

The Influence of IMPACT Approach in Financial Resource Mobilization to Improve Availability of Essential Health Commodities in Sikonge DC

Christopher Nyallu¹, Eddom Silabi^{2, *}, Mugabo M. Moses¹, Lynne Nuru Mshamu⁴, Grace Mollel¹, Rashid A. Omar⁵, Athanas Ntaganyamba², Martha Kikwale⁴, Ondo Baraka², Martine Peter Gogadi³, John Francis Rwegayura², Bwiro Joseph², Mathew Mganga⁵

¹Council Health Management Team, Sikonge District Council, Tabora, Tanzania

²Capacity Building and Data Use, United States Agency for International Development, Global Health Supply Chain-Technical Assistance-Tanzania, Dar es Salaam, Tanzania

³Regional Health Management Team, Regional Administrative Office, Tabora, Tanzania

⁴Pharmaceutical Services Unit, Ministry of Health, Dodoma, Tanzania

⁵Health Commodities & Diagnostics Services Unit, President's Office, Regional Administration and Local Government, Dodoma, Tanzania

Email address:

eSilabi@yahoo.com (Eddom Silabi)

*Corresponding author

To cite this article:

Christopher Nyallu, Eddom Silabi, Mugabo M. Moses, Lynne Nuru Mshamu, Grace Mollel, Rashid A. Omar, Athanas Ntaganyamba, Martha Kikwale, Ondo Baraka, Martine Peter Gogadi, John Francis Rwegayura, Bwiro Joseph, Mathew Mganga. The Influence of IMPACT Approach in Financial Resource Mobilization to Improve Availability of Essential Health Commodities in Sikonge DC. *International Journal of Health Economics and Policy*. Vol. 8, No. 1, 2023, pp. 16-22. doi: 10.11648/j.hep.20230801.13

Received: January 13, 2023; **Accepted:** February 4, 2023; **Published:** February 16, 2023

Abstract: The Tanzanian government, through the Ministry of Health, in collaboration with President's Office, Regional Administration and Local Government (PORALG) and various stakeholders, has developed several robust electronic health systems such as e-LMIS, GoTHOMIS, FFARS and DHIS2 to streamline health supply chain management processes and improve data visibility. However, the use of this data for informed decision making at all levels of the supply chain was found to be very low, which led to the introduction of IMPACT (Information Mobilized for Performance Analysis and Continuous Transformation) to increase the use of data to improve the supply chain in the country, including Sikonge District Council. Following the implementation of the approach, the IMPACT team in Sikonge discovered low performance in the availability of health commodities among other monitored indicators major reason being inadequate financial resources to procure health commodities. This prompted the team to look for other innovative ways of fundraising to rescue the situation in the council. The objective of this study was therefore to assess the influence of the IMPACT approach methods employed in mobilizing financial resources to improve the availability of health commodities in Sikonge DC. Some of the methods employed by Sikonge team for such a purpose were; conducting a preliminary data-driven analysis and assessment to identify issues related to i-CHF and NHIF services, developing strategies to increase i-CHF enrolment, retention, and disbursements, working on the most common anomalies in the NHIF forms to reduce the number of rejected claims and finally clearing the MSD debt of health facilities to relieve them of the financial burden. These strategies resulted in an increase in i-CHF funds reimbursement from Tsh1.4 million in September 2020 to Tsh8 million in December 2021. NHIF funds reimbursement increased from Tsh696,170 in September 2020 to Tsh12 million in December 2021. The overall percentage of health facilities submitting NHIF claims increased from 17% to 77% over the same period. Thus, the concept of IMPACT and the employed data driven strategies, played a major role in the results achieved in Sikonge and in order to meet the alarming demand for health commodities at service delivery points, council teams should show strong commitment in using real-time data for problem identification and resolution through IMPACT team approach as a tool for continuous improvement.

