

Qibla Direction Accuracy and Spiritual Service Provision in Hospitals: A Mixed-Methods Study in Palopo City

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Abstract

Qibla direction accuracy is an important aspect of Islamic prayer, yet hospital prayer facilities have received relatively little attention. This study examines qibla direction accuracy in hospital prayer facilities in Palopo City and explores its implications for spiritual service provision. The study used a mixed-methods, sequential explanatory design, combining qibla azimuth measurements obtained through spherical trigonometry and astronomical instruments with interviews of hospital management, prayer-facility administrators, and users. The study was conducted at six hospitals in Palopo City. The findings show that four facilities (66.7%) had accurate qibla orientation with zero deviation, while two facilities (33.3%), St. Madyang Hospital and Mujaisyah Hospital, exhibited a 12° deviation and therefore require correction. Although the mean deviation was 4°, the median was 0°, indicating that most facilities had accurate qibla orientation. Qualitative findings further show that the availability and completeness of worship facilities do not necessarily reflect qibla accuracy. These findings suggest that spiritual service provision in hospitals depends not only on the availability of worship facilities but also on their accuracy, functionality, and ongoing maintenance.

Keywords: qibla direction, hospital prayer facilities, spiritual service, Palopo City

Akurasi arah kiblat merupakan salah satu aspek penting dalam pelaksanaan ibadah salat, namun penerapannya pada fasilitas ibadah di rumah sakit masih relatif kurang mendapat perhatian. Penelitian ini bertujuan untuk menganalisis akurasi arah kiblat pada fasilitas ibadah rumah sakit di Kota Palopo serta mengkaji implikasinya terhadap penyediaan layanan spiritual. Penelitian ini menggunakan metode campuran (*mixed methods*) dengan desain sequential explanatory, melalui pengukuran azimuth kiblat menggunakan perhitungan trigonometri bola dan instrumen astronomi, yang kemudian diperdalam melalui wawancara dengan pengelola rumah sakit, pengelola musala, dan pengguna. Penelitian ini dilakukan di enam rumah sakit di Kota Palopo. Hasil penelitian menunjukkan bahwa empat fasilitas (66,7%) memiliki arah kiblat yang akurat dengan deviasi 0°, sedangkan dua fasilitas (33,3%), yaitu RS St. Madyang dan RS Mujaisyah, mengalami deviasi 12° dan memerlukan koreksi. Meskipun rata-rata deviasi mencapai 4°, median deviasi sebesar 0° menunjukkan bahwa sebagian besar fasilitas memiliki arah kiblat yang akurat. Temuan kualitatif menunjukkan bahwa kelengkapan fasilitas ibadah tidak selalu sejalan dengan akurasi arah kiblat. Kondisi ini menunjukkan bahwa penyediaan layanan spiritual tidak hanya berkaitan dengan keberadaan fasilitas, tetapi juga dengan ketepatan dan pemeliharaan fasilitas tersebut.

Kata Kunci: arah kiblat, fasilitas ibadah rumah sakit, layanan spiritual, Kota Palopo

A. Introduction

The qibla direction is crucial to performing Islamic prayer. For Muslims, facing the Kaaba in Masjid al-Ḥarām is mandatory, as Qur'an 2:144 instructs believers to turn their faces toward Masjid al-Ḥarām wherever they are. While finding the qibla is simple for those near Mecca, it becomes challenging for Muslims elsewhere, such as in Indonesia, because latitude and longitude differ.¹ These require using geographical and astronomical references rather than assuming a simple westward direction. Islamic astronomy offers several methods for determining the qibla, including spherical-trigonometric calculations, astronomical observations like *raṣd al-qiblah*,² and modern digital tools and apps. Research shows that even small deviations between the actual qibla azimuth and a prayer facility's orientation can translate into significant geographical distances from the Kaaba.³ Thus, accurately determining the qibla isn't just a technical issue for mosque construction; it's also vital for public worship spaces to ensure proper orientation.

Accurate qibla direction becomes especially important when prayer facilities are situated within healthcare settings. Hospitals are not only places for medical diagnosis and treatment but also environments in which patients and their families may experience significant physical, emotional, and spiritual needs. Accordingly, spiritual care has increasingly been recognized as an important dimension of holistic and patient-centered healthcare. For Muslim patients, such care may include access to appropriate religious and spiritual resources that enable them to maintain their religious practices during hospitalization. A *muṣallā*, or hospital prayer room, therefore provides one institutional means for hospitals to accommodate Muslim patients' religious needs. However, providing such a facility involves more than its physical presence; its functionality and suitability for religious practice are also important dimensions of spiritual service provision. Its usability, accessibility, adequacy, and alignment with the qibla are vital to effectively supporting religious practice. From a healthcare ethics standpoint, principles like justice, beneficence, non-maleficence, and respect for patient needs highlight that healthcare services should holistically promote patient well-being. The ethics of care also stresses attentiveness and responsiveness to individuals' specific needs, especially those of vulnerable people.⁴ From an Islamic viewpoint,

¹ Mohamad Syahmi Mohamad Asri et al., "Towards A Contemporary Fatwa Framework For Mosque Qibla Orientation: A Critical Study Of Egypt And Malaysia's Divergent Approaches," *Journal of Fatwa Management and Research* 31, no. 2 (May 26, 2026): 137–64, <https://doi.org/10.33102/jfatwa.vol31no2.731>; Sayehu Sayehu and Aspandi Aspandi, "Fiqh and Astronomical Rashdul Qibla; Determining the Direction of the Qibla by Using a Stellarium," *Al-Marshad: Jurnal Astronomi Islam Dan Ilmu-Ilmu Berkaitan* 9, no. 1 (June 21, 2023): 41–58, <https://doi.org/10.30596/jam.v9i1.14554>; Jayusman Jayusman, "Akurasi Metode Penentuan Arah Kiblat; Kajian Fiqh Al-Khilaf Dan Sains," *ASAS: Jurnal Hukum Ekonomi Syariah* 6, no. 1 (2014): 72–86, <https://doi.org/https://doi.org/https://doi.org/10.24042/asas.v6i1.1273>.

