higher the score, lower is the quality of life and vice versa. The reliability ranged from 0.82 to 0.93.

RESULTS

The analysis uses the correlation to understand the relationship between QoL and distress and t-test, to analyse the differences between group1 and group 2 in QoL and distress. The results analyse as total distress and total QoL along with their dimensions. Table 1 shows that the participants of the two groups differed significantly in the level of distress. The participants in group 2 had lower diabetes-related distress (M=24.70, SD=8.94, t (198) =16.76, p<.001, Cohen's d=2.37) compared to the participants in group 1 (M=48.06, SD=10.68). Significant differences were found between the two groups in all four dimensions of distress with the following data: emotional distress, (t (198) =15.27, p<.01, Cohen's d=2.16), physician-related distress, (t (198) =9.25, p<.01, Cohen's d=1.33), regimen-related distress, (t (198) =16.96, p<.01, Cohen's d=2.42), and interpersonal distress, (t (198) =11.09, p<.01, Cohen's d=1.58). Table 2 shows that the participants of the two groups differed significantly in their quality of life. The participants in group 2 had better QoL (M=12.14, SD=8.72), t (198) =19.13, p<.01, Cohen's d=2.70 than the participants in group 1 (M=40.29, SD=11.84). Significant differences can be seen between the two groups on five dimensions of quality of life.

TABLE 1, MEAN (M), STANDARD DEVIATION (SD) AND T-SCORES OF GROUP 1 AND GROUP 2 WITH RESPECT DIABETIC DISTRESS AND ITS DOMAINS

VARIABLES	GROUP 1		GROUP 2		*T* (198)	COHEN'S *D*
	Mean	*SD*	*Mean*	*SD*		
1. Distress total	48.06	10.68	24.7	8.94	16.76**	2.37
a. Emotional distress	3.45	0.82	1.72	0.78	15.27**	2.16
b. Physician related distress	1.86	0.58	1.2	0.39	9.25**	1.33
c. Regimen related distress	3.25	0.81	1.49	0.63	16.96**	2.42
d. Interpersonal distress	2.36	0.85	1.26	0.49	11.09**	1.58

** p<.01, M-mean, SD- standard deviation

TABLE 2 MEAN (M), STANDARD DEVIATION (SD) AND T-SCORES OF GROUP 1 AND GROUP 2 REGARDING DIABETES QOL AND ITS DOMAINS

VARIABLES	GROUP 1		GROUP 2		*T* (198)	COHEN'S *D*
	Mean	*SD*	*Mean*	*SD*		
2. QoL total	40.29	11.84	12.14	8.72	19.13**	2.7
a. Energy and mobility	42.84	12.04	14.66	9.09	18.07**	2.57
b. Diabetes control	37.8	12.18	9.17	10.54	17.27**	2.51
c. Anxiety and worry	40.04	14.01	11.92	11.8	15.35**	2.17
d. Sexual behaviour	50.17	19.09	21.72	17.01	11.12**	1.57
e. Social burden	34.83	15.17	6.17	8.22	16.60**	2.34

** p<.01, M-mean, SD- standard deviation

Distribution of distress scores in group1 and group 2 participants with type II diabetes

The frequency distribution of distress scores of the 100 participants in group 1, shown in figure 1. The scores of the participants ranged from 10 to 75. The mean and standard deviation scores were 48.06 and 10.68, respectively. Figure 1 shows the scores of distresses of the 100 participants in group 2. The scores ranged from 15 to 50. The mean and standard deviation scores were 24.70 and 8.94, respectively. The distribution of QoL scores for 100 participants in group 1 (figure 1) wherein the scores ranged from 5 to 76. The mean and standard deviation scores were 40.29 and 11.84, respectively. The frequency distribution of QoL scores of group 2 participants (figure 2) in which, the scores ranged from 0 to 40. The mean and standard deviation scores were 12.14 and 8.73, respectively. The Bar graph shows that the participants in two groups varied in their mean scores on distress and QoL (Figure 3). We can see that the participants in group 1 have higher distress than group 2 participants. We can also see that participants in group 1 had poor QoL than group 2 participants.

FIGURE 1.1: FREQUENCY DISTRIBUTION OF THE DISTRESS SCORES OF PARTICIPANTS IN GROUP 1 (M = 48.06, SD = 10.68)

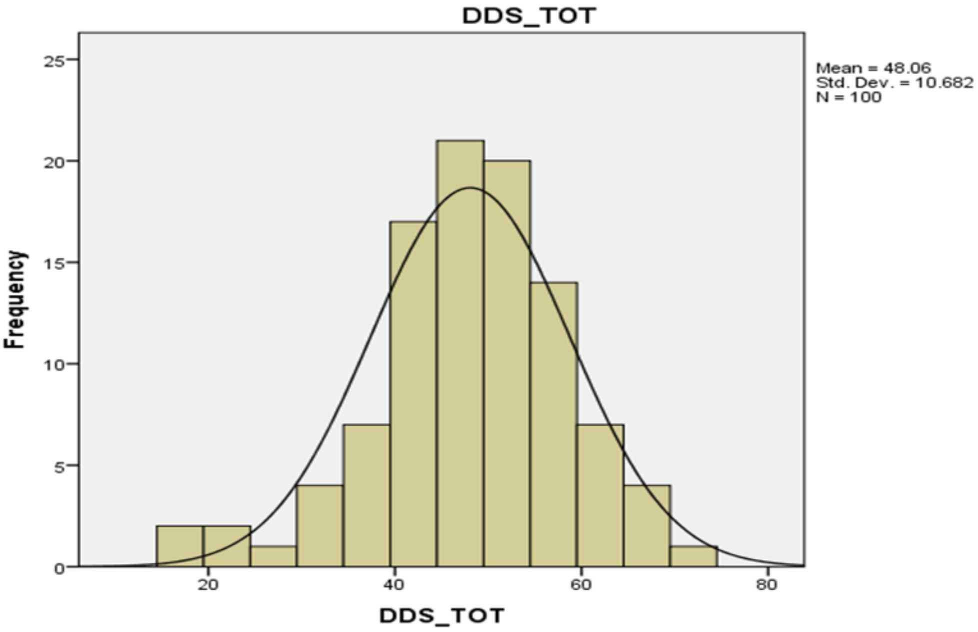

FIGURE 2.2: FREQUENCY DISTRIBUTION OF THE DISTRESS SCORES OF PARTICIPANTS IN GROUP 2 (M = 24.70, SD = 8.94)

