Primary Care Science and Practice
Vol. 1 No. 1 (2026) pp. 11-23
Online ISSN: 3124-3835

Original Research

Hesitancy on the Front Line: The Barriers among Primary Healthcare Workers in Bali for Immunizing Children in Special Populations

Desak Putu Yuli Kurniati[1,2], Komang Ayu Kartika Sari[1,2]✉, Ketut Dewi Kumara Wati[3,4], Ketut Ariawati[3,4], I Made Darma Yuda[3,4]
[1]Department of Public Health and Preventive Medicine, Faculty of Medicine, Universitas Udayana, Bali, Indonesia
[2]Center for Public Health Innovation, Universitas Udayana, Bali, Indonesia
[3]Department of Child Health, Faculty of Medicine, Universitas Udayana, Bali, Indonesia
[4]Ngoerah Hospital, Denpasar, Bali, Indonesia
✉ kartikasari@unud.ac.id
10.66641/pcsp.v1i1.14

Article Info
Submitted:
12/20/2025
Revised:
01/11/2026
Accepted:
01/12/2026
Available Online:
01/19/2026

Abstract. Background*: Primary healthcare workers are central to national immunization efforts, yet they face significant challenges in caring for children with special health needs. Clinical hesitancy among front-line workers causes missed opportunities for vulnerable children. This study examines perceptual, competency, and systemic barriers faced by primary healthcare workers in Bali in immunizing children in special cases populations, defined as those needing health services beyond routine care due to underlying conditions.* ***Methods****: A qualitative case study was conducted in Denpasar City and Badung District, Bali Province (September 2024 - March 2025). Data were collected through in-depth interviews and Focus Group Discussions with 36 stakeholders, following COREQ guidelines. Thematic analysis was performed using NVivo 12 1.* ***Results****: The study reveals that vaccine hesitancy among primary care staff is driven by systemic barriers rather than anti-vaccine sentiment. A critical lack of specific Standard Operating Procedures forces staff into a rigid "zero-risk" bias, causing unnecessary delays for minor ailments. To mitigate liability in the absence of legal protection, staff adopt defensive practices, such as refusing action without written authorization from specialists. This bureaucratic hurdle creates a "referral trap" that fragments care and imposes financial burdens on families, thereby exacerbating health inequities. Provider hesitancy reinforces the misconception that vulnerable children are too fragile for vaccination, validating parents' "never healthy paradigm".* ***Conclusion****: Hesitancy in primary care stems from insufficient legal protection and guidance. To break this cycle, urgent development of "legally protective" SOPs and consultation pathways is needed to empower frontline workers and avoid excluding vulnerable children.*

Keywords: *immunization; special populations; primary health care; vaccine hesitancy; health equity*

Key Messages

- Vaccine hesitancy among primary care staff is driven by systemic barriers rather than anti-vaccine sentiment.

- Legally protective SOPs and formalized consultation pathways are required to empower front-line management and prevent the systemic exclusion of vulnerable children.
- Defensive practices create a "referral trap" that imposes financial burdens and exacerbates health inequities for families.

1. Introduction

Immunization is the most effective public health intervention for preventing morbidity and mortality from infectious diseases [1]. The global vision, such as the Immunization Agenda 2030, emphasizes "leaving no one behind," which means everyone, everywhere must benefit from vaccines, including those within special populations [2]. In this study, we adopt the comprehensive framework of Children with Special Health Care Needs (CSHCN) to define our target population [3],[4]. This encompasses a broad spectrum of children who require health services beyond routine care due to various underlying conditions. In the context of immunization in Indonesia, this "special population" includes not only children with primary or secondary immunodeficiencies (e.g., HIV, malignancy) but also those with chronic physical illnesses (e.g., congenital heart disease, chronic kidney disease), developmental disabilities, and nutritional vulnerabilities (e.g., severe malnutrition, history of prematurity) [4],[5].

Despite their diverse diagnoses, these children share a common vulnerability: they are at significantly higher risk of severe morbidity and mortality from Vaccine-Preventable Diseases (VPDs) compared to the general pediatric population [5],[6]. Paradoxically, while they stand to benefit the most from immunization, children in special populations are often left behind because they face unique systemic barriers, ranging from clinical ambiguity to a lack of tailored guidelines, that frequently leave them unvaccinated and invisible in national coverage data [3],[6],[7].