² Muhamad Zainal Mawahib, "Metode Pengukuran Arah Kiblat Dengan Segitiga Siku-Siku Dari Bayangan Bulan" (UIN Walisongo Semarang, 2016).

³ Cut Nazar Mutia Hanum and Ismail Ismail, "Pandangan Tokoh Agama Jungka Gajah Terhadap Arah Kiblat Bagi Orang Yang Jauh Dari Ka'bah," *Astroislamica: Journal of Islamic Astronomy* 1, no. 2 (December 28, 2022): 169–86, <https://doi.org/10.47766/astroislamica.v1i2.934>; Tri Pangestu Utami and Muhammad Awaludin, "Komparasi Arah Kiblat; Masjid Kuno Songak Dan Masjid Kuno Bayan Di Lombok," *AL-AFAQ: Jurnal Ilmu Falak Dan Astronomi* 3, no. 1 (July 19, 2021): 77–88, <https://doi.org/10.20414/afaq.v3i1.3571>.

⁴ Ummesalmah Abdulbaseer et al., "Muslim Patients' Religious & Spiritual Resource Needs in US Hospitals: Findings from a National Survey," *Journal of General Internal Medicine* 40, no. 2 (February 23, 2025): 376–84, <https://doi.org/10.1007/s11606-024-08960-y>; Fabiana Cristina Dos Santos et al., "Spiritual Interventions Delivered by Nurses to Address Patients' Needs in Hospitals or Long-Term Care Facilities: A Systematic Review," *Journal of Palliative Medicine* 25, no. 4 (April 30, 2022): 662–77, <https://doi.org/10.1089/jpm.2021.0578>.

addressing religious needs may also relate to *ḥifẓ al-dīn* (protection of religion), a key aim of *maqāṣid al-sharī'ah*.⁵ Consequently, ensuring hospital prayer facilities are correctly aligned toward the qibla can be considered a substantive spiritual service rather than just an extra physical feature.

Research on qibla direction in Indonesia has advanced significantly, especially regarding azimuth calculations, measurement techniques, astronomical methods, and the accuracy of prayer facilities. Earlier studies have investigated qibla orientation in historic mosques, community prayer spaces, and individual locations through various astronomical approaches. For example, Utami and Awaludin compared the directions at the ancient Songak and Bayan mosques in Lombok, highlighting the role of astronomical measurements in evaluating religious building alignments.⁶ Other studies have focused on determining qibla for distant communities and on jurisprudential issues about facing the qibla, differentiating between directly facing the Kaaba and aligning with its broader direction (*jihāt al-qiblah*).⁷ Researchers have also explored practical strategies to improve qibla accuracy using *raṣd al-qiblah* and modern measuring tools. Mardiansyah evaluated a mosque's qibla accuracy using daily *raṣd al-qiblah* measurements,⁸ while recent studies have examined *qibla-finder* devices and *digital falak* apps for community use.⁹ Overall, this research underscores that qibla accuracy is a well-established concern in Islamic astronomy, with the main focus remaining on technical and spatial aspects, especially for mosques and *muṣallā's* serving general communities.

Although research on qibla direction has increased, it has focused little on prayer facilities in public institutions like hospitals. Unlike community mosques, hospital prayer spaces serve diverse users, including patients, families, visitors, and staff, making accuracy and maintenance crucial beyond technical correctness. Prior studies have focused mainly on technical accuracy or measurement methods, with less attention to qibla's institutional and spiritual role. This research fills two gaps: extending focus from mosques to hospital prayer rooms, and examining how qibla accuracy relates to the provision and upkeep of worship facilities. Rather than statistically linking accuracy to service quality, it considers broader themes of spiritual care, ethics, and responsibility, exploring whether worship spaces are functionally and spiritually well supported.

Building on this context, the study examines the precision of qibla directions in hospital prayer rooms in Palopo City and considers its impact on spiritual care in healthcare settings. The research has two main aims. *First*, it quantitatively evaluates qibla orientation in six hospitals by

⁵ Siti Nur Husna Abd Rahman et al., "Quranic Foundations of Maqasid Shariah in the Design of Islamic-Compliant Hotel Services in Malaysia," *QiST: Journal of Quran and Tafseer Studies* 4, no. 2 (October 20, 2025): 675–92, <https://doi.org/10.23917/qist.v4i2.11010>.

⁶ Utami and Awaludin, "Komparasi Arah Kiblat; Masjid Kuno Songak Dan Masjid Kuno Bayan Di Lombok."

⁷ Mutia Hanum and Ismail, "Pandangan Tokoh Agama Jungka Gajah Terhadap Arah Kiblat Bagi Orang Yang Jauh Dari Ka'bah."

⁸ Arif Mardiansyah, "Akurasi Arah Kiblat Masjid Al-Huda Desa Tik Tebing Kecamatan Lebong Atas Kabupaten Lebong Dengan Metode Rashdul Kiblat Harian" (IAIN Curup, 2023), <https://e-theses.iaincurup.ac.id/5147/>.

⁹ Hendra Yulia Rahman, Amri Amri, and Taufiq Akbar, "I'ādah Taḥdīd Al-Qiblah Fī Masjid Al-Muhājirīn Bi-Keirum – Bābūā Min Khilāl Ṭarīqatayn: Al-Falakiyyah Wa-Al-Fiqhiyyah," *Al-Zahra: Journal for Islamic and Arabic Studies* 22, no. 1 (2025): 61–80, <https://doi.org/https://doi.org/10.15408/h5saqa27>; Putri Cita Aulia, "Studi Akurasi Aplikasi Digital Falak Karya Ahmad Tholhah Ma'ruf Dalam Penentuan Arah Kiblat Menggunakan Metode Rashdul Kiblat" (Universitas Islam Indonesia, 2025), <https://dspace.uui.ac.id/handle/123456789/58994>.

comparing each facility's azimuth with the calculated true qibla azimuth for Palopo City, identifying deviations and classifying facilities as accurate or needing correction based on established operational criteria. *Second*, it qualitatively explores the institutional environment through interviews with hospital management, prayer-facility staff, and users, focusing on how the qibla was originally determined, whether it has been verified or corrected, how worship spaces are maintained, and how staff view their role in addressing patients' spiritual needs. This combined approach aims not to establish a statistical link between qibla accuracy and service ethics but to interpret the ethical and institutional relevance of accurate qibla as part of holistic spiritual care in hospitals. By integrating these methods, the study aims to enrich Islamic astronomy research by situating qibla measurement within broader institutional and human contexts and emphasizing the importance of precise, functional worship spaces as part of comprehensive healthcare.