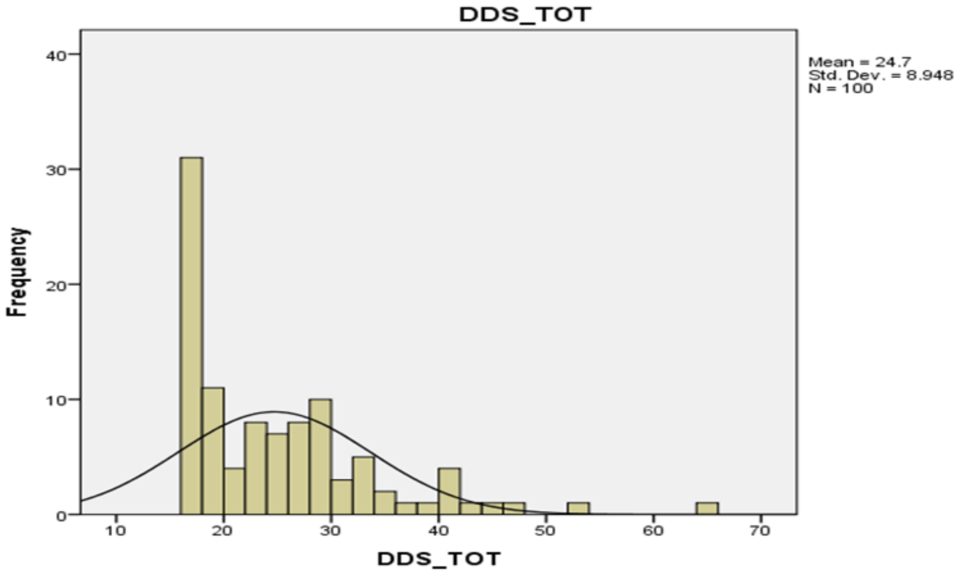

FIGURE 2.1: FREQUENCY DISTRIBUTION OF THE QOL SCORES OF PARTICIPANTS IN GROUP 1 (M = 40.29, SD = 11.84)

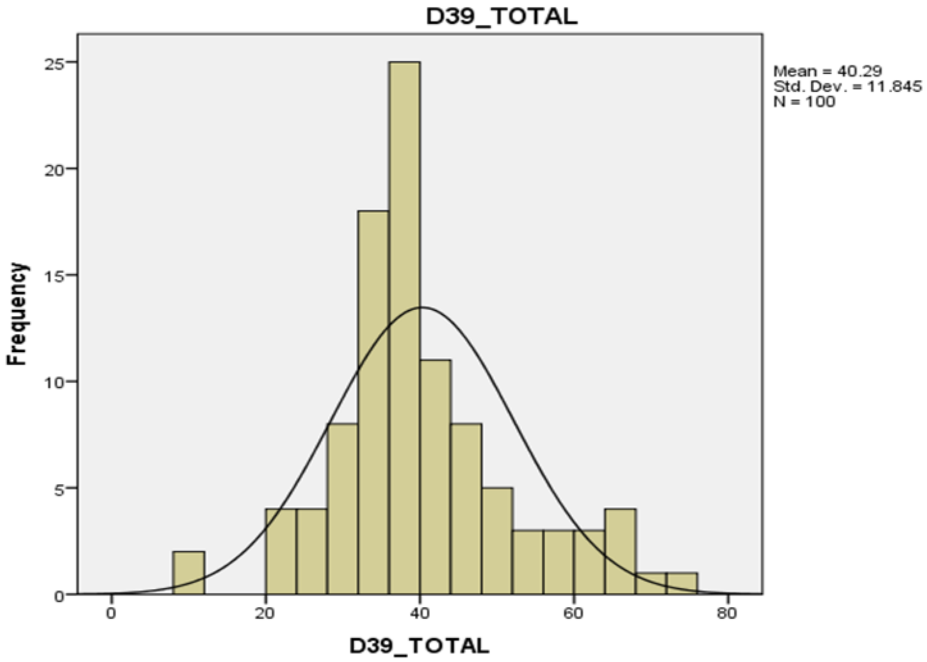

FIGURE 2.2: FREQUENCY DISTRIBUTION OF THE QOL SCORES OF PARTICIPANTS IN GROUP 2 (M = 12.14, SD = 8.73)

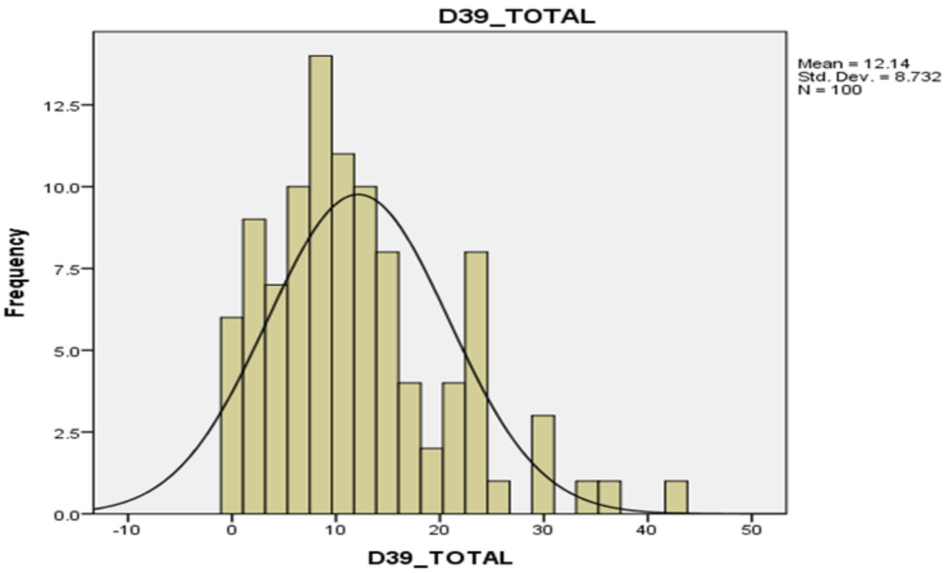

FIGURE 3: BAR GRAPH REPRESENTING MEAN SCORES OF GROUP 1 AND GROUP 2 FOR DISTRESS AND QOL REGARDING THEIR RESPECTIVE DIMENSIONS