Keywords: IMPACT Approach, i-CHF, NHIF, Supply Chain Management, Availability

1. Introduction

The government of Tanzania through the Ministry of Health (MoH), in collaboration with President's Office, Regional Administration and Local Government (PORALG) and various stakeholders had implemented various initiatives to improve the supply chain and availability of health commodities. As part of this effort, several robust electronic health systems such as e-LMIS, GoTHOMIS, FFARS and DHIS2 have been introduced to streamline health supply chain management processes and improve data visibility at all levels [1, 2].

Nevertheless, the use of such data for informed decision making was found to be very low across all supply chain levels [3] leading to stock-outs, wastage, alarming expiries, and pilferage of health commodities.

To strengthen and improve the culture of data use among health supply chain personnel, the PORALG and the Ministry of Health, in collaboration with USAID Global Health Supply Chain-Technical Assistance-Tanzania, introduced the IMPACT (Information Mobilized for Performance Analysis and Continuous Transformation) approach in the country in 2018 [4]. The Tabora region was oriented on the approach in February 2019 where among other councils, ten (10) Sikonge CHMT members were oriented on the approach with the financial and technical support from Elizabeth Glazer Pediatric AIDS Foundation (EGPAF) and USAID Global Health Supply Chain-Technical Assistance-Tanzania (GHSC-TA-TZ).

IMPACT approach is a people centered and data driven initiative which employs quality improvement mechanisms to identify challenges from the data and develop evidence-based interventions to improve the supply chain performance and availability of essential health commodities. The approach guides health supply chain personnel to use data on health commodities for planning, quantification, and procurement [4, 5]. The IMPACT approach is identified by several features such as common goal, performance monitoring, information management systems, problem solving, action planning, recognition, leadership, and IMPACT team meetings.

The composition of IMPACT teams at council level is comprised of the District Medical Officer (DMO), District Pharmacist (DPharm), District Laboratory Technologist (DLT), District Quality Improvement Coordinator, District Tuberculosis and Leprosy Coordinator (DTLC), District Reproductive and Child Health Coordinator (DRCHCo), District Immunization and Vaccines Officer (DIVO), District Malaria Focal person, District Health Officer (DHO), District AIDS Control Coordinator (DACC), District Health Management Information System coordinator (DHMIS), District Nutrition Officer (DNO) and any other co-opted member [4].

Unlike other councils, the successful implementation of the approach in Sikonge DC was enhanced by training and empowering thirteen (13) other CHMT members, follow-up of implementation. and capacity building to all 23 Sikonge

IMPACT team members with support from JSI-InSupply Health and MDH. In addition, the team assigned each coordinator to monitor supply chain performance for their health commodity programs.

Despite the team's great efforts to monitor the availability of essential health commodities among other indicators, the results for this indicator did not seem to improve. This prompted the Sikonge IMPACT team to look for other innovative ways to raise funds, which proved to be one of the most important factors to improving the availability of health commodities in their facilities [6]. This led to close monitoring of MSD debt to HFs, i-CHF enrollment and NHIF claiming and reimbursement trends.

The Sikonge IMPACT team showed outstanding performance evidenced by regional IMPACT team and PORALG recognitions as the best performing team in several areas including financial indicator performances. Therefore, this study aimed at assessing the influence and effectiveness of the data driven strategies employed by the Sikonge IMPACT team to mobilize financial resources which is a vital factor for procurement and improved availability of health commodities in the council health facilities.

2. Methods

The methods used by the Sikonge IMPACT team for funds collection and resource mobilization in efforts to improve the availability of health commodities.