In Indonesia, this problem is highly relevant. Currently, specific immunization coverage data for special populations in Indonesia, including Denpasar and Badung, are unavailable due to the lack of disaggregated surveillance systems. The available 2018 immunization coverage among children with HIV infection at Ngoerah Hospital in Bali Province, the top-tier central general hospital for the Eastern Indonesia region, indicate a complete immunization rate of 71%. Specifically, the coverage for individual vaccines was 92% for BCG, 72% for Hepatitis B, 79% for DPT, 80% for Polio, and 84% for Measles. This data invisibility" further obscures the magnitude of the problem.

Primary healthcare in Indonesia serves as a platform for implementing the national immunization program [8]. The program's success depends on the confidence and competency of these front-line healthcare workers to deliver vaccines safely and effectively [9]. However, vaccine hesitancy among healthcare workers, especially when faced with patients with complex clinical conditions, has been identified as a significant global barrier [10],[11].

Previous reports have identified healthcare workers as a determinant of vaccine hesitancy [12]. Field reports and preliminary findings indicate that healthcare workers in primary care often hesitate to immunize children from special populations [10]. This hesitancy appears driven not only by clinical concerns about Adverse Events Following Immunization (AEFI) but also by perceived professional liability vulnerabilities [11]. The absence of detailed national guidelines or legal protection mechanisms for specific populations exacerbates this uncertainty. This gap between the critical mandate of primary care and the lack of systemic support poses a risk of defensive practices and significant missed opportunities [13].

This gap between the critical role of primary care and the lack of systemic support for it creates a significant risk of *missed opportunities*. This study seeks to examine in depth the perceptual, competency, and systemic barriers encountered by primary healthcare workers in Bali as they strive to deliver immunization services to children in special populations.

2. Materials and Methods

Study design & ethic statement

This study employed an exploratory qualitative case study design [14],[15], to explore primary health workers' perceptions of policies and practices for special populations in their real-world context of primary care. The reporting of this method transparently follows the 32-item Consolidated Criteria for Reporting Qualitative Research (COREQ) [16].

This study has received ethical approval from the Research Ethics Committee of the Faculty of Medicine, Udayana University/Prof. I.G.N.G. Ngoerah General Hospital (No: 2734/tJN 14.2.2.VI1.14/LT l2O24). Before participation, individuals received study information and gave written consent. Throughout, confidentiality and anonymity were strictly maintained.

Setting and participants

Participants were selected through purposive sampling [17], to ensure representation across the macro (policy), meso (management), and micro (service delivery) levels. Participants were contacted via official letters and a personal agreement. Recruitment depended on participants' willingness to participate after they were informed of the study's goal. Data were collected in Denpasar City and Badung District, Bali, either online or in person at a location agreed upon by participants (e.g., their workplace). Only the researchers (facilitator and notetaker) and participants were present during the IDIs/FGDs.

A total of 36 informants participated, comprising representatives from the Ministry of Health, the National Immunization Advisory Committee, the Indonesian Pediatric Society, Provincial/District/City Health Offices, three general hospital management teams, pediatricians, and staff from two public health centers. All participants who met the criteria agreed to participate in the study. The characteristics of informants are presented in **Table 1**. No participants refused to participate or dropped out.

Data collection

Data were collected using in-depth interviews and FGD guides, either online or in person at a mutually agreed-upon workplace. All sessions were audio-recorded (60-120 minutes) with participant consent, and a notetaker captured field notes. In a few instances where other members were present, we documented in field notes for consideration during analysis. No repeat interviews were conducted. The research team discussed data saturation and concluded it had been reached.

Rigor and trustworthiness

To ensure the study's trustworthiness, we applied the criteria of credibility, transferability, dependability, and confirmability. Credibility was established through source triangulation with informants from macro (policy), meso (hospital management), and micro (primary care) levels, providing a comprehensive view. Participant verification was also used, with informants reviewing data interpretations. The team from various fields, such as pediatrics, public health, and biomedicine, strengthened credibility by providing a comprehensive view of the data.