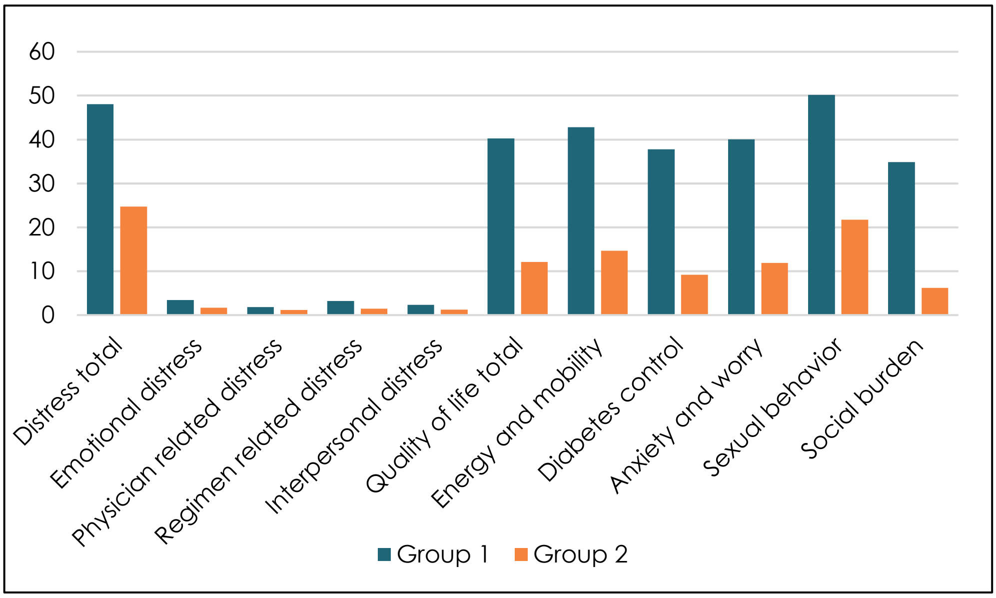

TABLE 3: THE INTERCORRELATION BETWEEN DISTRESS AND QUALITY OF LIFE

	TD	ED	PD	RD	ID	TQOL	EM	DC	AW	SF	SB
TD	-	.93**	.78**	.93**	.74**	.73**	.64**	.75**	.51**	.28**	.50**
ED		-	.59**	.82**	.55**	.68**	.60**	.74**	.47**	.20*	.41**
PD			-	.64**	.68**	.59**	.49**	.62**	.41**	.24*	.47**
RD				-	.59**	.67**	.59**	.65**	.45**	.38**	.44**
ID					-	.53**	.44**	.54**	.43**	0.11	.49**
TQOL						-	.89**	.92**	.75**	.53**	.72**
EM							-	.72**	.56**	.39**	.44**
DC								-	.68**	.34**	.72**
AW									-	.27**	.57**
SF										-	.37**
SB											-

Note: TD = Total Distress, EB = Emotional Burden, PD = Physician-related Distress, RD = Regimen-related Distress, ID = Interpersonal Distress, TQOL = Total Quality of Life, EM = Energy & Mobility, DC = Diabetes Control, AW = Anxiety & Worry, SF = Sexual Functioning and SB = Social Burden. ** p<.01, * p<.05.

DISCUSSION

This study's first objective was to measure the distress and QoL among type II diabetic participants about their physical exercise. The study showed that group 2 experienced lower levels of distress and had better QoL than those of group 1. The study's second objective was to analyse the association between distress and QoL in type II diabetic participants. Results analysed through Pearson (r), indicated a negative correlation between distress and quality of life. Based on the scores alone, the present study's result proves a positive correlation between the scores of distress and quality of life. There is thus sufficient evidence that distress and QoL among type II diabetic participants are negatively correlated. This study's third objective was to compare the difference between distress and QoL of group 1 and group 2 participants. Results analysed through t-test showed the significant relationship between low level of distress and high QoL regarding their dimensions in group 2. [51]

The results of this study suggest that adherence to daily physical activity plays a critical role in the effective management of type II diabetes, which is consistent with observations from recent studies on the association between physical activity and diabetes management. [52, 53, 54] Walking for at least 30 minutes every day was shown to reduce the risk of type II diabetes by approximately 50%. [55] Previous research suggests that an intense PA leads to critical problems, so a person with type II diabetes can safely perform PA. [56] On the contrary to this, lack of infrastructure, and physical constraints were the factors that acted as barriers to physical activity among older adults. [57]

In the correlation table for group 2, when we move across the distress, QoL and their dimensions, both variables and their dimensions have significant relationships with each other; except for two dimensions - physician-related distress and regimen related distress. These two dimensions, however, had a significant relationship with the QoL dimension, sexual functioning. On the other hand, interpersonal distress was not a significant association with sexual functioning; because many of the participants were older adults who already reached menopause and andropause and may have associated with other significant old age problems. In group 2, QoL and all its dimensions had significant relationships with distress but not group 1. The lack of significance level could be attributed to lack of physical activity and various other significant factors. With these observations, we can conclude that group 2 have better QoL than participants in group 1.

IMPLICATIONS OF THE STUDY

The study proves the physiological responses to physical activity and their role in lowering distress and improving QoL regarding type II diabetic participants. These findings allow psychologists (especially health psychologists) to confidentially design interventions that include physical activity, to minimize the distress and improve the QoL in type II diabetic patients. The study also indicates specific physical activity techniques that are convenient and manageable for patients with type II diabetes. This study also points out the need for the healthcare professionals and policymakers to take necessary steps in designing effectual interventions for the improvement of overall health aspects of type II diabetic patients. The government must design interventions related to various physical activity techniques on type II diabetics. This intervention should be done through various diabetic prevention programs under the surveillance of National Health Schemes.

CONCLUSION

This study shows the importance of physical activity among people with type II diabetes and proves that physical exercise and psychological relaxation could improve patients' QoL. PA recommendations should tailor to meet the specific needs of people with type II diabetes. [58] The psychological outcomes can see in the present study through the low scores on the scale of diabetes distress and high QoL scores associated with physical activity. Several unhealthy behavioural practices of people with type II diabetes leads to various psychological disturbance. Some of the PD are decreased QoL in type II diabetic participants and thus stressed that physical activity is imperative to diabetes patients to reduce distress and improve quality of life.

LIMITATION AND FUTURE SCOPE

The sample size is too small to generalize the findings and is also geographically restricted to India's southern part. Future studies may include a larger sample size with a random sample. Future studies can study the effects of pre- and post-intervention methods. If the medical intervention combined with psychophysiological interventions, it fetches better results in the overall QoL of type II diabetic participants. The study results showed that distress correlates negatively with QoL among type II diabetics in both groups, which demands the need for interventions, especially managing type II diabetes through physical activity.