- 1) The IMPACT team conducted periodic assessments and analysis on i-CHF and NHIF performance trends including health facility debts at the MSD. This approach had helped the team to have real-time data on funds coming from various sources, the number of clients who receive services and the associated challenges.
- 2) In order to improve i-CHF performance, the IMPACT team resolved to abandon the original strategy of using locally trained villagers as enrollment officers for i-CHF client enrolment and switched to using teachers as a result of losing TSH 17 million in new client's enrolment processes. This measure has led to improved results for both client enrollment and funds reimbursements.
- 3) Regarding NHIF performance, the team started using reimbursement forms to identify the claiming and not claiming health facilities as well as ascertaining the magnitude of funds rejections and the associated causes.
- 4) Thereafter, the health facility in charges were oriented on mitigation measures about common anomalies appearing in the NHIF reimbursement forms during quarterly meetings in order to reduce the number of rejections and at the same time improve reimbursement in the facilities.
- 5) In order to progressively monitor the overall performance of financial indicators, the team included financial indicators both in the performance improvement plan and recognition plan with set targets to achieve.
- 6) The team continued to sensitize health facility in charges during the quarterly CHMT and health facility meetings

to achieve the financial indicators set out in the performance improvement plan.

- 7) In order to achieve better performance on financial indicators, both the best and the worst performing health facilities were awarded at the quarterly meetings. At these events, the best performing facility was awarded based on the funds adjusted and the amounts payable, while the worst performing facility was penalized with the "KINYAGO CHEUSI".
- 8) Apart from working of i-CHF and NHIF indicator performances, the team advocated for proper utilization of the health facilities' collected funds by reducing procurements from the prime vendor and increasing procurements from the MSD with a purpose of slowly reducing the chronic financial debts at the MSD.
- 9) In line with the previous initiative, the Sikonge IMPACT team went further to reduce the debts of health facilities to the MSD by advising the Director of Council to use funds from facilities with sufficient balances at the MSD where Tsh. 46,500,000 was used to pay off about Tsh. 17 million of existing debt in May 2022 and then give these facilities a balance for future use.

3. Results

This section presents the overall results of the data led strategies implemented by the Sikonge IMPACT team to mobilize financial resources. The results are presented in four main areas; The trend of i-CHF funds reimbursements alongside number of households retained into the scheme from July 2020 to June 2022, the trend of NHIF reimbursements from July 2020 to March 2022, trend of MSD debts in health facilities from 2018 to 2022, and overall availability of essential health commodities and the number of reported items following improved financial indicators performance in Sikonge DC.

3.1. The Trend of i-CHF Funds Reimbursements Alongside Number of Households Retained into the Scheme over Time

As shown in the figure 1 below, the amount of i-CHF funds reimbursed have been increasing and peaked in the quarter of Apr-June 2021 before it started declining. However, the number of households enrolled and retained in the scheme have significantly been rising to June.