B. Method

This study used a mixed-methods, sequential explanatory design to assess qibla direction accuracy and explore its implications for spiritual service provision in hospital prayer facilities. The study was conducted at six hospitals in Palopo City: Sawerigading Hospital, dr. Pallemai Tandil Hospital, St. Madyang Hospital, Mujaisyah Hospital, AT Medika Hospital, and Mega Buana Hospital. The unit of analysis was the prayer facility (*muṣallā* or mosque) at each hospital. We collected quantitative data by directly measuring the existing qibla direction using the Qibla Tracker RHI, digital coordinate-based applications, and spherical-trigonometric calculations. The calculated true qibla azimuth for Palopo City served as the reference for determining each facility's deviation. Qibla accuracy was classified as highly accurate (0° – 2°), tolerable ($>2^{\circ}$ to $<4^{\circ}$), or requiring correction ($\geq 4^{\circ}$), following the criteria adopted in this study. Measurements were documented through field observations and photographs.

Qualitative data were collected through semi-structured interviews with hospital management, prayer-facility administrators, and, at several sites, facility users selected purposively based on their involvement with or experience of the prayer facilities. The interviews explored how qibla directions were originally determined, whether they were later verified or corrected, how worship facilities were maintained, and how institutional actors perceived their responsibility for users' spiritual needs. Additional documentation concerning hospital profiles and facilities was obtained from institutional and Ministry of Health sources. We analyzed quantitative data descriptively by calculating deviation, mean, median, range, and the proportion of facilities in each accuracy category, while we analyzed qualitative data through data reduction, data display, and conclusion. We integrated the two strands during interpretation to examine how qibla accuracy relates to the provision and maintenance of spiritual facilities.

C. Result and Discussion

1. Qibla Direction Accuracy in Hospital Prayer Facilities

Qibla direction is a fundamental requirement in the performance of Islamic prayer, including prayer performed in hospital prayer facilities. In this study, we assessed qibla orientation accuracy by comparing each prayer facility's measured azimuth with the calculated qibla azimuth

for Palopo City. The reference azimuth used in the measurements was 292° , obtained through spherical trigonometric calculation and verified using astronomical instruments. The assessment followed the study's tolerance categories: 0° – 2° as highly accurate, more than 2° to less than 4° as tolerable, and 4° or more as requiring correction.

The measurements were conducted in six hospital prayer facilities. The results show that four facilities had an azimuth of 292° , corresponding to 0° deviation, while two facilities, namely St. Madyang Hospital and Mujaisyah Hospital, had an azimuth of 280° , corresponding to a 12° deviation from the reference direction. The complete measurement results are presented in Table 1.

Table 1. Qibla Direction Accuracy in Hospital Prayer Facilities in Palopo City

Hospital	Measured Azimuth	Reference Azimuth	Deviation	Accuracy Status
Sawerigading Hospital	292°	292°	0°	Accurate
dr. Pallemai Tandi Hospital	292°	292°	0°	Accurate
St. Madyang Hospital	280°	292°	12°	Requires correction
Mujaisyah Hospital	280°	292°	12°	Requires correction
AT Medika Hospital	292°	292°	0°	Accurate
Mega Buana Hospital	292°	292°	0°	Accurate

As shown in Table 1, four of the six facilities (66.7%) had accurate qibla orientation, whereas two facilities (33.3%) showed a 12° deviation and therefore require correction. The distribution produces a mean deviation of 4° and a median deviation of 0° . The median is particularly important for interpreting the overall pattern because the data are concentrated at two extremes: four facilities have 0° deviation, while two have 12° deviation. Thus, the mean value of 4° should not be interpreted as indicating that the majority of hospital prayer facilities have inaccurate qibla orientation. Rather, the findings indicate that qibla orientation was generally accurate, although not uniformly so across all facilities.

One important finding concerns dr. Pallemai Tandi Hospital. The initial measurement identified an azimuth of 282° , representing a 10° deviation; after the hospital remeasured, they adjusted the qibla direction to 292° using a floor marking. The current measurement therefore indicates zero deviation. This case shows that qibla accuracy is not necessarily fixed and may change after institutional verification and correction. In contrast, St. Madyang Hospital and Mujaisyah Hospital recorded the largest deviation, namely 12° . At St. Madyang Hospital, Islamic astronomy experts and the Ministry of Religious Affairs had previously determined the prayer facility through deliberation, while the existing permanent marker remained unchanged despite a later inspection. At Mujaisyah Hospital, management initially relied on a digital compass and GPS-

based determination, and a remeasurement in March 2026 reportedly confirmed the 12° deviation. Nevertheless, the existing direction and marker remained in use.

These two cases matter not only because they represent the largest deviations in the dataset, but because they show that a qibla marker does not necessarily guarantee the accuracy of the direction it indicates. The findings therefore highlight the importance of periodic verification and institutional attention to qibla orientation in hospital prayer facilities. At the same time, the measurement results alone do not establish a direct relationship between qibla accuracy and the broader quality of spiritual services. That dimension requires examination of the availability, condition, management, and use of the worship facilities, which is discussed in the following subsection.