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VIEWPOINT ARTICLE

ACHIEVEMENTS AND CHALLENGES OF IRAN HEALTH SYSTEM AFTER ISLAMIC REVOLUTION: STRUCTURAL REFORMS AT THE SECOND STEP

Mohammad Meskarpour-Amiri, MohammadKarim Bahadori, Seyed Mostafa Hakimzadeh

Health management research center, Tehran, Iran

Correspondence: mailer.amiri@gmail.com

The first 40 years of the Islamic revolution in Iran is called the first step of development. [1] Iran's health system has had significant success in providing universal health coverage at the primary health care level. [2] The development of the primary healthcare network especially, in rural and deprived areas is financed by public funds. The increase in the number of health facilities and health care providers per population, and simultaneously serving the role of education, research and healthcare service provision are the major achievements of the health system in Iran after the Islamic revolution. [2-4] Also, after Covid-19 outbreak, Iran had good progress in the human trial of homegrown COVID-19 vaccine. However, Iran's health financing system is still far from ideal. [5, 6]

The instability of financial resources and inappropriate payment mechanisms [5, 7, 8] remain major challenges of Iran`s health system. Insufficient resources of insurance companies to reimburse healthcare providers [9, 10] and long-term delays in paying healthcare providers have led to dissatisfaction among providers and decline in quality of care as well as an increase in out-of-pocket payments and household exposure to catastrophic health expenditures. Unfortunately, the accumulated debt of insurance companies to medical centres has led to a crisis in terms of provision of hospital services, distribution of medicines in pharmacies, and sale of medical equipment. [11] On the other hand It seems, due to COVID-19 crisis, Irans hospitals -as a heart of health services providing system - are faced with an irreversible economic shock.[12]

Iran's health care system challenges stem from not only the lack of resources but also is largely due to inappropriate health policymaking and macro-level health decisions. A sharp increase in medical tariffs (up to 400%), the development of health insurance coverage through unstable sources, and not paying enough attention to risk pooling and risk-sharing mechanisms in the health system are some of the most important adverse effects of last health reforms on Iran health system [13-15]. On the other hand, there was not enough attention to address the main structural weaknesses of the health system including the implementation of a coherent referral system, family physician program and electronic health record (EHR). [9, 16] In this situation, health insurance companies cannot afford to pay for the inefficiency costs of the health system in Iran. [11]

In the current situation of structural weakness, despite providing new financial resources, the challenges in health financing systems remained. The health system in Iran requires a fundamental reform of its structure and process. If these changes are not made, the health system financing problems will not be solved, and the mere injection of new financial resources will not be a good solution to the problem in the long-term. Coherent policies should be pursued and implemented to organize the structure of the health system in Iran. At the first step, it is recommended that sustainable resources be allocated to the implementation and development of structural reforms including referral system, family physician, EHR and private health insurance coverage. These reforms should take into account the experience of the country and the success of other countries in creating an effective system of universal health coverage. Hence, the health reforms in terms of structure and process could be the linchpin of the health system in the second step of the Iran Islamic revolution.

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RESEARCH ARTICLE

STRATEGIC ANALYSIS OF COMMUNITY PARTICIPATION IN PRIMARY HEALTH CARE IN IRAN AND PRESENTATION OF PROMOTION STRATEGIES USING INTERNAL AND EXTERNAL ENVIRONMENT ASSESSMENT TECHNIQUES

Hadi Karimi Nodehi[1], *Nader Khalesi*[1], *Amir Ashkan Nasiripour*[1]. *Pouran Raeissi Dehkordi*[2]

1. Department of Health Services Management, Semnan Branch, Islamic Azad University, Semnan, Iran
2. Department of Health Services Management, School of Health Management and Medical Information Science, Iran University of Medical Sciences, Tehran, Iran

Correspondence: Nader Khalesi, Email: Khalesi_nader@yahoo.com

ABSTRACT

INTRODUCTION

Community participation in health affairs and especially in the field of primary health care is one of the requirements for achieving the goals defined in this field. Accordingly, the present study was designed and implemented with the aim of strategic analysis of the internal and external environment in the field of primary health care in Iran and presentation of the promotion strategies to attract community participation.

METHODS

This is a qualitative study that was conducted using the internal and external environment assessment technique called Strengths, Weaknesses, Opportunities, and Threats (SWOT). The data used were obtained through a semi-structured quality questionnaire and a survey on strengths and weaknesses, opportunities, and threats, as well as proposed promotion strategies to improve community participation in the field of primary health care.

RESULTS

Analysis of external environment of the field of primary health care in Iran regarding community participation led to identification of the opportunities such as increasing community literacy. The possibility of using public spaces and media as well as influential people to attract community participation. Threats such as financial and employment constraints of families, citizens' unfamiliarity with their effective role in health, and inadequate intersectoral participation. The evaluation of the internal environment led to the identification of strengths in such as native selection policy for health workers; and weaknesses such as lack of attention to evidence-based performance and poor time access to health activities.

CONCLUSION

The findings of the present study indicate that there are internal weaknesses and external threats to community participation in the field of primary health care.

KEYWORDS:

Primary health care, Community participation, Strategic analysis

INTRODUCTION

Today, the issue of health promotion with emphasis on people's participation has received a lot of attention, and the international community expects countries to do the same. [1, 2] Primary health care (PHC) refers to those health services that are provided to the community during their first contact with the health system. [3, 4] In recent years, the issue of health promotion has become more necessary and accepted by emphasizing the role of people in health development. Despite, emphasis and attention at the international level, the Iranian health care system has not achieved much success in attracting active and effective community participation in the health field due to limited citizen participation in community health affairs, especially in relation to health care and major challenges in this regard. [8-10] It should also be noted that it seems that the epidemiological approach that used to be the basis for assessing health needs is no longer responsive to meet the needs and challenges facing the health system, especially primary health care, and the is a need for an approach called participatory approach (based on demand, needs, and perspectives of interested partners including professionals, policymakers, patients, and the general public) with an emphasis on a culture of participation. [12] The present study was designed and implemented with the aim of strategic analysis of the internal and external environment of primary health care in Iran and presentation of promotion strategies to attract community participation. SWOT analysis is considered as one of the most common tools for analyzing internal factors (strengths, weaknesses) and external factors (opportunities and threats) in the organization. The main purpose of SWOT analysis is to move forward based on strengths, minimize weaknesses, seize opportunities, and reduce threats. Internal analysis enables the organization to identify its competencies and weaknesses.

METHODS

This qualitative study was conducted on 25 health policy makers (head of the network, head of the health centre) from January to October 2019. Purposeful sampling method was used to select participants. Inclusion criteria included having at least 15 years of experience in the health system. Data collection was carried out using semi-structured interviews. The interviews lasted between 45 and 60 minutes using an electronic recorder. The interview site was a quiet room in the health centre.

At this stage, the data collection tool included a semi-structured qualitative interview guide. Literature review as well as in-depth interviews were used to design the interview guide. This guide could be updated during the interviews. In other words, the researcher conducts additional interviews with previous people so that everyone can answer all the guide questions.

Data collection method: Before conducting all interviews with the participants, prior coordination was conducted by phone or in person. After providing the necessary explanations about the research objectives and its importance and necessity and obtaining informed and voluntary consent from participants, the interviews were conducted. SWOT technique or matrix is a tool for identifying threats and opportunities in the external environment of a system and recognizing its internal strengths and weaknesses to assess the situation and formulate a strategy to guide and control the system. [13]

Steps of SWOT analysis include determining the objectives of the analysis, identifying the strengths and weaknesses of the organization (resources and capabilities), identifying opportunities and threats in the micro and macro external environment, as well as assessing the interaction of strengths and weaknesses against opportunities and threats to develop effective strategies. [16, 17]

This study was approved by the Islamic Azad University of Semnan with the Code of Ethics: IR.IAU.Semnan.REC.1396.4. Written and oral consent form were received from all participants before interviews. Participants were assured that their information would remain confidential and that they could withdraw from the study at any time.