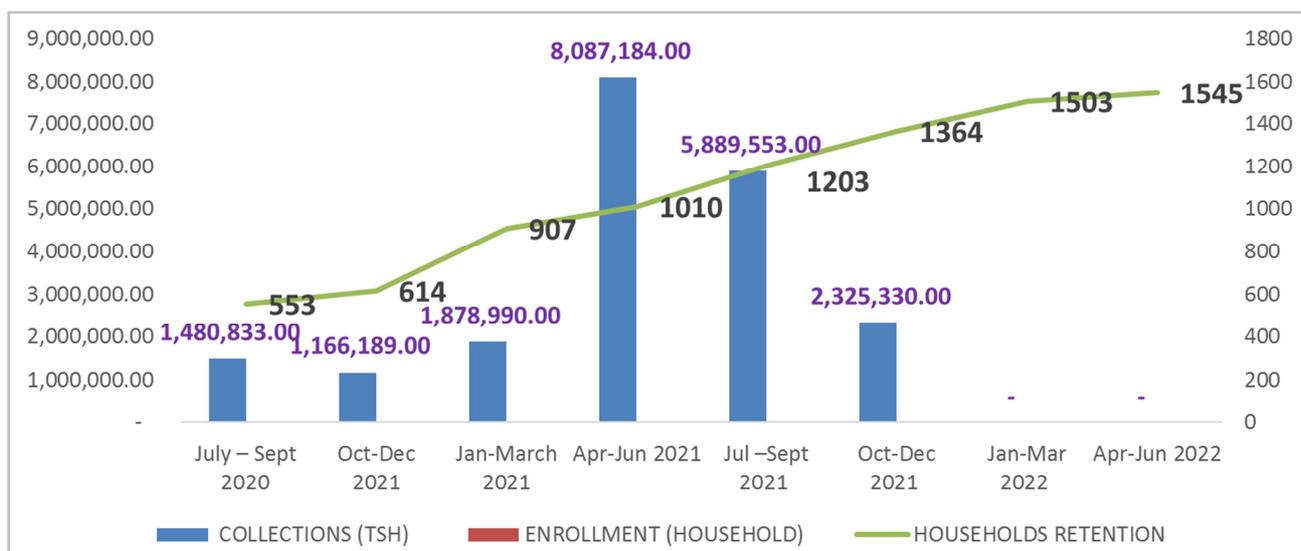


Figure 1. The number of households enrolled and retained into i-CHF and the amount of funds reimbursed in quarterly basis.

3.2. NHIF Performances for Sikonge DC Health Facilities

3.2.1. NHIF Funds Reimbursement Trends

The figure 2 below highlights the amount of funds reimbursed from NHIF to Sikonge DC facilities and the reimbursement proportions obtained from the funds reimbursed against total claims in the council. The figure summarizes the overall improvement for both the proportions and the amount of NHIF funds reimbursed to Sikonge DC facilities.

3.2.2. Percentage (%) of Health Facilities That Submit Claims to NHIF

Figure 3 shows the increasing proportion of health facilities that were submitting claims to NHIF for reimbursement. This

figure shows the relatively improvement from July-Sept 2020 to October-December 2021.

3.3. Trends of MSD Debt in Health Facilities with the Number of Health Facilities in Debts at MSD

Figure 4 below shows the significant annual decrease of the health facility MSD debts including the number of health facilities in debt.

3.4. Percentage Availability of Essential Health Commodities and Number of Reported Items Following Improved Financial Indicators Performances in Sikonge

The results presented in figure 4 below portrays the overall improvements in availability of essential health commodities

and the number of reported incidences for health commodities in the council from August 2020 to July 2022.

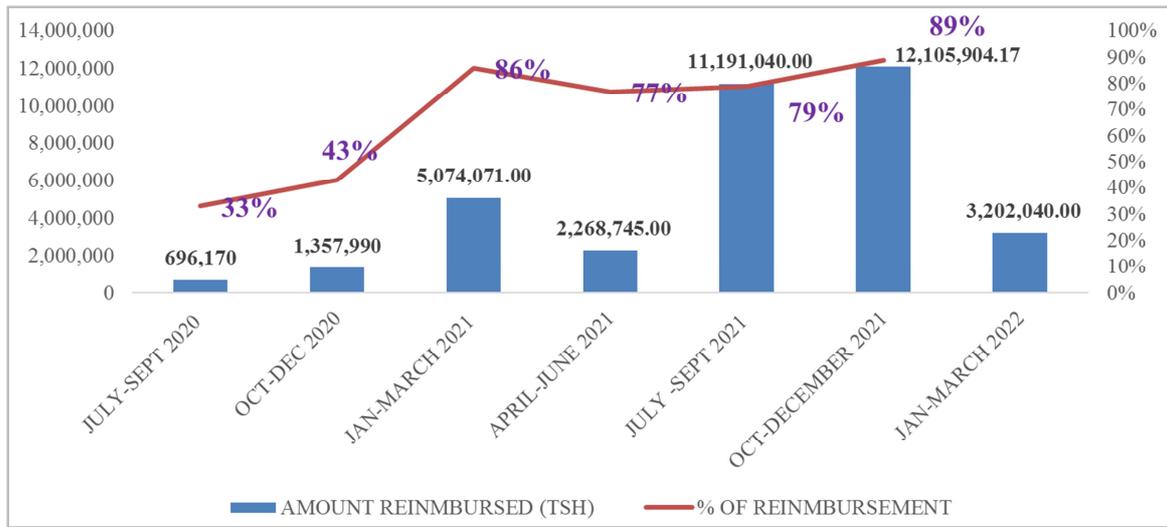


Figure 2. The amounts and rates of NHIF funds reimbursed in Sikonge DC from July 2020 to March 2022.

