

Evaluating the Tunisian 'Access Program' for Innovative Therapies: Stakeholder Perspectives and Operational Recommendations

Accès aux médicaments innovants en Tunisie : Une évaluation multicentrique du programme d'accès et des recommandations opérationnelles

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ABSTRACT

Introduction: Access to innovative medicines is a major challenge in middle-income countries, where budgetary constraints and social inequalities hinder therapeutic equity. In response to the exclusion of indigent patients not covered by the National Health Insurance Fund (CNAM), the Tunisian Ministry of Health launched the Access Program in 2015. This initiative is based on the donation of innovative drugs by pharmaceutical companies, in partnership with public hospitals. Its objective is to provide free access to high-cost treatments for severe conditions such as cancer and autoimmune diseases.

Aim: To assess the program's functioning based on the experiences of its beneficiaries and operational stakeholders.

Methods: A descriptive cross-sectional survey was conducted between August and December 2024 in two hospitals (Mongi Slim La Marsa and Abderrahmen Mami Ariana).

A total of 50 patients, 22 prescribing clinicians, 4 hospital pharmacists, and 5 representatives from the pharmaceutical industry participated in the survey.

Results: Among the patients surveyed, 52% reported access-related difficulties, including stock shortages, prolonged delivery delays (with waiting times of 1 to 3 months reported by 40% of patients and estimated by 91% of prescribing clinicians). and geographic remoteness. Statistical analysis revealed a significant association between these barriers and overall patient satisfaction with the Access Program ($p < 0.001$): the more difficult the access, the lower the level of satisfaction. In addition, healthcare professionals emphasized the lack of formalized protocols and limited stock visibility, while pharmaceutical companies highlighted the absence of post-distribution follow-up mechanisms.

Conclusion: The Access Program appears to be a socially equitable initiative, yet with organizational shortcomings. Strengthening the program requires digitalization of the logistical circuit, decentralization of drug distribution, and better integration of monitoring and tracking tools.

Keywords: Access to medicines, innovative therapies, geographic disparities, indigent patients, pharmaceutical donations

RÉSUMÉ

Introduction : L'accès aux médicaments innovants représente un défi majeur dans les pays à revenu intermédiaire, où les contraintes budgétaires et les inégalités sociales entravent l'équité thérapeutique. Face à l'exclusion des patients démunis, le ministère tunisien de la Santé a lancé le Programme d'accès en 2015. Cette initiative repose sur le don de médicaments innovants par les entreprises pharmaceutiques, en partenariat avec les hôpitaux publics. Son objectif est de garantir un accès gratuit aux traitements onéreux pour des maladies graves telles que le cancer et les maladies auto-immunes.

Objectif : Cette étude vise à évaluer le fonctionnement du programme à partir des expériences de ses bénéficiaires et des parties prenantes opérationnelles.

Méthodes : Une enquête descriptive transversale a été menée entre août et décembre 2024 dans deux hôpitaux (Mongi Slim La Marsa et Abderrahmen Mami Ariana).

Au total, 50 patients, 22 médecins prescripteurs, 4 pharmaciens hospitaliers et 5 représentants de l'industrie pharmaceutique ont participé à l'enquête.

Résultats : Parmi les patients interrogés, 52 % ont signalé des difficultés d'accès aux médicaments, notamment des ruptures de stock, des délais de livraison prolongés et l'éloignement géographique. L'analyse statistique a révélé une association significative entre ces obstacles et la satisfaction globale des patients vis-à-vis du Programme d'accès ($p < 0,001$). Par ailleurs, les professionnels de santé ont souligné l'absence de protocoles formalisés et le manque de visibilité sur les stocks, tandis que les entreprises pharmaceutiques ont mis en évidence le manque de mécanismes de suivi après distribution.

Conclusion : Le programme d'accès semble être une initiative socialement équitable, malgré certaines lacunes organisationnelles. Son renforcement passe par la numérisation du circuit logistique, la décentralisation de la distribution des médicaments et une meilleure intégration des outils de suivi et de traçabilité.