2. Worship Facilities and the Provision of Spiritual Services

Qibla direction accuracy is one dimension of worship provision in hospitals, but fulfilling patients' spiritual needs also depends on the availability and condition of supporting worship facilities. Therefore, this study extended beyond qibla orientation to examine the physical provision of worship facilities in the six hospitals. The indicators included the availability of a *muṣallā* or mosque, a qibla marker, prayer mats, directional signage, and the overall condition of the worship facility. These indicators were used descriptively to identify how hospitals provide physical support for the religious needs of patients, patients' families, visitors, and healthcare personnel. The results are presented in Table 2.

Table 2. Condition of Worship Support Facilities at Hospitals in Palopo City

Hospital	<i>Muṣallā</i>	Qibla Marker	Prayer Mat	Directional Signage	Overall Condition
Sawerigading Hospital	Available	Available	Available	Available	Good
dr. Palemmmai Tandi Hospital	Available (Small)	Available	Available	Available	Adequate
St. Madyang Hospital	Available	Available	Available	Available	Good
Mujaisyah Hospital	Available (Small)	Available	Available	Available	Good
AT Medika Hospital	Available (Small)	Available	Available	Available	Adequate
Mega Buana Hospital	Available (Small)	Available	Available	Available	Adequate

Source: Authors' field measurement, 2026.

As shown in Table 2, all six hospitals had provided the basic physical facilities required to support worship. Each hospital had a designated *muṣallā* or mosque, a qibla marker, prayer mats, and directional signage. The observation also identified other supporting facilities, including prayer

garments, copies of the Qur'an, and ablution facilities. The availability of these facilities indicates that the hospital accommodates worship rather than leaving it entirely to individual patients and visitors.

Nevertheless, the availability of facilities does not mean their quality and capacity are the same. The field observations indicate differences in the completeness, physical condition, and comfort of worship spaces. Some facilities were adequately equipped and maintained, while others remained relatively limited, particularly in the number of prayer garments and Qur'anic copies and the prayer space's capacity. Several *muṣallā*'s were relatively small, which may limit their ability to accommodate worshippers during periods of higher use. Thus, the provision of worship facilities should be understood not merely in terms of whether a facility exists, but also in terms of its functionality and adequacy for actual users.

This finding is relevant to the concept of spiritual service provision in hospital settings. A hospital serves patients with physical, psychological, and spiritual needs simultaneously. In this study, an accessible, functional worship facility provides institutional support for patients and other service users who wish to fulfill their religious obligations during their hospital stay. Therefore, the existence, supporting facilities, and usability of a *muṣallā* can be seen as observable manifestations of institutional attention to the spiritual dimension of healthcare services.

However, the findings also indicate that physical availability and substantive accuracy constitute different dimensions of worship provision. This becomes particularly evident when Table 2 is read together with the qibla measurement results in Table 1. For example, St. Madyang Hospital and Mujaisyah Hospital both received a "Good" assessment for the overall condition of their worship facilities, yet their qibla directions showed a 12° deviation from the calculated reference azimuth. Conversely, some facilities with accurate qibla directions received only an "Adequate" rating for overall physical condition.

This pattern suggests that spiritual services cannot be assessed solely by the physical completeness of worship facilities. A hospital may provide a relatively comfortable, well-equipped *muṣallā* while still needing further attention to the technical accuracy of its qibla orientation. Conversely, an accurately oriented prayer facility may still need improvements to its physical amenities. The findings therefore position facility availability and qibla accuracy as complementary but distinct components of spiritual service provision, rather than as interchangeable indicators of institutional performance.

The distinction becomes particularly important in understanding institutional responsiveness. The question is not only whether hospitals provide a place for worship, but also whether they periodically verify, maintain, and improve the facilities so they continue to function as intended. This issue leads to the next stage of the analysis, which examines how hospital management responds to qibla measurement, verification, and existing perceptions of qibla accuracy.

3. Institutional Responsiveness and the Measurement-Perception Gap

The findings indicate that qibla accuracy in hospital prayer facilities depends not only on the initial orientation process, but also on the extent to which hospital institutions are willing to verify,

reassess, and, when necessary, correct the direction. This institutional dimension is important because qibla orientation may remain unchanged for a considerable period after a prayer facility has been established, even when the original method of determination is no longer clearly documented. In this regard, institutional responsiveness can be observed through verification, willingness to respond to measurement results, and maintenance of the established qibla marker.

The case of dr. Pallemai Tandi Hospital provides a clear example of responsive institutional action. The initial measurement identified an azimuth of 282° , representing a 10° deviation from the 292° reference azimuth. The hospital then remeasured and adjusted the direction to 292° , marking the corrected orientation on the prayer-room floor. The current measurement consequently indicates zero deviation. This case shows that an initial error does not necessarily indicate persistent institutional neglect. More importantly, the verification-and-correction process shows that qibla accuracy can become part of ongoing institutional maintenance.

A different pattern appears at St. Madyang Hospital. Islamic astronomy experts and the Ministry of Religious Affairs previously oriented the prayer facility through deliberation, and the existing permanent qibla marker remained in place. Although the facility was subsequently inspected, the present study measured an azimuth of 280° , a 12° deviation from the 292° reference azimuth. This case therefore illustrates that a previous verification process does not necessarily guarantee the current orientation remains accurate. Verification needs to be accompanied by institutional follow-up when subsequent measurement identifies a substantial deviation.

The most distinctive case is found at Mujaisyah Hospital. The facility had initially determined its qibla direction using a digital compass and GPS-based methods. A remeasurement conducted in March 2026 reportedly confirmed a 12° deviation from the reference azimuth. Nevertheless, the existing qibla marker remained unchanged, and the informant continued to regard the established direction as accurate. This situation reveals what may be described as a measurement-perception gap: the scientifically measured condition and the institutional perception of that condition do not fully coincide.

The measurement-perception gap is particularly significant because it shows that technical information does not automatically result in institutional correction. A qibla direction may be measured using a particular instrument or method, yet the result still requires institutional recognition and follow-up before it produces a physical change in the facility. In Mujaisyah's Hospital case, the continued use of the existing marker despite the reported 12° deviation illustrates the distinction between measurement, recognition, and action. These three stages should not be treated as identical. Measurement produces technical information; recognition concerns whether institutions accept that information as a basis for decision-making; and action involves implementing correction or adjustment.