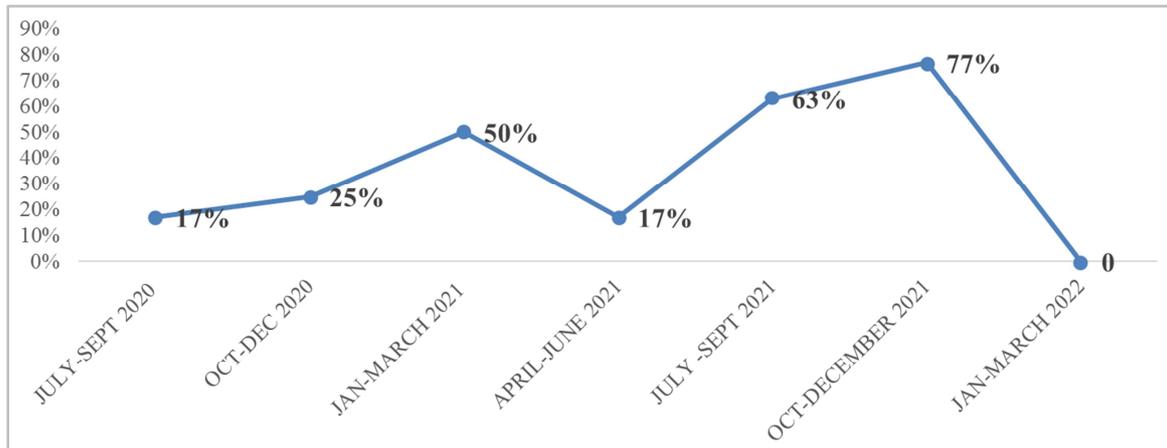


Figure 3. The proportion of HF's that submitted NHIF claims against all facilities that offered services to NHIF clients.



Figure 4. Trend of health facilities with debts at MSD in Sikonge DC.

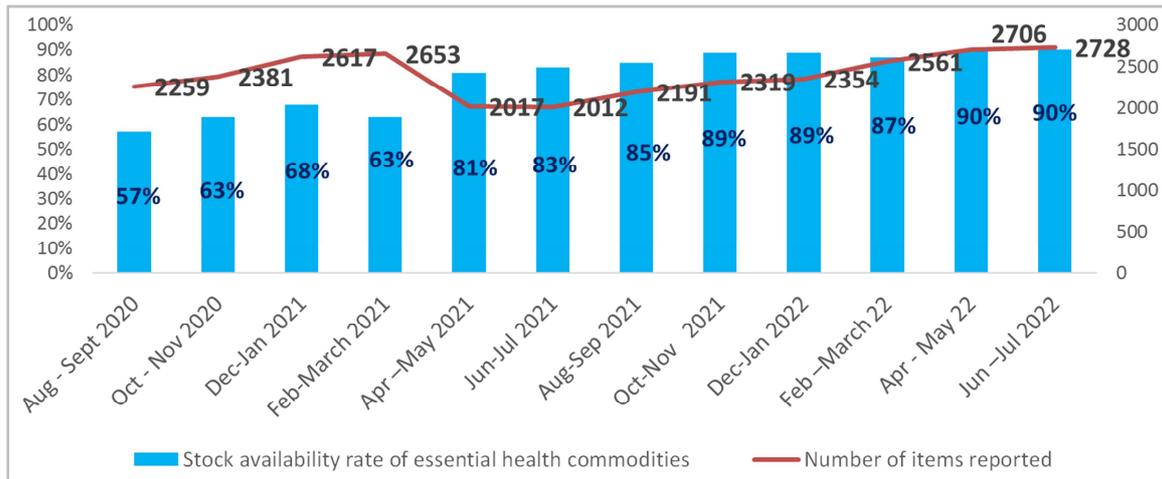


Figure 5. The trend of bimonthly availability and reported number essential health commodities from August 2020 to July 2022.