RESULTS

According to the purpose of the present study, its findings can be presented in five main areas of strengths, weaknesses, opportunities, and threats related to community participation in primary health care, as well as promotional suggestions for appropriate strategic management in this area. The findings related to each of these areas are mentioned in detail below in Table 1, 2

TABLE 1: ANALYSIS OF THE EXTERNAL ENVIRONMENT OF THE PRIMARY HEALTH CARE SYSTEM REGARDING COMMUNITY PARTICIPATION

OPPORTUNITIES	THREATS
- Relatively increasing literacy of the public people and their increasing potential for effective participation -The possibility of using public spaces (neighborhoods, schools, mosques, etc.) in programs related to community participation - The possibility of using mass media to educate the public and encourage them to participate - The possibility of financial participation of philanthropists, especially in the provision of spaces and health equipment - The possibility of using communities such as Friday prayers, religious ceremonies, charity food, etc. in order to educate the public and attract their participation	- Low-income status of men and lack of enough time to participate in health affairs -Impossibility for women's active participation due to their family concerns - Irrational expectations and financial and political abuses of some philanthropists - Lack of a suitable cultural, social, etc. context for people's participation - Lack of awareness of people about their rights and effective role in health issues -Lack of appropriate laws and policies to support and promote community participation in the health field - Inadequate intersectoral cooperation between different departments in the health field

TABLE 2: ANALYSIS OF THE INTERNAL ENVIRONMENT OF THE PRIMARY HEALTH CARE SYSTEM REGARDING COMMUNITY PARTICIPATION

STRENGTHS	WEAKNESSES
- The effective role of health center officials in attracting community participation - Selection of health personnel from native forces and familiar with native culture -The effective role of health liaisons and ambassadors - Physical access of people to health workers, liaisons, and ambassadors - Providing the potential to attract community participation in health programs from a hardware and software perspective	- Lack of understanding of health conditions and needs by the relevant authorities -Lack of knowledge and skills in some managers and health personnel in attracting the community participation and especially philanthropists - Lack of research to assess resources and identify deficiencies and needs -Lack of written and transparent guidelines regarding community participation in health affairs - Political abuses of people's participation and gatherings - Short access to health centers and non-participation of employed people due to their job affairs - Lack of manpower providing services in order to attract community participation

SELECTIVE STRATEGIES

SWOT analyses performed based on the interaction between the internal and external environment of the health system led to the development of 18 promotion strategies to improve community participation in the health field, and SO, WO, ST and WT domains consisted of 6, 5, 5 and 2 strategies, respectively (Table 3).

TABLE 3: PROMOTION STRATEGIES DETERMINED BASED ON THE INTERACTION OF INTERNAL AND EXTERNAL FACTORS

	EXTERNAL ENVIRONMENT	
INTERNAL AND EXTERNAL FACTORS	**Opportunities (O)** O1: The relatively increasing literacy of the community and the increase of their potential for effective participation O2: The possibility of using public spaces (neighborhoods, schools, mosques, etc.) in programs related to community participation O3: The possibility of using mass media to educate the community and encourage them to participate O4: The possibility of financial participation of philanthropists, especially in the provision of spaces, equipment and health personnel O5: The possibility of using communities such as Friday prayers, religious ceremonies, charity food, etc. to educate the community and attract their participation	**Threats (T)** T1: Low-income status of men and lack of enough time to participate in health affairs T2: Impossibility for women's active participation due to their family concerns T3: Irrational expectations and financial and political abuses of some philanthropists T4: Lack of a proper sociocultural context for public participation T5: Lack of awareness of people about their rights and their effective role in health issues T6: Lack of appropriate laws and policies to support and promote community participation in the health field T7: Inadequate intersectoral cooperation between institutions in the health field

INTERNAL ENVIRONMENT	**Strengths (S)** S1: The effective role of health center officials in attracting community participation S2: Selection of health personnel from native forces and familiar with native culture S3: The effective role of health liaisons and ambassadors S4: Physical access of people to health workers, liaisons, and health ambassadors S5: Providing the potential to attract community participation in health programs from a hardware and software perspective	**SO strategies** S5O1: Empowering the public and people who are willing to participate in health-related activities S2O3 and S1O2: Encouraging the public to participate in community health issues through the mass media as well as influential people, especially in communities S2O2: Using public facilities and spaces to attract community participation S3O1: Increasing the knowledge and skills of health liaisons and ambassadors S1O4: Leading philanthropists to community health priorities by raising their awareness S5O1: Providing the necessary hardware and software platform to maximize health participation among the public and governmental and non-governmental institutions	**ST Strategies** S2T1, S3T2 and S4T1: Effective and purposeful use of the ability of native health personnel, liaisons and health ambassadors to establish an active and constructive relationship between the health system and the community S1T3: Careful attention of managers and officials of health centers in preventing philanthropists and participants abusing of their social status S4T5: Training the general public about the importance of their participation in health programs and their inalienable rights in this regard S5T6: Efforts to create a legal context and prestige public for people to participate in the health affairs of their community S1T7: Effective and targeted activity of health center officials in order to promote intersectoral support and cooperation outside the health sector
	Weaknesses (W) W1: Lack of understanding of health conditions and needs by the relevant authorities W2: Lack of knowledge and skills of some health managers and personnel in attracting the participation of	**WO Strategies** W1O1: Entrusting the management of health centers to people with sufficient knowledge and experience in the field health management W2O1: Empowering health managers about the importance and	**WT Strategies** W6T1: Holding health sessions in the evening and at night shifts or on holidays to allow employees to participate in the health affairs W6T2: Active referral of health personnel to homes as well as private and public institutions to establish effective communication

	people and especially philanthropists W3: Lack of research studies to review resources and identify deficiencies and needs W4: Lack of clear guidelines regarding community participation in health affairs W5: Political abuses of people's participation and gatherings W6: Short access to health centers and lack of public participation due to their job affairs W7: Lack of manpower providing services to attract community participation	attraction of the community actively W3O1: Promoting evidence-based and research-based management in the health field, especially to attract the community participation, especially health philanthropists W4O1: Development of clear guidelines to prevent any political, guild or personal abuse by participants in the health field W7O4: Attracting the support of philanthropists in order to recruit health personnel needed by health centers and increase their capabilities	between the health sector and the community

DISCUSSION

The aim of the present study was to perform a strategic analysis of the internal and external environment of primary health care and presentation of promotion strategies to attract community participation. Analysis of external environment of the field of primary health care in Iran regarding community participation in health affairs led to identification of opportunities such as increasing the level of community literacy and improving the ability of people to participate in health affairs, the possibility of using public spaces to hold conference with the community, the possibility of using media and influential people in the community in encouraging people to take an active part in health affairs as well as the influence of health philanthropists in removing financial constraints in this area.