Taken together, the cases demonstrate different institutional responses to qibla verification. The dr. Pallemai Tandi Hospital represents a case in which measurement was followed by correction, whereas St. Madyang Hospital and Mujaisyah Hospital demonstrate situations in which an existing orientation remained in place despite the identification of substantial deviation. These differences are particularly relevant when considered alongside the findings in Table 2. Both facilities with a 12° deviation were assessed as having "Good" overall worship-facility conditions,

indicating that a prayer facility's physical quality does not necessarily determine the institution's responsiveness to qibla accuracy.

This finding strengthens the central argument of the study: spiritual service provision involves more than providing a physical space for worship. It also involves attention to whether the facility continues to function accurately according to its religious purpose. In this sense, institutional responsiveness provides an important bridge between the technical dimension of qibla measurement and the broader question of spiritual service provision. The findings do not establish a statistical relationship between institutional responsiveness and qibla accuracy; rather, they reveal qualitatively different patterns of institutional response across the facilities studied.

From this perspective, qibla verification should be understood not as a one-time technical activity but as part of the continuing maintenance of hospital worship facilities. The findings particularly suggest the importance of ensuring that institutions communicate, evaluate, and follow up on measurement results with appropriate action. This consideration provides the basis for the final discussion, which examines how qibla accuracy, facility provision, and institutional responsiveness collectively inform the substantive provision of spiritual services in hospitals.

4. From Qibla Accuracy to Substantive Spiritual Care

The findings of this study reveal three interconnected but distinct dimensions of worship provision in hospitals. First, quantitative measurements show that four of the six hospital prayer facilities had accurate qibla orientations, while St. Madyang Hospital and Mujaisyah Hospital deviated by 12° from the calculated reference azimuth. Second, all six hospitals had provided basic worship facilities, although their completeness and overall condition varied. Third, the qualitative findings demonstrate that institutional responses to qibla verification were not uniform. The dr. Pallemai Tandi Hospital, for example, responded to an initial deviation by remeasuring and correcting it, whereas St. Madyang Hospital and Mujaisyah Hospital suggest that the presence of worship facilities and prior verification did not necessarily lead to continued attention to qibla accuracy.

Taken together, these findings indicate that spiritual service provision in hospitals has both physical and substantive dimensions. The physical dimension concerns the availability and condition of facilities that enable patients, families, visitors, and healthcare personnel to perform worship. The substantive dimension concerns whether those facilities function appropriately for their intended religious purpose. This distinction is important because the completeness of worship facilities did not consistently correspond with qibla accuracy. For instance, St. Madyang Hospital and Mujaisyah Hospital were both assessed as having “Good” overall worship-facility conditions, yet both recorded a 12° qibla deviation. Conversely, several facilities with accurate qibla orientations were assessed as only “Adequate” in their overall physical condition. The findings therefore suggest that the existence and physical condition of a worship facility should not, by themselves, be regarded as sufficient evidence of substantive spiritual service.

This finding can be further interpreted through the lens of care ethics, which emphasizes attentiveness to human vulnerability and the ethical responsibilities involved in responding to

patients' needs.¹⁰ In a hospital setting, patients may depend on institutional support to maintain their religious practices during treatment. Research on Indonesian Muslim patients has identified prayer as a significant religious need during hospitalization.¹¹ Similarly, a national survey of Muslim patients in the United States found that access to religious and spiritual resources, including prayer spaces, was considered important during hospital stays.¹² Providing a *muṣallā* is therefore an important form of institutional support, but attentiveness to spiritual needs extends beyond merely providing a physical space. It also involves ensuring that spiritual care is supported through appropriate facilities, resources, and institutional arrangements.¹³ In this context, qibla accuracy can be understood as one aspect of substantive care because it concerns the religious appropriateness of the prayer facility provided. This interpretation aligns with the Islamic ethical framework of *maqāṣid al-sharī'ah*, particularly *hiḍḍ al-dīn* (the protection of religion), which provides a normative basis for considering the facilitation of religious practice within broader ethical responsibilities in healthcare.¹⁴

The findings also provide an important reflection on institutional responsiveness. The case of dr. Pallemai Tandi Hospital demonstrates that an identified deviation can become an opportunity for institutional correction when measurement is followed by action. The initial azimuth of 282° was subsequently remeasured and adjusted to 292°, resulting in zero deviation in the current measurement. By contrast, Mujaisyah Hospital presents a different situation. A remeasurement in March 2026 reportedly confirmed a 12° deviation, yet the existing qibla marker remained unchanged, and the informant continued to regard the established direction as accurate. These cases demonstrate that measurement, institutional recognition, and corrective action are distinct but interconnected stages of a potential improvement process. Research on audit and feedback in healthcare similarly indicates that identifying performance gaps does not, by itself, guarantee improvement; organizations must translate the information into actionable decisions and corrective measures.¹⁵ Technical measurement therefore provides information about a

¹⁰ Charlotte B. Thorup et al., "Care as a Matter of Courage: Vulnerability, Suffering, and Ethical Formation in Nursing Care," *Scandinavian Journal of Caring Sciences* 26, no. 3 (September 10, 2012): 427–35, <https://doi.org/10.1111/j.1471-6712.2011.00944.x>.

¹¹ Lenni Sastra et al., "Spiritual Needs and Influencing Factors of Indonesian Muslims With Cancer During Hospitalization," *Journal of Transcultural Nursing* 32, no. 3 (May 13, 2021): 212–20, <https://doi.org/10.1177/1043659620908926>.

¹² Abdulbaseer et al., "Muslim Patients' Religious & Spiritual Resource Needs in US Hospitals: Findings from a National Survey."

¹³ Parinaz Khalili Khouzani et al., "Identifying The Key Components Of Providing Spiritual Care In The Hospital: A Scoping Review Study," *BMC Palliative Care* 24, no. 1 (May 22, 2025): 142, <https://doi.org/10.1186/s12904-025-01762-x>.