4. Discussion

4.1. The Trend of i-CHF Funds Reimbursements Alongside Number of Households Retained into the Scheme over Time

The results achieved by Sikonge DC's IMPACT team on this indicator show the positive impact of all the measures taken to improve performance related to i-CHF. However, since the indicator began to be monitored, major gains have been observed in enrolment trends and the number of households retained. The decline in i-CHF funds in the July-September 2021 quarter could be attributed to several factors. One is the decline in health services provided to i-CHF clients, as the more health facilities that provide services to i-CHF clients, the more i-CHF funds the council receives. Another important factor is the changeover of the electronic i-CHF system at the points of care. Nevertheless, a study conducted by Maluka *et al* in Iramba DC and Lindi DC observed the same such that low provision of health services triggered the members of households to go and seek health services from other providers in nearby districts resulting into low CHF reimbursement back to the districts under study since they provided fewer health services to the ensured [7]. Despite the rising enrolment trends in Sikonge, Macha *et al* observed a contrary scenario where by CHF enrolment for Mbulu DC and Kigoma DC in Tanzania was decreasing over time and the main factor is poor understanding and knowledge on the concept of risk pooling among the community members [8].

4.2. NHIF Funds Reimbursement Trends

It has been shown that the number of facilities offering NHIF services and submitting their claims to NHIF in this category has increased over time. This and other factors such as increased sensitization of health facilities on common anomalies in NHIF forms may have contributed significantly to the improvements in both the amount and rate of NHIF reimbursements. The decline in reimbursements to Sikonge

DC during January-March 2022 could be attributed to the reported issues related to late NHIF reimbursements across the country. This argument is backed up by a study conducted in Tanzania where by Durrizo *et al* highlighted that the sustainability of the National Health Insurance Fund is very questionable needing a subsidy from the government using other sources such as tax-based and international funds or increase the premium package costs to meet the running costs of the fund [9], this might be a reason why reimbursement for claims made was delayed beyond the normal processing time as per contract between NHIF and health care providers.

4.3. Trends of Health Facility MSD Debts

The gradual reduction in MSD debt for some health facilities in Sikonge DC clearly indicates that the financial burden on the respective health facilities has decreased and their purchasing power for health commodities has increased. The temporary shift in procurement focus from the prime vendor to the MSD and the offsetting of the debt through the redistribution of funds among the health facilities has led to tremendous success in this area. This observation is supported by Kuwawenaruwa *et al.* who point out that stronger purchasing power of health facilities is critical for the effective functioning of the Medical Stores Department (MSD), while the presence of reputable prime vendors is very important to fill in the missing health commodities in the MSD to ensure uninterrupted supply of essential health commodities at points of care [10, 11].

4.4. Availability and Number of Items Reported in Sikonge DC

The results in this section show that all the interventions implemented by the Sikonge IMPACT team that focused on improving fund mobilization had potentially large impacts. Furthermore, these results establish a clear link between the availability of funds for health commodity procurement and the overall availability of health commodities in the council. The simultaneous increase in the total number of items reported in the e-LMIS and overall availability is indicative of

the great improvement in visibility of logistics data through the e-LMIS, paving the way for reliable data for accurate and informed decision making to improve the supply chain. This scenario is in line with another study conducted in Indonesia which reveals that the availability of funds improves healthcare budgeting especially in purchasing both generic and innovator brand for effective provision of health services at Service Delivery Points [12]. In addition to that, another study by Briggs et al suggests that mobilization of financial resources is very vital in ensuring the sustainable availability of health commodities including RMNCH drugs [13].