To improve transferability, the study detailed the research context in Denpasar City and Badung District and used purposive sampling to include a wide range of stakeholders. This helps readers evaluate the applicability of the findings to similar settings with comparable policies and primary care systems. Dependability and confirmability were maintained through a thorough audit trail, which systematically documented all data using audio recordings, field notes, and NVivo 12 for data management. Additionally, the coding involved investigator triangulation, in which two researchers (DPYK & KAKS) independently coded the data and met to refine themes, thereby reducing individual bias. Regular team discussions were also held to address reflexivity and potential biases arising from their professional backgrounds.

Data analysis

Verbatim transcripts were analyzed using thematic analysis [18],[19]. Data were managed using NVivo12. The research team (DPYK & KAKS) conducted the coding process. An initial code set was created deductively from the research objective, and it was refined inductively as new codes emerged from data interviews & FGDs. The two coders then met to discuss, compare, and reach a consensus on the final themes and create a coding tree. Credibility was ensured through source triangulation (informants from macro, meso, and micro levels) and participant verification, with some informants providing comments and corrections after IDI or FGD. Verbatim quotes from participants are presented in the report to illustrate the main themes. Three major themes were identified, though this article focuses on findings relevant to primary care barriers.

Research role (reflexivity)

This research was conducted by a multidisciplinary team of six researchers (male & female) with expertise in pediatrics (pediatrician, consultant), public health (MPH, Dr.PH), and biomedicine (M. Biomed). The investigators have backgrounds in both clinical practice and public health, as well as quantitative and qualitative research methodologies.

Data collection (IDIs and FGDs) was conducted by two senior researchers (K.A.K.S. and D.P.Y.K.), who are academics and public health practitioners, assisted by trained research assistants. Some researchers had pre-existing professional relationships with participants as colleagues within the Bali health system. However, they maintained a respectful distance from the participants by refraining from establishing formal relationships. The researchers, who described themselves as public health practitioners from Bali, might have been influenced in their interpretation. Potential researcher bias was regularly discussed within the team to maintain data credibility.

3. Results and Discussion

Results

A total of 36 stakeholders participated in this study, representing a comprehensive range of perspectives across the macro (policy), meso (hospital management), and micro (primary care service delivery) levels. This diverse group included representatives from the Ministry of Health, the Indonesian Pediatric Society, regional health offices, and front-line staff at public health centers. All eligible participants approached for the study agreed to participate, with no dropouts recorded. The detailed sociodemographic characteristics of the participants are presented in **Table 1**.

Table 1. Participants' Characteristics

Characteristic	Frequency (f)	Proportion (%)
Gender		
Male	12	33.3
Female	24	66.7
Age group (years)		
≤40	10	27.8

Characteristic	Frequency (f)	Proportion (%)
41-50	11	30.6
51-60	12	33.3
≥60	3	8.3
Education		
Diploma (D1/D2/D3)	3	8.3
Bachelor (D4/S1)	11	30.6
Postgraduate (Master's/Doctorate/Specialist)	22	61.1

The analysis identified three main themes that directly prevent primary health care workers from providing immunizations to children in special populations. There were also two minor themes identified in the analysis that related to immunization hesitancy. These are presented in Table 2, followed by a detailed narrative of the findings.

Table 2. Summary of Barriers Faced by Staff of Public Health Centers

Barrier Category	Key Findings in Primary Care
Mayor themes	
1. Clinical Hesitancy and Competency Gaps	– Staff feel incompetent to assess complex cases. – Rigid "zero risk" approach: mild symptoms (cough/cold) lead to postponement.
2. Absence of SOPs and Legal Protection	– No specific SOPs for special populations. – Staff prioritize legal safety over clinical action; need a "legal umbrella."
3. Non-Standardized Referral and Coordination Pathways	– Defensive practice: demanding written permission (ACC) from specialists. – One-way referral flow (no feedback from hospitals)
Minor themes	
1. The "referral trap" and financial barriers.	– The "referral trap" creates a financial barrier for uninsured families, causing loss to follow-up when parents cannot afford the hospital visits required by hesitant primary care staff.
2. The "never healthy" paradigm among parents	– Provider refusal validates the parents' "never healthy" paradigm, reinforcing the misconception that children with special health needs are perpetually too fragile to be immunized