¹⁴ Abdul Halim Ibrahim et al., "Maqasid Al-Shariah Based Islamic Bioethics: A Comprehensive Approach," *Journal of Bioethical Inquiry* 16, no. 3 (September 4, 2019): 333–45, <https://doi.org/10.1007/s11673-019-09902-8>; Muhammad Uqbah Azis et al., "Improving the Quality of Healthcare Services for Patient Well-Being through Maqasid Al-Sharia: A Study at Klaten Islamic Hospital," *Tasharruf: Journal Economics and Business of Islam* 10, no. 2 (2025): 262–75, <https://doi.org/https://doi.org/http://dx.doi.org/10.30984/tjebi.v10i2.3867>; Siti Yuhannah, Muhajirin, and Hasbi Abdul Al-Wahhab KH, "Analisis Implementasi Maqashid Syariah Pada Rumah Sakit Berkompotensi Syariah Di Indonesia Sebagai Unique Value Proposition," *Reslaj: Religion Education Social Laa Roiba Journal* 6, no. 4 (February 9, 2024): 1817–26, <https://doi.org/10.47467/reslaj.v6i4.1106>; Abdurezak Abdulahi Hashi, "Clinical Applications of Maqasid Al-Shari'ah in Healthcare Services," *Malaysian Journal of Medicine and Health Sciences* 18, no. s19 (December 12, 2022): 198–204, <https://doi.org/10.47836/mjmhs.18.s19.30>.

¹⁵ Wouter T. Gude et al., "Facilitating Action Planning Within Audit And Feedback Interventions: A Mixed-Methods Process Evaluation Of An Action Implementation Toolbox In Intensive Care," *Implementation Science* 14, no. 1 (December 18, 2019): 90, <https://doi.org/10.1186/s13012-019-0937-8>; Noah Ivers et al.,

facility's physical condition, while substantive improvement depends on whether stakeholders acknowledge the findings and translate them into appropriate institutional action.¹⁶

This finding also contributes to the existing literature on qibla direction. Previous studies cited in this research have predominantly examined qibla from the perspectives of technical accuracy, measurement methods, and astronomical instruments. For example, Mardiansyah (2023) examined qibla accuracy at Al-Huda Mosque using the daily *raʿṣd al-qiblah* method.¹⁷ Taufiq Akbar et al. (2025) examined efforts to improve qibla accuracy in a community setting through a *qibla-finder* device and *raʿṣd al-qiblah*,¹⁸ while Aulia (2025) examined the accuracy of a digital Islamic astronomy application for determining qibla direction.¹⁹ Utami and Awaludin (2021) compared the qibla orientation of historical mosques,²⁰ while Hanum (2022) examined religious perspectives concerning qibla direction for Muslims living far from the Kaaba.²¹ These studies show the continued importance of scientific measurement and religious considerations in determining qibla direction.

The present study confirms the importance of this technical dimension but shifts the analytical context from community worship spaces to hospital-based prayer facilities. More importantly, it combines qibla measurement with a qualitative examination of how the direction was determined, whether it was subsequently verified, how deviations were addressed, and how worship facilities were provided and maintained. Thus, the study does not treat the 12° deviations identified at St. Madyang Hospital and Mujaisyah Hospital merely as technical measurements. They are interpreted alongside the condition of the facilities and the institutional responses to verification. This allows the study to show that technical qibla accuracy, physical facility provision, and institutional responsiveness do not necessarily develop in parallel.

The study's principal finding can therefore be formulated as follows: qibla accuracy, the physical provision of worship facilities, and institutional responsiveness are distinct but interconnected dimensions of spiritual service provision in hospitals. These dimensions should not be collapsed into a single indicator of institutional performance. A facility may be physically complete but technically inaccurate; technically accurate but physically limited; or may have adequate facilities and accurate orientation while differing in its approach to verification and maintenance. The findings consequently challenge a purely formal understanding of spiritual service in which the existence of a *muṣallā* is treated as sufficient evidence that the spiritual needs of service users have been accommodated. Instead, substantive spiritual care requires that the

"Audit And Feedback: Effects On Professional Practice And Healthcare Outcomes," *Cochrane Database of Systematic Reviews* 2012, no. 7 (June 13, 2012), <https://doi.org/10.1002/14651858.CD000259.pub3>.

¹⁶ Inas S Khayal and Jordan T. Sanz, "From Measures To Action: Can Integrating Quality Measures Provide System-Wide Insights For Quality Improvement Decision Making?," *BMJ Health & Care Informatics* 30, no. 1 (June 2023), <https://doi.org/10.1136/bmjhci-2023-100792>.

¹⁷ Mardiansyah, "Akurasi Arah Kiblat Masjid Al-Huda Desa Tik Tebing Kecamatan Lebong Atas Kabupaten Lebong Dengan Metode Rashdul Kiblat Harian."

¹⁸ Rahman, Amri, and Akbar, "T'adah Taḥdīd Al-Qiblah Fī Masjid Al-Muhājirīn Bi-Keirum – Bābūā Min Khilāl Ṭarīqatayn: Al-Falakiyyah Wa-Al-Fiqhiyyah."

¹⁹ Aulia, "Studi Akurasi Aplikasi Digital Falak Karya Ahmad Tholhah Ma'ruf Dalam Penentuan Arah Kiblat Menggunakan Metode Rashdul Kiblat."

²⁰ Utami and Awaludin, "Komparasi Arah Kiblat; Masjid Kuno Songak Dan Masjid Kuno Bayan Di Lombok."

²¹ Mutia Hanum and Ismail, "Pandangan Tokoh Agama Jungka Gajah Terhadap Arah Kiblat Bagi Orang Yang Jauh Dari Ka'bah."

facilities provided are available, functional, accurate, and subject to continuing institutional attention.