5. Conclusion

The IMPACT TEAM APROACH concept has played a major role in bringing the Sikonge CHMT together to achieve the outcomes discussed. In order to meet the alarming demand for health commodities at points of care and ensure quality care, council teams need to strongly advocate for the use of real-time data for problem identification and resolution through IMPACT TEAM APROACH as a tool for continuous improvement. In addition, this study has also shown that financial resources are very important and critical to increasing the overall availability of essential health commodities at the points of care.

6. Recommendations

- 1) Health facilities should always comply with government guidelines in the use of funds for the procurement of health commodities, depending on the source, and the respective government authorities should develop various mechanisms to encourage compliance by health facility staff, such as the inclusion of financial management performance in annual staff performance evaluations.
- 2) In order to ensure continued provision of quality health services, the application for and subsequent reimbursement of i-CHF or NHIF funds should be made in accordance with the timelines set out in the respective guidelines and contracts.
- 3) The council teams should put in place mechanisms to raise funds collection and proper utilization of funds on health commodities.
- 4) As it has been found that the use of data is key to informed decision-making, strategies to improve the quality of data and ultimately its use are very important for supply chain management performance.

Abbreviations

CHMT: Council Health Management Team
 CTC: Care and Treatment Clinic
 DC: District Council
 DHIS2: District Health Information System
 e-LMIS: Electronic Logistics Management Information System

FFARS: Facility Financial Accounting and Reporting System

GHSC-TA-TZ: Global Health Supply Chain Technical Assistance Tanzania

GoTHOMIS: Government of Tanzania Hospital Management Information System

HF: Health Facilities

i-CHF: Improved Community Health Fund

IMPACT: Information Mobilized for Performance Analysis and Continuous Transformation

MOH: Ministry of Health

MSD: Medical Stores Department

NHIF: National Health Insurance Fund

PORALG: President's Office, Regional Administration and Local Government

RHMT: Regional Health Management Team

TC: Town Council

Tsh: Tanzanian Shillings

USAID: United States Agency for International Development

Definition of Key Terms

Health supply chain management: the management of the flow of products and services that begins with manufacturers and ends with the consumption of the product by the end user. Healthcare supply chain management includes the acquisition of resources, the management of supplies and the delivery of goods and services to providers and patients [14].

IMPACT team approach: it is a people-centered and data-driven initiative adopted by the MOH and PORALG to improve health supply chain performance and availability of essential health commodities in Tanzania [5].

Data use: refers to the use of routine collected information to assess performances at various health system levels and guide decision making [15]. In this case, data use is regarded as the use of information reported in the existing electronic health information systems for informed decision making to improve the supply chain.

Acknowledgements

We extend our gratitude to the USAID Global Health Supply Chain Technical Assistance Tanzania (GHSC-TA-TZ) for their financial and technical support during the execution of this work. In addition to that, our sincere thanks go to EGPAF for their financial support during the first roll out of IMPACT approach to our council, JSI-InSupply Health for their outstanding financial and technical support during IMPACT approach implementation in the council, MDH for the continued support in our IMPACT and supply chain operations to date. Finally, we acknowledge a great contribution from the Ministry of Health (MOH) and the President's Office, Regional Administration and Local Government (PORALG) during the preparation of this work. Without all these stakeholders, it would not be possible to accomplish this work.