Mots clés: Accès aux médicaments, thérapies innovantes, disparités géographiques, patients indigents, dons de produits pharmaceutiques

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INTRODUCTION

Access to innovative medicines remains one of the most pressing global health challenges, particularly in low- and middle-income countries (LMICs), where financial constraints and health system inequalities frequently limit therapeutic equity. Despite substantial advances in biomedical research, the availability of high-cost, life-saving treatments remains restricted to populations with adequate health coverage, thereby exacerbating existing disparities in healthcare access. In Tunisia, the issue is particularly acute for patients who fall outside the scope of the national health insurance system — most notably, indigent individuals (Beneficiaries of reduced-fee healthcare and beneficiaries of free healthcare) [1,2]. To address this structural exclusion, the Tunisian Ministry of Health launched the Access Program in 2015, a national patient-assistance initiative based on pharmaceutical donations. The program involves partnerships between the public hospital system and pharmaceutical companies holding a valid Marketing Authorization (MA) in Tunisia. Its primary aim is to ensure free and equitable access to innovative and high-cost treatments for patients suffering from severe chronic or life-threatening conditions -such as cancer and autoimmune diseases- and who would otherwise be unable to afford them [3].

The Access Program stands out for its humanitarian logic: it does not rely on subsidized pricing or generics but rather on direct donations of branded innovative drugs. As of 2024, over 40 therapeutic molecules — including monoclonal antibodies, kinase inhibitors, and immunotherapies - have been made available under this initiative through centralized distribution and oversight mechanisms involving both the Direction de la Pharmacie et du Médicament (DPM) and the Direction de la Santé et des Structures de Base (DSSB).

Despite its significant contribution to equity in health, several logistical, informational, and coordination-related limitations have been reported by stakeholders involved in the program.

The objective of this study is to evaluate the real-world implementation of the Access Program across two public hospitals located in the Tunis region (Mongi Slim Hospital and Abderrahmen Mami Hospital). Although peripheral and rural healthcare structures were not included in this study, the two referral centers account for a significant proportion of patients receiving innovative therapies through the Access Program.

By collecting the perspectives of patients, prescribing clinicians, hospital pharmacists, and pharmaceutical companies, the study seeks to assess the strengths and weaknesses of the distribution circuit and to formulate concrete recommendations for improving the program's sustainability and accessibility.

METHODS

Study design and setting

This study is a bicentric, descriptive cross-sectional

investigation conducted between August and December 2024 in two public hospitals in Tunisia: Mongi Slim Hospital, La Marsa and Abderrahmen Mami Hospital, Ariana.

Study population

The study included four categories of stakeholders involved in the Access Program:

1. Patients benefiting from innovative treatments under the program
2. Prescribing clinicians
3. Hospital pharmacists
4. Pharmaceutical company representatives

Inclusion and exclusion criteria

- Patients: Individuals classified as “indigent” (Type 1: full coverage; Type 2: reduced tariff) receiving Access Program drugs in the oncology, rheumatology, gastroenterology, or internal medicine departments of the two hospitals.

Exclusion criteria: patients lost to follow-up, unreachable, or whose treatments had already been completed or permanently interrupted.

- Prescribing clinicians: Clinicians authorized to prescribe Access Program medications within the relevant hospital departments.

Exclusion: non-prescribing clinicians, those working outside the target departments, or unavailable during the survey.

- Hospital pharmacists: Pharmacists responsible for receipt, inventory management, and dispensing of Access medicines.

Exclusion: pharmacists not involved in the program or absent during data collection.

- Pharmaceutical companies: Representatives of donor companies operating in Tunisia, responsible for market access or regulatory affairs.

Exclusion: companies not participating in the Access Program or no longer active during the study period.

Data collection tools

Structured questionnaires were developed for each participant group:

- Patients: Interviews conducted by phone after verbal informed consent, addressing demographics, knowledge of the program, access difficulties and satisfaction level. Patients were included consecutively during the data collection period. All patients meeting the eligibility criteria and reachable by telephone were contacted. No randomization procedure was used.

- Clinicians and pharmacists: In-person self-administered questionnaires distributed within their departments, exploring practices, perceived barriers, coordination, and program efficiency.