The most important threat identified included the impossibility of people's participation due to financial constraints and consequently their busy work and family schedule, unfamiliarity of the society with its valuable role in the field of health, political and financial abuse of officials and philanthropists of health gatherings and insufficient participation of organizations which are outside of the health sector. Assessment of the internal environment of primary health care led to the identification of few strengths, including native selection policy in the case of health personnel and the existence of relative basic infrastructure for community participation. This assessment also led to the identification of significant weaknesses such as the inefficiency of some health managers, lack of attention to evidence-based performance, absence of community participation due to poor time access to health activities and the lack of health personnel.

Another study conducted in Iran by Mohammadi-Shahbolaghi et al., Introduces issues such as centralization at the community level, separation of government from people, and the lack of equal access to information as the main barriers to community participation [10] Findings of this study also showed a relationship between level of education, hours of leisure time, existence and duration of social participation in the past with the level of social participation of citizens (10). In a study conducted in Saudi Arabia, Abdulhadi referred to illiteracy, low health awareness of citizens, irresponsibility of people towards participation in community health, lack of information needed for health personnel to make decisions, the presence of non-native and non-Arabic speaking health personnel in health system of Saudi Arabia, the tendency of the society towards private medical centers, and the non-participation of women in health affairs as the most important challenges of community participation in health affairs. [23]

Gatewood also divides the factors influencing social non-participation to health promotion into individual (monthly income, level of education, leisure and family size) and environmental dimensions (school, work, family and friends). He also refers to self-efficacy of participants as one of the important factors in social participation and believes that people with high self-efficacy are more participatory than others. [24] Existence of committed, experienced and motivated personnel, direct and effective displacement and activity of employees of organizations involved in promoting community health, is an important source for attracting social participation. [25] Organizational management model, introduction of community health promotion interventions and plans [26], management network, managers' resources, and the attitudes of those involved in policymaking are among structural-organizational factors affecting social participation in health promotion. [27] Overall, it can be claimed that political, legal, legislative, and economic factors affect social participation in health promotion. [27] Kenny et al. have also referred to challenges in defining concepts such as community and participation, the purpose and logic of community participation, disregard for research and creation of evidence related to community participation, determining people participating in the health field, the role of government in attracting community participation, and continuation of this participation. [28]

The most strategies proposed to promote public participation in community health can be summarized and reported as follows. Increasing awareness and empowerment of citizens to participate in health-related activities with the cooperation of the media and influential people, provision of public spaces and facilities, holding participatory meetings, continuous empowerment of health personnel and liaisons, directing and targeting the assistance provided by philanthropists to health priorities. Providing the necessary hardware and software facilities to attract maximum participation of people and governmental and non-governmental institutions in the health field. Entrusting the management of health centres to people with sufficient knowledge and experience. Increasing their skills in attracting community participation, promoting evidence-based and research-centered management in the health field. Developing clear guidelines to prevent any political / guild or personal abuse of those involved in health affairs, active referral of health personnel to people's living environment to obtain their views and support. Improving the timely access to health activities, creating appropriate legal and social contexts for community participation in health affairs, strengthening intra- and inter-sectoral cooperation with individuals and health institutions.

In their study, Mohammadi-Shahbolaghi et al. suggested promotion strategies such as creating a correct image in the authorities regarding the issue of community participation, educating people to have appropriate interpersonal communication and building a collaborative culture, as well as creating the ground needed to promote community participation and thus to increase prosperity in this area. [10] Abdolhadi also suggested the following important promotion strategies to increase community participation in matters related to primary health care: eradicating illiteracy, especially among women, expanding health education through the media, expanding cooperation with local institutions, active referral of health personnel to homes to encourage community participation, creating health-friendly communities, creating appropriate incentives for participants, selection of experienced and preferably indigenous health personnel as well as decentralization in the field of primary health care. [23] Draper et al. also referred to creation of appropriate political facilities and conditions for discussion and dialogue between people to reach a single definition of problems, a single decision, public education, and legal and financial support for these programs as important and necessary factors for expansion of community participation. [26]

The effort and accuracy of the research team in selecting the best experts using purposeful sampling and directing the analysis of the external and internal environment of the organization to the point to develop promotion strategies can be considered the strengths of the present study. They are few relevant domestic and foreign studies, and the present study focused only on the community participation in the field of primary care, therefore, the results cannot be fully generalized to other areas of health services, namely treatment and rehabilitation.

CONCLUSION

The present study showed that there are major problems and challenges in the internal and external environment of primary health care to expand effective community participation in health activities and we can overcome them by relying on the strengths of the health system and external opportunities. Undoubtedly, the results of the present study and the promotion strategies presented can pave the way for managers and policy makers in the field of primary health care in Iran.

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RESEARCH ARTICLE

UTILIZATION OF HEALTHCARE SERVICES & HEALTHCARE EXPENDITURE PATTERNS IN THE RURAL HOUSEHOLDS OF NEPAL

Sachin Pokharel[1], Shiva Raj Acharya[2], Sandip Pahari[3], Deog Hwan Moon[2], Yong Chul Shin[5]*

1. Department of Public Health, La Grandee International College, Nepal
2. Graduate School of Public Health, Busan Medical Campus, Inje University, South Korea
3. School of Health and Allied Sciences, Pokhara University, Nepal
4. Department of Occupational Health & Safety, Inje University, South Korea

Correspondence: sameeracharya39@gmail.com

ABSTRACT

BACKGROUND

Healthcare financing as a lever to move closer to universal health coverage. Financing health care has been identified as a barrier to access to health care and increases the likelihood of impoverishment of households. There is still limited study and information on healthcare service utilization in the rural community of Nepal. Our study aims to assess utilization of healthcare services & patterns of healthcare expenditure in the rural households of Nepal.

METHODS

A community-based research study was conducted among 341 rural households of Tanahun District, Nepal. A Chi-square test was used for assessing the associated factors with healthcare utilization.

RESULTS

The utilization of in-patient and out-patient health services was 89.9 % and 10.1 % respectively. The majority of households (88%) had in USD less than $410 annual household healthcare expenditure. The mean annual healthcare expenditure was found to be $279. Nearly three-fourths (71.4%) of households had annual expenditure on medicine more than $40 with mostly on allopathic medicine (93.4%). The majority of participants (70%) mentioned that the healthcare expenditure was a burden to their household.

CONCLUSION

Despite the higher knowledge of health insurance, the involvement was found to be very low & poor. Educational status, knowledge about insurance, privileged ethnicity, religion, income source were the major factors associated with the utilization of healthcare services. Awareness & promotion programs focusing on rural communities should be implemented with affordable health services.