Clinical hesitancy and competency gaps

A pervasive sense of anxiety regarding safety was the most significant barrier among staff of public health centers. This hesitancy often manifests as a rigid interpretation of clinical contraindications. Lacking confidence in assessing mild conditions, staff strictly adhere to the principle that a child must be "100% healthy" to be vaccinated. Consequently, children with minor ailments like coughs or colds, who might be eligible for vaccination under specialist care, are frequently postponed (pending) at the primary level. As one staff member explained:

> "*Usually, in conditions where the child is not truly healthy... usually because the child has a cough or cold, even if there is no fever, we stick to the principle that immunization is given to healthy children/babies. So usually, it gets postponed (pending).*" (FGD, Public Health Center in Badung)

Absence of SOPs and legal protection

Staff hesitancy was exacerbated by a critical vacuum in practical guidance. The study revealed that none of the participating health facilities had specific Standard Operating Procedures (SOPs) for immunizing special populations. Staff emphasized that they require clear pathways not only for medical guidance but for psychological and legal security. Without a "legal umbrella," they feel exposed to procedural errors and liability. A participant from Denpasar highlighted this need for safety.

> "*Because if there is a clear pathway, the legal umbrella will also be clear, so that we can work safely regarding what we must administer and what we must not, so we are truly certain that we are on the right track and compliant with guidelines.*" (FGD, Public Health Center in Denpasar)

Non-standardized referral and coordination pathways

The structural disconnect between primary and secondary care was evident in the defensive nature of referrals. Staff reported that the referral system often operates as a "one-way street," where they send patients out but rarely receive feedback on outcomes. A participant noted this disconnect.

> "*...the only shortcoming for us here is that sometimes we do not receive further information from the hospital. So, only when the patient comes back to the public health center do we know what was done at the hospital...*" (FGD, Public Health Center in Badung)

To mitigate this uncertainty and avoid risk, primary care workers have adopted a strict bureaucratic defense. They refuse to act on verbal advice alone. Staff demand written permission from specialists in the patient's handbook (Mother and Child Health (MCH) Handbook) before resuming immunization.

> "*Well, we usually advise that if [the patient] is referred back to the public health center, we ask the doctor to write in the MCH handbook (Buku KIA) that the doctor has given permission (ACC) to continue immunization at the public health center*" (FGD, Public Health Center in Badung)

Beyond the competency barriers and policy, the study identified minor but impactful themes regarding the socio-economic consequences of the staff's defensive practices: 1) the "referral trap" and financial barriers, and 2) the "never healthy" paradigm among parents.

The "referral trap" and financial barriers.

While referral to a hospital is the default strategy for hesitant primary care providers, participants noted that this often leads to loss to follow-up, particularly among uninsured patients. A significant dilemma arises when a primary care worker refuses to vaccinate due to safety concerns. Yet, as one participant revealed, the family cannot afford the costs of a hospital visit.

> "*There are some who truly do not have the funds. They want to try the free immunization at the public health center, but they were afraid. Then they were told to go to the hospital, but because there were no funds, they never returned [never came for the immunization].*" (FGD, RSUD Wangaya)

The "never healthy" paradigm among parents.

Healthcare worker hesitancy is often mirrored and reinforced by parental perceptions. Participants observed that parents of children with special conditions usually view their children as perpetually "sick" and therefore ineligible for vaccination. The staff's refusal to vaccinate children with mild symptoms validates this fear.

> "*...mothers... do not remember immunization because they consider their child to be never healthy... parents will not want to give immunization.*" (WM, Pediatrician at hospital)

Discussion

This study's findings reveal that vaccination hesitancy among primary care providers in Bali is not driven by disinformation or anti-vaccine sentiment, but by a systemic failure that leaves staff feeling incompetent and legally unprotected. Their hesitancy is a rational response to a high-risk situation lacking adequate guidance [20]. This aligns with global findings that, while primary healthcare workers are key to addressing community hesitancy [21], they can themselves become a source of hesitancy if unsupported [10]. Specifically, the main barrier in Bali is a confidence gap regarding complex patients, mirroring European research on varying levels of confidence across health professions [11].