- Clinicians and pharmacists were systematically approached during working hours in their respective departments throughout the data collection period. All eligible professionals present during the period of the study were invited to participate.

- Pharmaceutical companies: Online Google Form distributed via email to local affiliate contacts,

investigating contractual procedures, monitoring mechanisms, and supply chain challenges.

- Seven pharmaceutical companies holding Access Program listed products in Tunisia were systematically identified and contacted. Five agreed to participate (response rate: 71.4%). Two companies declined, citing internal data confidentiality policies.

Ethical considerations

This was a non-interventional descriptive study based on questionnaires, with no medical procedures, biological sampling, or collection of directly identifiable personal data. Verbal informed consent was obtained from all patients prior to the telephone interviews after explanation of the study objectives, the voluntary nature of participation, and data confidentiality.

Statistical analysis

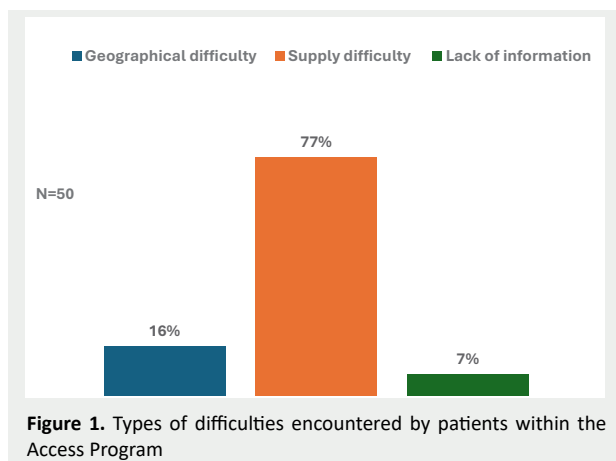
Data were entered in Microsoft Excel 2019 and analyzed using IBM SPSS Statistics version 19.0. Associations between categorical variables were tested using Chi-square or Fisher's exact test, with statistical significance set at $p < 0.05$.

RESULTS

Patient demographics and treatment access

A total of 50 indigent patients were surveyed, including 30 from Mongi Slim La Marsa Hospital and 20 from Abderrahmen Mami Ariana Hospital. The sex ratio (M/F) was 0.47, with a mean age of 45 years (ranging from 22 to 69). Most participants (74%) reported having no income, while 26% were employed. Regarding health coverage, 60% held a white indigent card granting reduced tariffs, and 40% had a yellow card offering full coverage. The most commonly reported diagnoses were breast cancer (40%) and Crohn's disease (32%). In terms of prescribed treatments, Infliximab (42%) and Trastuzumab (36%) were the most frequently administered drugs.

Access barriers were reported by 52% of patients. The main difficulties encountered included drug stockouts (77%), geographic inaccessibility (16%), and insufficient information about the program (7%).

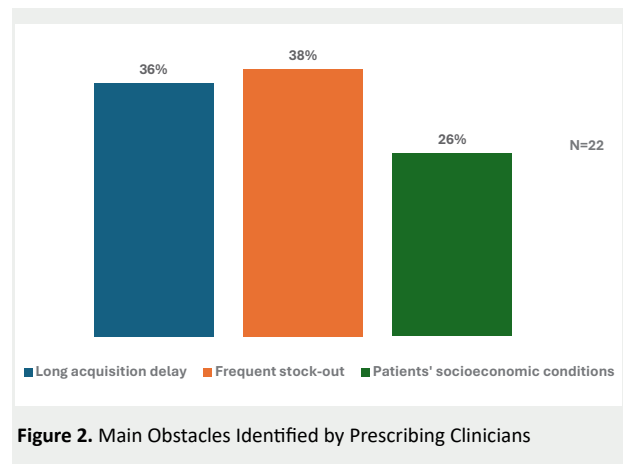


Overall, 66% of patients reported waiting times of at least one month. Among them, the most frequently reported delay was between 1 and 3 months (40%). Overall, 70% of patients reported being satisfied or very satisfied with the program. A statistically significant association was observed between treatment access and satisfaction levels, with more difficult access correlating with lower satisfaction ($p < 0.001$).