KEYWORDS

healthcare utilization, healthcare services, health insurance, healthcare expenditure, rural householdAt lant, quia nobitem estiandebit quis mo odipici duntiamus.

INTRODUCTION

Health financing levers to move closer to universal health coverage lie in three interrelated areas: raising funds for health, reducing financial barriers to access through prepayment and subsequent pooling of funds in preference to direct out-of-pocket payments and allocating or using funds in a way that promotes efficiency and equity. [1] In low-income countries, direct out-of-pocket (OOP) payments are the principal means of health system financing. [2] Public health expenditure to GDP ratio has remained low in developing countries and the general public has no choice but to seek healthcare from their own pocket, which has remained the dominant source of financing. [3] Significant Out of pocket expenditure may lead households to a "financial catastrophe" in the absence of risk and payment pooling mechanisms or insurance. [4]

Globally, approximately 44 million households or more than 150 million individuals face cata- strophic health expenditure (CHE), and about 25 million households or more than 100 million individuals are pushed into poverty by the need to pay for services every year. In the South Asian region, this proportion has been estimated to reach up to 60%–70% of total expenditure due to poor public spending on health. In most of the low/middle-income countries, a large proportion of the money spent on healthcare comes from the out-of-pocket (OOP) expenditure of patients or their families. [22-28]

In Nepal, there has been estimated that 48–69% households can experience financial hardship and often impoverishment as a result of their spending on health care. In the long term, financial protection against the risk of catastrophic health expenditure at household level can be achieved through tax-based health financing systems or social health insurance schemes or a combination of both. [25] Nepal has committed to the global community to achieve universal health coverage by 2030. As the government moves to progressively realize Universal Health Coverage (UHC), it remains committed to expand health services, increase the population coverage and reduce financial burdens for the citizens. [5,6,16-20, 27-31] Almost 50% of the Nepali health budget is made up of international aid. [7] More than half of Nepali women visited traditional healers for healthcare as the first choice of treatment. [8,9] The study was carried out to determine the patterns of health care expenditure among people of the rural municipality in Tanahun, Province No. 4 of Nepal.

MATERIALS AND METHODS

Study design & population

A quantitative, descriptive cross-sectional research study was carried out among 341 households of selected wards from the rural municipality in Tanahun, Province No. 4 of Nepal. Households that migrated into our study location since the time of less than one year were excluded from the study. The responsible person of the household who takes health care and other financial decisions were included for this study.

Sampling technique & sample size

Initially, three wards were selected randomly by using simple random method and 125, 126, 90 households from each ward were selected using proportionate sampling respectively. Then, the households from each ward were selected through systematic random sampling. Sample size was calculated using the formula,

$$n = \frac{Z^2pqN}{d^2(N-1) + Z^2pq}$$

Z = standard normal variable at 95% CI (1.96), N = Total number of households (4132) [21], p = estimated proportion of out of pocket expenditure (p = 0.68) based on the similar study [13], q = 1-p, d = desirable error (5%). With the application of 10% non-response rate, the sample size of this study was 341.

Data collection & management

To refine the developed data collection tools, precise and accurate information, the tools was tested. 10 % (n= 35) of defined sample size were used to conduct pretesting of designed tools. The reliability of tools was tested in SPSS using Cronbach's Alpha which calculated value was found to be greater than 0.8 in average. It was conducted in Bandipur municipality of Nepal because of neighboring rural municipality with similar characteristics. Data collection was from June to August 2019 through face to face interview technique with structured questionnaire. Data were entered and coded in EpiData 3.1 and further analyzed in IBM SPSS version 21. Descriptive analysis used frequency, mean, median and standard deviation. Bivariate analysis using Chi-square ($\chi 2$) test to determine the association between independent and dependent variables was utilised.

Age, religion, ethnicity, location, family type, education, income source, occupation was assessed as socio-economic variables. Healthcare utilization & healthcare expenditure was considered as dependent variables for the study purpose. Approval for the study was taken from the ethical review board of Nepal Health Research Council (ERB No: 574/2019). Informed consent was taken from the respondents. The privacy of the information was maintained and used for the research purpose only.

RESULTS

As depicted in Table 1, most of the household members were Hindu. The majority of households were Janajati of the same race, language and customs (70.1%). Agriculture was the main source of income by covering 44% of all income sources.

TABLE 1: SOCIO-DEMOGRAPHIC INFORMATION AND PATTERNS ON UTILIZATION OF HEALTH CARE SERVICES

Socio-demographic information		
Variables	Frequency(n)	Percentage (%)
Religion		
Hindu	287	84.2
Buddhist	54	15.8
Caste		
Brahmin	27	7.9
Chhetri	27	7.9
Janajati	239	70.1
Dalit	48	14.1
Income Source		
Agriculture	150	44.0
Government employee	22	6.5
Service	26	7.6
Remittance	70	20.5
Business	73	21.4
Utilization of health care services & health insurance		
Visit to health care facility		
Yes	296	86.8
No	45	13.2
Types of services used		
Outpatient care	266	89.9
Inpatient care	30	10.1
Regularity of Medicine		
Yes	91	26.7
No	250	73.3
Types of medicine used		
Allopathy	85	93.4
Ayurveda	6	6.6

Annual mean expenditure on medicine: NRs 5,700 (41$)		
Travelled abroad for medical treatment		
Yes	332	2.6
No	9	97.4
Heard about health insurance		
Yes	261	76.5
No	80	23.5
Have health insurance (n=262)		
Yes	94	36.0
No	167	64.0
Mean expenditure on abroad treatment: NRs 1,72,000 (1412)		

1USD = 119 Nepali rupees

The majority of household members were admitted or seen by doctors and among them, most of the household members (89.9%) used OPD Services and only 10.1% were admitted in health services. Most of the households (73.3%) didn't take any kind of medicine regularly. Among those who take medicine regularly, the mean expenditure was NRs 5,700 ($41). The majority of households (93.4%) used the allopathy type of medicine. Most of the households had visited health post (27.9%) followed by private hospital (23.2%), pharmacy (22.4%), government hospital (19.4%), Ayurveda centres (3.5%), primary health care centers (3%) and community hospitals (0.7%). The study shows that the majority of household members hadn't traveled abroad for medical treatment & the mean expenditure on abroad treatment was about NRs 1,72,000 (1412). Most of the households had heard about health insurance but only around one-third of households had health insurance.