Root causes – the "zero risk" bias

This confidence gap manifests in a rigid interpretation of clinical contraindications [3]. Lacking specific training and Standard Operating Procedures (SOPs), frontline staff default to a "zero risk" principle, often postponing vaccination for minor ailments like coughs or colds that specialists would consider safe. International literature identifies provider education and process standardization as the most effective interventions [22], yet our participants lacked both. As evidenced by the staff's plea for a "legal umbrella," the absence of SOPs forces them to prioritize their own legal safety over the child's timely immunization, which explains the persistent missed opportunities observed in national data [12].

Systemic consequence – defensive referrals

The direct consequence of this lack of protection is a highly defensive practice [23]. The phenomenon of staff demanding written permissions (ACC) in patient handbooks before acting illustrates a profound lack of trust in their own judgment and the system. This creates a bureaucratic hurdle, delaying care until a specialist "signs off." Furthermore, the unidirectional flow of information, in which primary health care staff are unaware of hospital treatments until the patient returns, hinders ongoing monitoring of care. This fragmentation obscures patient data and places the entire burden of care coordination on the patient's family [3],[7].

Health inequity & parents' 'never healthy' paradigm

Furthermore, these defensive practices exacerbate health inequities [7]. The resulting 'referral trap' creates a financial barrier for uninsured families, turning a free preventative service into an inaccessible luxury and increasing the risk of loss to follow-up. This structural barrier is compounded by parents' 'never healthy' paradigm. Since parents of children with special conditions are already predisposed to defer vaccination due to perceived fragility [24], the lack of a confident recommendation from the primary provider, or worse, a rejection due to mild symptoms, acts as a final deterrent [12]. This underscores that empowering primary care workers is not merely a clinical imperative but also a crucial step toward bridging the equity gap [22].

Table 3 synthesizes the structural disconnect identified in this study and proposes a corrective framework tailored to the Indonesian context. The 'Current Reality' illustrates how the lack of legal protection drives defensive medicine, creating a 'referral trap' that disproportionately affects uninsured families. Conversely, the 'Ideal Pathway' proposes integrating specific risk-assessment SOPs [22], derived from Ministry of Health regulations (e.g., Permenkes No. 12/2017), to provide the necessary legal umbrella for primary care staff. These must explicitly define screening criteria (e.g., clarifying that mild symptoms are not contraindications) and serve as a formal legal framework [3]. This is crucial to provide the psychological safety staff need to administer vaccines without fear of liability. The reliance on informal channels (e.g., personal messaging) must be replaced with a formal consultation system (e.g., telemedicine hotlines) between primary care and specialists. Furthermore, replacing the passive referral system with active telemedicine consultations (potentially leveraging the Satu Sehat platform) would enable immediate eligibility decisions to close the equity gap. This enables on-site eligibility decisions, thereby preventing the financial and logistical burden of unnecessary hospital referrals for vulnerable families [9],[22]. Capacity-building programs must be restructured [9]. Rather than instructing staff to refer all complex cases, training should focus on building competency in risk stratification and safe vaccination procedures for stable conditions, empowering them to manage cases at the primary level. It will reduce the 'never healthy' stigma attached to these children."

Table 3. The "Referral Trap" versus The Ideal Consultative Model in Primary Care

Feature	Current Reality ("The Referral Trap")	Ideal Pathway (Proposed Intervention)
Primary Action	**Zero-Risk Bias:** Postpone vaccination if symptoms are mild (cough/cold).	**Risk Assessment:** Screen based on SOP; vaccinate if stable/minor illness.
Referral Flow	**Defensive:** Refer to hospital for "safety" & request written permission (ACC).	**Consultative:** Telemedicine consultation with a specialist for an immediate eligibility decision.
Coordination	**One-Way / Fragmented:** No feedback from hospital to primary care.	**Integrated:** Two-way feedback; vaccination recorded in a shared system.
Impact on Parents	**High Burden:** High cost (transport/fees), confusion, validates "never healthy" fear.	**Equitable:** One-stop service, reduced cost, builds confidence.

This research was conducted in two areas of Bali Province, so the findings may not be generalizable to all of Indonesia. However, as the main barriers relate to national policies and standardized guidance, similar challenges are likely to be faced in other provinces.