Clinician perspectives

Twenty-two prescribing clinicians were included in the study, primarily specialists in oncology, rheumatology, and gastroenterology. A majority (43%) reported having first learned about the Access program through informal communication within medical teams, whereas only 10% cited official institutional channels. Off-label prescribing practices were reported by 59% of participants, indicating use of Access medications outside the approved indications of their marketing authorization. Within the framework of the Access Program, off-label use is regulated and restricted to patients who have either failed available therapies or present contraindications to all treatments holding a valid Marketing Authorization (MA) in Tunisia for the relevant indication. In such cases, the prescribing clinician must submit a documented clinical dossier supported by published scientific evidence, which is subsequently reviewed by an institutional validation committee prior to approval.

The main challenges identified by clinicians included recurrent stockouts (38%), delayed drug deliveries (36%), and socioeconomic obstacles limiting patients' access to care (26%).



A large majority of clinicians (91%) reported drug delivery times ranging from one to three months. Waiting times were assessed independently from each stakeholder category and reflect perceived, not objectively measured, delays at distinct steps of the distribution circuit. The 91% figure reflects clinicians' estimation of the time elapsed between prescription issuance and effective drug dispensation which may not be perceived by patients as part of their own waiting period.

Furthermore, more than half stated that they were unaware of the quantities allocated to their departments. Regarding fairness, 60% of respondents perceived the

program as only partially equitable when compared to the benefits provided to CNAM-covered patients. As for program performance, most clinicians rated its overall efficiency as moderate.

Hospital pharmacist perspectives

Hospital pharmacists highlighted several logistical shortcomings in the management of Access medications. None had received formal training specific to the handling of these drugs, and 75% reported the absence of internal procedures for their reception or dispensation. Although all pharmacists relied on computerized stock management systems, coordination with prescribing clinicians was described as only “moderately fluid” by 50% of respondents. While 75% judged delivery delays to be acceptable, 33% attributed stockouts to logistical errors, and another 33% cited inaccurate estimations of supply needs as a primary contributing factor.

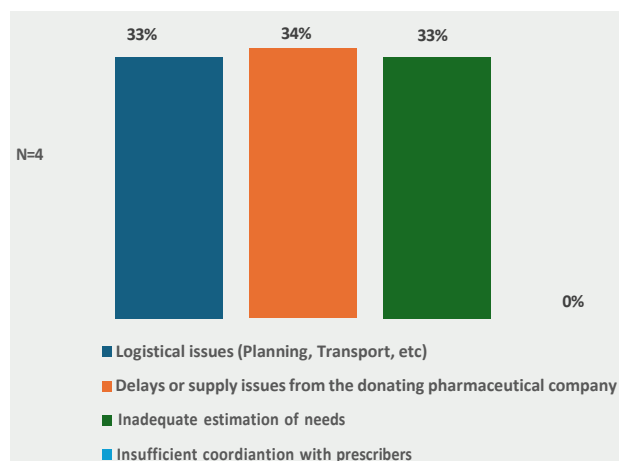


Figure 3. Main Obstacles Identified by Pharmacists

Nonetheless, all pharmacists surveyed perceived equitable access for indigent patients and rated the program “satisfactory”.

Pharmaceutical industry insights

Five pharmaceutical companies responded to the online questionnaire. Among them, 80% reported having established a standardized internal procedure for participating in the Access program. However, only 40% had conducted estimations of annual needs, whether in terms of patient numbers or drug volumes. None of the respondents reported implementing external monitoring via Contract Research Organizations (CROs). All unanimously emphasized the necessity of introducing an electronic tracking platform to enhance transparency and logistical coordination.

DISCUSSION

Equitable access to high-cost innovative therapies remains a pressing challenge for health systems in low- and middle-income countries (LMICs), including Tunisia.