TABLE 2: HOUSEHOLD EXPENDITURE PATTERNS ON VARIOUS MEDICAL SERVICES

SERVICES	DEPARTMENTS	EXPENDITURE (IN NRS)		
		TOTAL	MEAN	S. D.
Bed	OPD	23,500	1566.67	979.553
	IPD	1,36,500	5687.50	5042.88
	ICU	30,000	30,000	-
	Emergency	58,000	2900	2516.26
Medicine	OPD	9,95,000	7653.85	13,164.63
	IPD	4,16,500	16.660	11,128.71
	ICU	30,000	30,000	-
	Emergency	19,500	1500	1274.75
X-Ray	OPD	22,500	2812.50	2137.042
	IPD	71,500	3250	20333.93
	ICU	80,000	80,000	-
Eye Care	OPD	30,000	15,000	7071.068
Dental Care	OPD	35,000	8750	7071.068
Mean annual healthcare expenditure: NRs 34,000 (279$)				

1USD = 119 Nepali rupees

The visit to health care services is significantly associated with socio-demographic variables such as family type (χ2 =7.446, p≤0.05), educational level (χ2 =26.035, p≤0.01), the main source of income (χ2 =14.241, p≤0.01). It is found that involvement in health insurance was significantly associated with socio-demographic variables such as ethnicity (χ2=13.068, p≤0.01), educational level (χ2=33.192, p≤0.01). Our study showed that type of utilized healthcare service was significantly associated with religion (χ2=6.071, p≤0.05), income source (χ2=18.753, p≤0.01) but ethnicity of participants wasn't found to be associated with healthcare service utilization.

TABLE 3: FACTORS ASSOCIATED WITH UTILIZATION OF HEALTHCARE SERVICES

Admitted or seen by doctors			χ^2 /Fisher Exact	df	p-value
Variables	No	Yes			
Family type					
Nuclear	17(11.6%)	130(88.4%)	7.446	2	0.024*
Joint	19(9%)	144(88.3%)			
Extended	9(29%)	22(71%)			
Educational level					
Illiterate	17(37%)	29(63%)	26.035	5	0.001**
Informal	12(17.9%)	55(82.1%)			
Basic	10(7,8%)	119(92.2%)			
Secondary	5(6.3%)	74(93.7%)			
Bachelor	1(5.6%)	17(94.4%)			
Masters or above	0(0.0%)	2(100%)			
Income Source					
Agriculture	30(20%)	120(80%)	14.241	4	0.001**
Government employee	0(0.0%)	22(100%)			
Service	0(0.0%)	26(100%)			
Remittance	7(10%)	63(90%)			
Business	8(11%)	65(89%)			
Involvement in health insurance					
Variables	No	Yes			
Ethnicity					
Brahmin	9(37.5%)	15(62.5%)	13.068	3	0.004**
Chettri	17(70.8%)	7(29.2%)			
Janajati	121(63.7%)	69(36.3%)			
Dalit	20(87%)	3(13%)			

Educational level					
Illiterate	15(71.4%)	6(28.6%)	33.192	5	0.001**
Informal	28(71.8%)	11(28.2%)			
Basic	79(75.2%)	26(24.8%)			
Secondary	43(55.8%)	34(44.2%)			
Bachelor	2(11.8%)	15(88.2%)			
Masters or above	0(0.0%)	2(100%)			
Types of health services					
Variables	Outpatient care	Inpatient care			
Religion					
Hindu	225(91.8%)	20(8.2%)	6.071	1	0.014*
Buddhist	41(80.4%)	10(19.6%)			
Ethnicity					
Brahmin	23(92%)	2(8.0%)	7.173	3	0.051
Chhetri	22(84.6%)	4(15.4%)			
Janajati	181(88.3%)	24(11.7%)			
Dalit	40(100%)	0(0.0%)			
Income Source					
Agriculture	117(97.5%)	3(2.5%)	18.752	4	0.001**
Government employee	21(95.5%)	1(2.2%)			
Service	23(88.5%)	3(11.5%)			
Remittance	50(79.4%)	13(20.6%)			
Business	55(84.6%)	10(15.4%)			

DISCUSSION

According to this study, the annual expenditure on medical health care was less than fifty thousand rupees which are similar to the findings of the study among industrial workers of Nepal in which annual expenditure was about thirty thousand rupees. [10] The main reason may be because Nepal is a developing country and most people cannot invest enough budget for health care. But in the study conducted in low-income societies of Iran, the annual expenditure of healthcare was about eight thousand rupees as compared to the present study. [11] This may have occurred because of the existence of health insurance and free health care services in that study area and the context of the current study, where utilization of free health care services is not good.

In this study, the availability of medicine was found to be nearly three-fourth (71.2%) whereas in one of the studies from Nepal, a free health care scheme was found to be 92.4% which differs from present study findings. [12] It could be due to a lack of access and knowledge on free health services. In the present study, less than one-fourth (18.8%) of household members were admitted to health institutions. About 16% of household members were admitted to health institutions [10] which is similar to our findings. It may be due to the working power and healthy life of the respondents. The expenditure was mainly on beds, medicine, x-ray, eye care, and dental care. Regarding beds, the highest expenditure was on IPD (Mean= NRs 5687.50, S.D.= NRs 5042.88, Sum= NRs 1,36,500).

Only about fifteen percent (14.5%) of households didn't utilize health services to treat the above-mentioned diseases whereas, in the study done on Nepali older adults, more than one-fourth (30%) of participants didn't utilize health services to treat such diseases which are more than our findings. [13] In another study among industrial workers in Nepal, the utilization of out-patient and in-patient health services was 89.9% and 10% respectively which is similar to the present study that 87.5 and 14.6% respectively. [10] This may have occurred because the outpatient services are used commonly. According to the present study, the percentage of household traveling abroad for medical treatment remains very low (2.6%) and among them, most of the household spent about one lakh fifty thousand rupees to two lakh rupees (1228 ~$1638) for the treatment which is low in comparison to the study conducted on low- and middle-income people of the Maldives. [14] It may have occurred because of the low annual household income of our study households.

In our study, more than half (76.5%) of households knew health insurance and among then only 36% of households were involved in such a scheme. In the social health insurance in implemented districts of Nepal, only very few (5%) of households had health insurance. [15] The huge difference occurred because there were many rural areas where many illiterate people lived and the people of those areas lacked information about health insurance. Among health insurance clients, nearly three-fourth (69.1%) of clients benefited from the services. Among involved households, about three-fourth of them were satisfied with health insurance services. The limitation of our study is focusing on the province 4 of Nepal. Studies focusing on the health utilization patterns in other provinces and in the nation may have more indepth picture of the health service utilization in Nepal. However, this result supported the growing effectiveness of health insurance programs in the rural municipalities of Province No. 4 of Nepal.

CONCLUSION

The utilization of health care services was found to be inadequate. Rural community household involvement in health insurance service is still low & poor. In Nepal, limited study & facts are available on healthcare service utilization in rural households. Ethnicity, family type, educational level, and annual income were the major determinants for the utilization of health care services. The ayurvedic type of medicine should be promoted and the government should invest more in health care finance focusing on rural areas.

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This research study work was conducted without any funding. We declare that we don't have any conflicting interest.

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