Practically, the findings suggest that maintaining hospital worship facilities should be part of a broader understanding of spiritual service quality. Qibla verification should not be regarded solely as a technical task within Islamic astronomy, but also as one component of maintaining the functionality and reliability of religious facilities in public healthcare institutions. At the same time, this study does not establish a statistically tested relationship between qibla accuracy and service ethics. Its contribution lies in demonstrating, through a combination of astronomical measurement, observation, and qualitative inquiry, that evaluating substantive spiritual service requires considering technical accuracy and institutional attentiveness together. Periodic verification and appropriate institutional follow-up are therefore important to ensure that worship facilities remain more than formal and continue to respond to the religious needs of hospital service users.

D. Conclusion

This study found that qibla direction accuracy in Palopo City hospital prayer facilities was generally satisfactory. Four of the six facilities (66.7%) showed zero deviation from the calculated qibla azimuth, while St. Madyang Hospital and Mujaisyah Hospital (33.3%) showed a 12° deviation and therefore require correction. The study also found that all six hospitals provided basic worship facilities, though the completeness and overall condition varied. Importantly, the findings demonstrate that qibla accuracy, the physical provision of worship facilities, and institutional responsiveness constitute distinct but interconnected dimensions of spiritual service provision. A relatively complete and well-maintained prayer facility does not necessarily guarantee accurate qibla orientation, and accurate qibla orientation alone does not fully represent the quality of spiritual service. The study therefore highlights the importance of viewing hospital worship facilities not merely as physical amenities but as part of substantive spiritual care that requires accuracy, functionality, and ongoing institutional attention.

This study has several limitations. *First*, the research was conducted in only six hospitals in a single city, and one additional hospital was excluded because institutional permission was not obtained; therefore, the findings cannot be generalized to hospitals beyond the study setting without further verification. *Second*, the qualitative component relied on thematic summaries of interviews rather than verbatim presentation of participants' statements. *Third*, the study employed descriptive quantitative analysis and qualitative interpretation rather than statistical testing of the relationship between qibla accuracy and service-related variables. Accordingly, the findings should be understood as an interpretive account of patterns in qibla accuracy, worship-facility provision, and institutional responsiveness, rather than as evidence of a statistically established relationship among these dimensions.

Future research could extend this study by examining additional hospitals across different cities or regions to determine whether similar patterns of qibla accuracy, worship-facility provision, and institutional responsiveness occur in other healthcare settings. Further studies could also adopt a more systematic qualitative design with a broader range of stakeholders, including hospital managers, facility administrators, healthcare personnel, patients, and patients' families. In

addition, future research may develop a more explicit framework or assessment instrument for evaluating the substantive quality of spiritual services in hospitals, incorporating qibla accuracy, facility accessibility, maintenance, institutional responsiveness, and users' experiences. Such research would provide a more comprehensive understanding of how to integrate Islamic spiritual needs into the quality and standards of healthcare services.

BIBLIOGRAPHY

- Abdulah Hashi, Abdurezak. "Clinical Applications of Maqasid Al-Shari'ah in Healthcare Services." *Malaysian Journal of Medicine and Health Sciences* 18, no. s19 (December 12, 2022): 198–204. <https://doi.org/10.47836/mjmhs.18.s19.30>.
- Abdulbaseer, Ummesalmah, Natasha Piracha, Mohamed Hamouda, Iman Farajallah, Samsiah Abdul-Majid, Shareif Abdelwahab, Warren K. Teltser, and Aasim I. Padela. "Muslim Patients' Religious & Spiritual Resource Needs in US Hospitals: Findings from a National Survey." *Journal of General Internal Medicine* 40, no. 2 (February 23, 2025): 376–84. <https://doi.org/10.1007/s11606-024-08960-y>.
- Aulia, Putri Cita. "Studi Akurasi Aplikasi Digital Falak Karya Ahmad Tholhah Ma'ruf Dalam Penentuan Arah Kiblat Menggunakan Metode Rashdul Kiblat." Universitas Islam Indonesia, 2025. <https://dspace.uii.ac.id/handle/123456789/58994>.
- Azis, Muhammad Uqbah, Jaih Mubarak, Nur Kholis, and Setiyawan Gunardi. "Improving the Quality of Healthcare Services for Patient Well-Being through Maqasid Al-Sharia: A Study at Klaten Islamic Hospital." *Tasharruf: Journal Economics and Business of Islam* 10, no. 2 (2025): 262–75. <https://doi.org/https://doi.org/http://dx.doi.org/10.30984/tjebi.v10i2.3867>.
- Gude, Wouter T., Marie-José Roos-Blom, Sabine N. van der Veer, Dave A. Dongelmans, Evert de Jonge, Niels Peek, and Nicolette F. de Keizer. "Facilitating Action Planning Within Audit And Feedback Interventions: A Mixed-Methods Process Evaluation Of An Action Implementation Toolbox In Intensive Care." *Implementation Science* 14, no. 1 (December 18, 2019): 90. <https://doi.org/10.1186/s13012-019-0937-8>.
- Ibrahim, Abdul Halim, Noor Naemah Abdul Rahman, Shaikh Mohd Saifuddeen, and Madiha Baharuddin. "Maqasid Al-Shariah Based Islamic Bioethics: A Comprehensive Approach." *Journal of Bioethical Inquiry* 16, no. 3 (September 4, 2019): 333–45. <https://doi.org/10.1007/s11673-019-09902-8>.
- Ivers, Noah, Gro Jamtvedt, Signe Flottorp, Jane M Young, Jan Odgaard-Jensen, Simon D French, Mary Ann O'Brien, Marit Johansen, Jeremy Grimshaw, and Andrew D Oxman. "Audit And Feedback: Effects On Professional Practice And Healthcare Outcomes." *Cochrane Database of Systematic Reviews* 2012, no. 7 (June 13, 2012). <https://doi.org/10.1002/14651858.CD000259.pub3>.
- Jayusman, Jayusman. "Akurasi Metode Penentuan Arah Kiblat; Kajian Fiqh Al-Khilaf Dan Sains." *ASAS: Jurnal Hukum Ekonomi Syariah* 6, no. 1 (2014): 72–86. <https://doi.org/https://doi.org/https://doi.org/10.24042/asas.v6i1.1273>.