The elevated cost of these treatments, compounded by public budget constraints, underscores the need for targeted support mechanisms, such as the Access Program, which is designed to serve indigent patients. Launched in Tunisia in March 2015, the Access Program aims to provide free access to costly innovative therapies for uninsured patients suffering from severe illnesses, particularly cancers and complex chronic diseases. The initiative is based on a partnership between Tunisian health authorities and pharmaceutical companies, which supply the drugs on a donation basis. This bicenter evaluation offers a critical analysis of the program’s strengths, weaknesses, and stakeholder perceptions—including patients, clinicians, hospital pharmacists, and pharmaceutical companies. The triangulation of stakeholder perspectives allows for a more nuanced understanding of the program’s implementation dynamics. These insights justify a comparative and critical analysis, particularly in light of similar international experiences in which Patient Assistance Programs (PAPs) play a strategic role in mitigating health disparities.

The program’s main advantage lies in its complete financial coverage of innovative therapies, thereby removing a major barrier to care. This model addresses both access to innovation and social equity in health. Unlike global mechanisms such as the Medicines Patent Pool (MPP), which promotes access to generic medicines at reduced prices—particularly in East Africa—the Access Program operates solely through humanitarian donations. This structure seeks to guarantee health equity for the most vulnerable populations [4].

Moreover, the program embraces a social justice framework by targeting the economic determinants of access to care. It plays a preventive role against medical exclusion by ensuring therapeutic continuity for patients whose personal or public financial resources are insufficient.

Another notable strength is the program’s exceptionally broad therapeutic scope. With over 40 costly molecules available—including monoclonal antibodies and tyrosine kinase inhibitors—the Access Program covers a wide spectrum of high-burden chronic diseases. These include various cancers (e.g., breast, lung), inflammatory bowel diseases (e.g., Crohn’s disease), and systemic autoimmune disorders (e.g., rheumatoid arthritis, ankylosing spondylitis), whose biological treatments would otherwise remain inaccessible for indigent patients.

This diversified therapeutic portfolio distinguishes Access from more narrowly targeted initiatives like the Glivec International Patient Assistance Program (GIPAP), launched by Novartis in 2001, which offered imatinib access for chronic myeloid leukemia and gastrointestinal stromal tumors. Although GIPAP reached over 75,000 patients across 60 countries, its scope was initially limited to a single molecule and a few indications [5]. In contrast, the Access Program offers a more systemic approach to therapeutic equity, encompassing multiple drugs and indications.

Functionally, the program relies on collaboration between prescribing clinicians and hospital pharmacists

to ensure secure, continuous drug delivery. Two-thirds of pharmacists surveyed described this coordination as "moderately fluid," and one-third considered it "fluid." While there is room for improvement—through digital tools and standardized protocols—this dynamic suggests the existence of a solid operational foundation.

Comparable interprofessional coordination models have proven effective elsewhere, such as in South Africa's Central Chronic Medicines Dispensing and Distribution (CCMDD) program. That initiative demonstrated that collaboration among clinicians, pharmacists, nurses, and logisticians is key to maintaining therapeutic continuity under resource constraints [6].

Patient perception data reinforce the program's acceptability: nearly 70% of respondents reported being satisfied or highly satisfied with Access, despite logistical or organizational constraints. Comparable satisfaction levels have been observed in India's Jan Aushadhi program, which increased utilization through affordable generics. One study highlighted the perceived effectiveness ($\beta = 0.254$) and ease of use ($\beta = 0.237$) of medications as key satisfaction drivers [7].

Nevertheless, the Access Program exhibits structural and operational limitations that could undermine its long-term impact. Frequent stockouts—reported by 38% of clinicians and 33% of pharmacists—signal persistent supply chain fragility. These disruptions pose serious clinical risks for patients requiring uninterrupted therapy, particularly in oncology and immunology. At Ethiopia's Tikur Anbessa hospital, only 67.8% of essential cancer drugs were available at any time, forcing some patients to purchase treatments privately or suspend therapy—outcomes with direct implications for efficacy and survival [8].

Addressing these supply disruptions requires a reinforced and more proactive institutional role for the Direction de la Pharmacie et du Médicament (DPM). As the central regulatory authority overseeing the Access Program, the DPM is well positioned to implement a national pharmaceutical needs-forecasting system, mandate standardized and periodic stock reporting from donor companies, and coordinate inter-hospital redistribution in cases of localized shortages. Integrating these functions into a unified digital supply chain platform, as recommended by stakeholders across all surveyed groups, would enhance the DPM's capacity to anticipate stockouts, ensure continuity of care, and improve overall program governance, consistent with practices observed in Tanzania's eLMIS system. [14].