4. Conclusion

Hesitancy among primary care workers in Bali toward special populations is not due to personal flaws. Still, it is a rational response to a high-risk environment lacking systemic legal protections and clinical guidance. The absence of specific SOPs) forces frontline staff into a "zero-risk" mindset, driving a cycle of defensive referrals and bureaucratic hurdles (such as demanding written permissions). This informal referral system not only fragments care and obscures data but also creates a "referral trap" that disproportionately affects uninsured families, turning a free preventive service into an inaccessible luxury. Ultimately, without empowering primary care providers with apparent legal authority and clinical competence, the national goal of "leaving no one behind" will remain unattainable for the most vulnerable children.

Acknowledgements

The authors would like to thank all research participants for their time and valuable contributions to this research. We also extend our gratitude to the Director and the Research and Development Unit of the Prof. I.G.N.G. Ngoerah General Hospital in Bali Province, and to the Center for Public Health Innovation, Udayana University, for supporting and facilitating the study's implementation.

Author`s Declaration

Authors' contributions and responsibilities

The authors made substantial contributions to the study's conception and design. The authors took responsibility for data analysis, interpretation, and discussion of results. The authors have read, approved the final manuscript, and agree with its submission.

Funding

The Director and the Research and Development Unit of Prof. I.G.N.G. Ngoerah General Hospital in Bali Province funded this research.

Availability of data and materials

All data are available from the authors.

Competing interests

The authors declared no potential conflicts of interest concerning the research, authorship, and/or publication of this article.

Additional information

No additional information from the authors.

References

[1] Orenstein WA, Ahmed R. Simply put: Vaccination saves lives. Proc Natl Acad Sci U S A. 2017 Apr 11;114(15):4031-3. DOI: https://doi.org/10.1073/pnas.1704507114

[2] World Health Organization [Internet]. Geneva: World Health Organization; c2020. Immunization Agenda 2030: A Global Strategy to Leave No One Behind; [cited 2025 Nov 16]. Available from: https://www.who.int/publications/m/item/immunization-agenda-2030-a-global-strategy-to-leave-no-one-behind

[3] Li M, Ji C, Zeng Y, Yao D, Wang X, Shao J. Reasons for the delayed vaccination, recommendations, and safety of vaccination in children with congenital heart

disease in Zhejiang, China. Hum Vaccin Immunother. 2021;17(7):2065-71. DOI: https://doi.org/10.1080/21645515.2020.1852865

[4] Liu Y, Dang Y, Wang L, Huang Y. Bridging the vaccine gap: overcoming barriers for special healthcare needs children in China. Lancet Reg Health West Pac. 2025 Aug;61:101644. DOI: https://doi.org/10.1016/j.lanwpc.2025.101644

[5] Pittet LF, Posfay-Barbe KM, Ritz N. Vaccination of immunocompromised children: an overview for physicians. Eur J Pediatr. 2021 Jun;180(6):2035-47. DOI: https://doi.org/10.1007/s00431-021-03997-1

[6] Feldman AG, Curtis DJ, Moore SL, Kempe A. Under-immunization of pediatric transplant recipients: a call to action for the pediatric community. Pediatr Res. 2020 Feb;87(2):277-81. DOI: https://doi.org/10.1038/s41390-019-0597-4

[7] Musuka G, Cuadros DF, Miller FD, Mukandavire Z, Dhliwayo T, Iradukunda PG, et al. Immunization Coverage, Equity, and Access for Children with Disabilities: A Scoping Review of Challenges, Strategies, and Lessons Learned to Reduce the Number of Zero-Dose Children. Vaccines (Basel). 2023 Jan 23;11(2):241. DOI: https://doi.org/10.3390/vaccines11020241

[8] Kementerian Kesehatan Republik Indonesia. Peraturan Menteri Kesehatan Republik Indonesia Nomor 12 Tahun 2017 tentang Penyelenggaraan Imunisasi. Jakarta: Kementerian Kesehatan RI; 2017.