- Khalili Khouzani, Parinaz, Vahid Yazdi-Feyzabadi, Mohammad Setayesh, Mohammad Hossain Mehrolhassani, and Rohaneh Rahimisadegh. "Identifying The Key Components Of Providing Spiritual Care In The Hospital: A Scoping Review Study." *BMC Palliative Care* 24, no. 1 (May 22, 2025): 142. <https://doi.org/10.1186/s12904-025-01762-x>.
- Khayal, Inas S, and Jordan T. Sanz. "From Measures To Action: Can Integrating Quality Measures Provide System-Wide Insights For Quality Improvement Decision Making?" *BMJ Health & Care Informatics* 30, no. 1 (June 2023). <https://doi.org/10.1136/bmjhci-2023-100792>.
- Mardiansyah, Arif. "Akurasi Arah Kiblat Masjid Al-Huda Desa Tik Tebing Kecamatan Lebong Atas Kabupaten Lebong Dengan Metode Rashdul Kiblat Harian." IAIN Curup, 2023. <https://e-theses.iaincurup.ac.id/5147/>.
- Mawahib, Muhamad Zainal. "Metode Pengukuran Arah Kiblat Dengan Segitiga Siku-Siku Dari Bayangan Bulan." UIN Walisongo Semarang, 2016.
- Mohamad Asri, Mohamad Syahmi, Muhamad Syazwan Faid, Manswab Mahsen Abdulrahman, Nurul Kausar Nizam, and Mohd Saiful Anwar Mohd Nawawi. "Towards A Contemporary Fatwa Framework For Mosque Qibla Orientation: A Critical Study Of Egypt And Malaysia's Divergent Approaches." *Journal of Fatwa Management and Research* 31, no. 2 (May 26, 2026): 137–64. <https://doi.org/10.33102/jfatwa.vol31no2.731>.
- Mutia Hanum, Cut Nazar, and Ismail Ismail. "Pandangan Tokoh Agama Jungka Gajah Terhadap Arah Kiblat Bagi Orang Yang Jauh Dari Ka'bah." *Astroislamica: Journal of Islamic Astronomy* 1, no. 2 (December 28, 2022): 169–86. <https://doi.org/10.47766/astroislamica.v1i2.934>.
- Rahman, Hendra Yulia, Amri Amri, and Taufiq Akbar. "I'ādah Taḥdīd Al-Qiblah Fī Masjid Al-Muhājirīn Bi-Keirum – Bābūā Min Khilāl Ṭarīqatayn: Al-Falakiyyah Wa-Al-Fiqhiyyah." *Al-Zahra: Journal for Islamic and Arabic Studies* 22, no. 1 (2025): 61–80. <https://doi.org/https://doi.org/10.15408/h5saqa27>.
- Rahman, Siti Nur Husna Abd, Rafidah Mohd Azli, Nursafra Mohd Zhaffar, and Siti Nadiah Binti Babge. "Quranic Foundations of Maqasid Shariah in the Design of Islamic-Compliant Hotel Services in Malaysia." *QiST: Journal of Quran and Tafseer Studies* 4, no. 2 (October 20, 2025): 675–92. <https://doi.org/10.23917/qist.v4i2.11010>.
- Santos, Fabiana Cristina Dos, Tamara G.R. Macieira, Yingwei Yao, Samantha Hunter, Olatunde O. Madandola, Hwayoung Cho, Ragnhildur I. Bjarnadottir, Karen Dunn Lopez, Diana J. Wilkie, and Gail M. Keenan. "Spiritual Interventions Delivered by Nurses to Address Patients' Needs in Hospitals or Long-Term Care Facilities: A Systematic Review." *Journal of Palliative Medicine* 25, no. 4 (April 30, 2022): 662–77. <https://doi.org/10.1089/jpm.2021.0578>.
- Sastra, Lenni, Arndt Büssing, Ching-Huey Chen, Miaofen Yen, and Esther Ching-Lan Lin. "Spiritual Needs and Influencing Factors of Indonesian Muslims With Cancer During Hospitalization." *Journal of Transcultural Nursing* 32, no. 3 (May 13, 2021): 212–20.

<https://doi.org/10.1177/1043659620908926>.

- Sayehu, Sayehu, and Aspandi Aspandi. "Fiqh and Astronomical Rashdul Qibla; Determining the Direction of the Qibla by Using a Stellarium." *Al-Marshad: Jurnal Astronomi Islam Dan Ilmu-Ilmu Berkaitan* 9, no. 1 (June 21, 2023): 41–58. <https://doi.org/10.30596/jam.v9i1.14554>.
- Thorup, Charlotte B., Ewa Rundqvist, Christel Roberts, and Charlotte Delmar. "Care as a Matter of Courage: Vulnerability, Suffering, and Ethical Formation in Nursing Care." *Scandinavian Journal of Caring Sciences* 26, no. 3 (September 10, 2012): 427–35. <https://doi.org/10.1111/j.1471-6712.2011.00944.x>.
- Utami, Tri Pangestu, and Muhammad Awaludin. "Komparasi Arah Kiblat; Masjid Kuno Songak Dan Masjid Kuno Bayan Di Lombok." *AL-AFAQ: Jurnal Ilmu Falak Dan Astronomi* 3, no. 1 (July 19, 2021): 77–88. <https://doi.org/10.20414/afaq.v3i1.3571>.
- Yuhanah, Siti, Muhajirin, and Hasbi Abdul Al-Wahhab KH. "Analisis Implementasi Maqashid Syariah Pada Rumah Sakit Berkompetensi Syariah Di Indonesia Sebagai Unique Value Proposition." *Reslaj: Religion Education Social Laa Roiba Journal* 6, no. 4 (February 9, 2024): 1817–26. <https://doi.org/10.47467/reslaj.v6i4.1106>.

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