Delayed drug availability represents another critical bottleneck. 40% of patients and 91% clinicians reported waiting 1–3 months for prescribed treatments. In life-threatening conditions, such delays can postpone treatment initiation or interrupt ongoing therapy. Brazil's national Farmácia Popular program offers a useful contrast: thanks to a centralized digital platform (DATASUS), drug delivery times were reduced from several weeks to a few days [9].

Patient awareness is another major concern. In this study, 90% of patients were unaware of the Access Program. This communication gap weakens adherence, autonomy,

and therapeutic understanding. Evidence from the U.S. and LMICs shows that mobile technologies—such as SMS alerts and digital apps—can improve program visibility, adherence, and patient engagement [10].

The study also found that geographic accessibility significantly influenced satisfaction: patients with no access issues were 95.8% satisfied, compared to 65.4% among those facing at least one barrier (Fisher's exact test, $p = 0.001$). These findings are consistent with U.S.-based research indicating that transportation insecurity impedes cancer care and that rideshare services improve attendance and satisfaction [11,12].

Furthermore, the lack of external monitoring systems, such as CRO-based pharmacovigilance, limits data reliability. In contrast, companies like Novartis and BMS integrate CROs into international PAPs [13].

These limitations call for more extensive, longitudinal, and multicentric evaluations. However, they do not negate the program's relevance or potential. Strategic upgrades inspired by successful international models could reinforce its public health value.

Central to this transformation is the creation of a national digital platform linking the National Medicines Agency, pharmaceutical donors, and hospitals. This would facilitate real-time drug tracking, demand forecasting, and equitable allocation. Tanzania's nationwide eLMIS reduced stockouts from 32% to 23% and improved supply chain transparency [14].

International partnerships, especially with NGOs like Médecins Sans Frontières or Access Accelerated, could expand service delivery to underserved regions. The Butaro Cancer Center in Rwanda, developed with Partners in Health, offers a replicable example of rural, equity-oriented oncology care [15].

Additionally, performance monitoring systems should be institutionalized. Metrics such as treatment initiation delays, adherence rates, and patient satisfaction should guide program improvements. Brazil's Farmácia Popular and France's Market Access Contracts provide successful examples of using KPIs for policy optimization [16,17].

Geographic disparities must also be addressed. Treatment availability remains concentrated in urban hospitals, excluding rural populations. Regional redistribution, via secondary hospitals or community networks, is essential for equity. In their current form, travel and logistical burdens may discourage the most vulnerable patients, compromising both adherence and outcomes [18].

In sum, the Access Program represents a critical step toward therapeutic equity in Tunisia. However, its full potential can only be realized through structural reforms, digital transformation, strengthened governance, and meaningful patient engagement.

Limitations of the study

This study has several limitations. First, its cross-sectional design captures perceptions at a single point in time and may not reflect changes in program performance over time. Second, the study was conducted in only two urban hospitals, which may limit its applicability to other healthcare settings. In addition, the small sample sizes of

the pharmacist (N=4) and pharmaceutical industry (N=5) groups limit the interpretation of percentage-based results, which should be considered exploratory. The four pharmacists represent all those involved in Access Program management at Mongi Slim Hospital. Therefore, findings from these subgroups should be interpreted with caution and not generalized. Despite these limitations, the multi-stakeholder approach provides useful insights into the strengths and areas for improvement of the Access Program.

CONCLUSION

The Tunisian Access Program represents a critical mechanism for bridging the equity gap in access to innovative therapies among uninsured and indigent populations. Its humanitarian model, based on pharmaceutical donations, has enabled the delivery of high-cost treatments for severe chronic conditions that would otherwise be inaccessible.

While the program demonstrates strong acceptability and therapeutic coverage, its effectiveness is undermined by logistical bottlenecks, coordination gaps, and low patient awareness. Addressing these challenges through digital tools, professional training, decentralized logistics, and expanded patient support services will be essential to improving program sustainability and replicability.