References

- [1] Gilbert SS, Bulula N, Yohana E, Thompson J, Beylerian E, Werner L, et al. The impact of an integrated electronic immunization registry and logistics management information system (EIR-eLMIS) on vaccine availability in three regions in Tanzania: A pre-post and time-series analysis. *Vaccine* [Internet]. 2020; 38 (3): 562–9. Available from: <https://doi.org/10.1016/j.vaccine.2019.10.059>
- [2] Wasswa JH, Oundo H, Oteba MO, Komakech H, Ochola I, Mwebaze S, et al. Leveraging electronic logistics management information systems to enhance and optimize supply chain response during public health emergencies: lessons from COVID-19 response in Uganda. *J Pharm Policy Pract* [Internet]. 2023; 16 (1): 1–9. Available from: <https://doi.org/10.1186/s40545-023-00517-4>
- [3] Simeo J, Silabi E, Kikwale M, Mahamudu H, Mateso C, Baraka O, et al. The Role of Impact Approach in Minimizing Wastage During TLE-TLD Transition : A Case of Geita Region. *Int J Heal Econ policy*. 2022; 7 (August 2020): 78–83.
- [4] MOHCDGEC. IMPACT Team approach for data Management to improve health commodities supply chain in Tanzania [Internet]. First. Dodoma: Tanzania Ministry of Health; 2021. 54 p. Available from: <https://www.moh.go.tz/>
- [5] Lamphere B, Machagge M, Adane TD. IMPACT Team Approach to Supply Chain Management. *Reprod Heal supplies coalition* [Internet]. 2019; 39. Available from: <https://www.rhsupplies.org/>
- [6] Lugada E, Komakech H, Ochola I, Mwebaze S, Olowo Oteba M, Okidi Ladwar D. Health supply chain system in Uganda: current issues, structure, performance, and implications for systems strengthening. *J Pharm Policy Pract* [Internet]. 2022; 15 (1): 1–11. Available from: <https://doi.org/10.1186/s40545-022-00412-4>
- [7] Maluka SO, Bukagile G. Implementation of Community Health Fund in Tanzania: Why do some districts perform better than others? *Int J Health Plann Manage*. 2014; 29 (4): e368–82.
- [8] Macha J, Kuwawenaruwa A, Makawia S, Mtei G, Borghi J. Determinants of community health fund membership in Tanzania: A mixed methods analysis. *BMC Health Serv Res*. 2014; 14 (1): 1–11.
- [9] Durizzo K, Harttgen K, Tediosi F, Sahu M, Kuwawenaruwa A, Salari P, et al. Toward mandatory health insurance in low-income countries? An analysis of claims data in Tanzania. *Heal Econ (United Kingdom)*. 2022; 31 (10): 2187–207.
- [10] Kuwawenaruwa A, Tediosi F, Metta E, Obrist B, Wiedenmayer K, Msamba VS, et al. Acceptability of a prime vendor system in public healthcare facilities in Tanzania. *Int J Heal Policy Manag*. 2021; 10 (10).
- [11] Wiedenmayer K, Mbwaswi R, Mfuko W, Mpuya E, Charles J, Chilunda F, et al. Jazia prime vendor system- A public-private partnership to improve medicine availability in Tanzania: From pilot to scale. *J Pharm Policy Pract*. 2019 Feb 25; 12 (1).
- [12] Latifah E, Kristina SA, Suryawati S, Satibi. Overview of drug availability and influencing factors in several low, lower and upper-middle countries: A systematic review. *Syst Rev Pharm*. 2019; 10 (1): 67–72.
- [13] Briggs J, Embrey M, Maliqi B, Hedman L, Requejo J. How to assure access of essential RMNCH medicines by looking at policy and systems factors: an analysis of countdown to 2015 countries. *BMC Health Serv Res*. 2018; 18 (1): 1–12.
- [14] Chukwu OA, Ezeanochikwa VN, Eya BE. Supply chain management of health commodities for reducing global disease burden. *Res Soc Adm Pharm*. 2017 Jul 1; 13 (4): 871–4.
- [15] Geers E, Nghui P, Ekirapa A, Rop V, Mbuyita S, Patrick J, et al. Information Products to Drive Decision Making: How to Promote the Use of Routine Data Throughout a Health System. *Meas Eval* [Internet]. 2017; 72. Available from: <https://www.measureevaluation.org/resources/publications/sr-17-145-en>