[9] Freitas CAM, Vilasbôas ALQ, Prado NMBL. Strategies and challenges for immunisation of children under 5 years in primary health care in different countries: a scoping review. BMC Public Health. 2023 Nov 16;23(1):2260. DOI: https://doi.org/10.1186/s12889-023-17154-8

[10] Conrado DDS, Drumond SPDC, Nascimento AID, Ajalla MEA, Santos-Pinto CDB, Oliveira EF. Vaccine hesitancy among primary care health workers in Campo Grande, after the COVID-19 pandemic. Epidemiol Serv Saude. 2023;32(2):e2022479. DOI: https://doi.org/10.1590/S1679-49742023000200007

[11] Kaur M, Coppeta L, Olesen OF. Vaccine Hesitancy among Healthcare Workers in Europe: A Systematic Review. Vaccines (Basel). 2023 Nov 17;11(11):1756. DOI: https://doi.org/10.3390/vaccines11111756

[12] Hanifah N, Herdiana I, Ardi R. Determinants of Vaccine Hesitancy in Indonesia: A Scoping Review. Makara Hubs-Asia. 2021;25(1):3-11. DOI: https://doi.org/10.7454/hubs.asia.1050520

[13] Jusril H, Rachmi CN, Amin MR, Dynes M, Sitohang V, Untung ASB, et al. Factors affecting vaccination demand in Indonesia: a secondary analysis and multimethods national assessment. BMJ Open. 2022 Aug 11;12(8):e057395. DOI: https://doi.org/10.1136/bmjopen-2021-057395

[14] Chowdhury A, Shil NC. Thinking 'Qualitative' Through a Case Study: Homework for a Researcher. Am J Qual Res. 2021;5(2):190-210. DOI: https://doi.org/10.29333/ajqr/11295

[15] Crowe S, Cresswell K, Robertson A, Huby G, Avery A, Sheikh A. The case study approach. BMC Med Res Methodol. 2011 Jun 27;11:100. DOI: https://doi.org/10.1186/1471-2288-11-100

[16] Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. Int J Qual Health Care. 2007 Dec;19(6):349-57. DOI: https://doi.org/10.1093/intqhc/mzm042

[17] Memon MA, Thurasamy R, Ting H, Cheah JH. Purposive sampling: a review and guidelines for quantitative research. J Appl Struct Equ Model. 2025 Jan;9(1):1-23. DOI: https://doi.org/10.47263/JASEM.9(1)01

[18] Nowell LS, Norris JM, White DE, Moules NJ. Thematic Analysis: Striving to Meet the Trustworthiness Criteria. Int J Qual Methods. 2017;16(1):160940691773384. DOI: https://doi.org/10.1177/1609406917733847

[19] Jnanathapaswi SG. Thematic Analysis & Coding: An Overview of the Qualitative Paradigm [Internet]. ResearchGate; 2021 [cited 2025 Dec 16]. Available from: https://www.researchgate.net/publication/356924218

[20] Woolf SH, Grol R, Hutchinson A, Eccles M, Grimshaw J. Clinical guidelines: potential benefits, limitations, and harms of clinical guidelines. BMJ. 1999 Feb 20;318(7182):527-30. DOI: https://doi.org/10.1136/bmj.318.7182.527

[21] O'Leary ST, Opel DJ, Cataldi JR, Hackell JM; Committee on Infectious Diseases; Committee on Practice and Ambulatory Medicine. Strategies for Improving Vaccine Communication and Uptake. Pediatrics. 2024 Mar 1;153(3):e2023065039. DOI: https://doi.org/10.1542/peds.2023-065039

[22] Sibson K, Shrontz A, Jones J, Hooks O, Gerges M, Forbes J, et al. Successful Interventions to Improve Pediatric Vaccine Uptake in Hesitant Cohorts: A Scoping Review. Cureus. 2023 May 19;15(5):e39255. DOI: https://doi.org/10.7759/cureus.39255

[23] Sekhar MS, Vyas N. Defensive medicine: A bane to healthcare. Ann Med Health Sci Res. 2013 Apr;3(2):295-6. DOI: https://doi.org/10.4103/2141-9248.113688

[24] Al Saad AJ, Alhassan GM, Albedaiwi MS, Alqattan FF, Alessa FA, Alabdulmohsen HW. Acceptance of COVID-19 vaccination among parents of children with autism and other neurodevelopmental disorders in Saudi Arabia: a cross-sectional study. BMC Public Health. 2023 Dec 1;23(1):2386. DOI: https://doi.org/10.1186/s12889-023-17282-5