As Tunisia and other LMICs explore models to ensure equitable access to health innovations, the Access Program offers a scalable framework — provided its operational foundations are reinforced by data-driven and system-oriented reforms

REFERENCES

1. Organisation de Coopération et de Développement Economiques. *Études économiques de l'OCDE Tunisie 2022*. Paris: OCDE; 2022
2. Ismaïl S, Arfa C. Effects of out-of-pocket medicine's spending on catastrophic expenditure and impoverishment in Tunisia. *Value Health Reg Issues*. 2022;30(1):109-18.
3. Direction de la Pharmacie et du Médicament. *Procédure interne de suivi et de gestion des Access Programs*. Tunis: DPM; 2015
4. Medicines Patent Pool. *Annual Report 2022: Greater access to medicines and health technologies for those who need them*. Geneva: MPP; 2023
5. Umeh CA, Garcia Gonzalez P, Tremblay D, Laing R. The survival of patients enrolled in a global direct-to-patient cancer medicine donation program: The Glivec International Patient Assistance Program (GIPAP) *EClinicalMedicine*. 2020;19(1):e100257
6. Bogart LM, Shazi Z, MacCarthy S, Mendoza Graf A, Wara NJ, Zions D, et al. Implementation of South Africa's central chronic medicine dispensing and distribution program for HIV treatment: A qualitative evaluation. *AIDS Behav*. 2022;26(8):2600-12.
7. Dash A. Assessment of patient satisfaction with generic medication in an Treatment Satisfaction Questionnaire for emerging economy using the Medication. *J Patient Exp*. 2021;8(1):1-6.
8. Fentie AM, Mekonen ZT, Gizachew Z, Hailemariam M, Clark SM, Richardson J, et al. Chemotherapy supply chain management, safe handling and disposal in Ethiopia: The case of Tikur Anbessa Specialized Hospital. *Pediatr Hematol Oncol*. 2023;40(3):258-66.
9. Mendes Da Silva R, Cactano R. "Farmacia Popular do Brasip" Program: characterization and evolution between 2004 and 2012. *Cien Saude Colet*. 2015;20(10):2943-56
10. Colon C, Salas P, Diaz M, Cotto R, Martinez I, Hale GM, et al. Patient assistance programs and technology in medication adherence. *Innov Pharm*. 2020;11(2):e3269.
11. Graboyes EM, Chaiyachati KH, Gall JS, Johnson W, Krishnan JA, McManus SS, et al. Addressing transportation insecurity among patients with cancer. *J Natl Cancer Inst*. 2023;115(3):229-38
12. Pringle S, Ko EM, Doherty M, Bodurtha Smith AJ. Addressing transportation barriers in oncology: existing programs and new solutions. *Support Care Cancer*. 2024;32(5):317-9.
13. Novartis Patient Assistance Foundation Novartis Patient Assistance Foundation Program [En Ligne]. 2025 Disponible sur: <https://pap.novartis.com/>
14. Mwencha M, Rosen JE. Better data visibility & data use result in lower cost and improved performance in medicine supply chains [En Ligne]. 2016 [consulté le 22/06/2025] Disponible sur [tpe/www.researchgate.net/publication/30874079](https://www.researchgate.net/publication/30874079)
15. Mubili JM, Hedt Gauthier BL, Mpunga T, Tapela N, Okao P, Harries AD, et al. Caring for patients with surgically resectable cancers: experience from a specialised centre in rural Rwanda. *Public Health Action*. 2014;4(2):128-32.
16. Emmerick IC, Do Nascimento JM, Pereira MA, Luiza VL, Ross Degnan D. Farmacia popular program: Changes in geographic accessibility of medicines during ten years of a medicine subsidy policy in Brazil. *J Pharm Policy Pract*. 2015;8(1):1-10.
17. Toumi M, Zard J, Duvillard R, Jommi C. Médicaments innovants et contrats d'accès au marché. *Ann Pharm Fr*. 2013;71(5):302-12.
18. Oldfield L, Penm J, Moles R. Exploring access to essential medicines in the South Pacific: insights from a multi-country cross-sectional study. *Lancet Reg Health West Pac*. 2025;54(1):e101262.