Yemen Joint Market Monitoring Initiative (JMMI)

Pilot monitoring of medication and communication costs

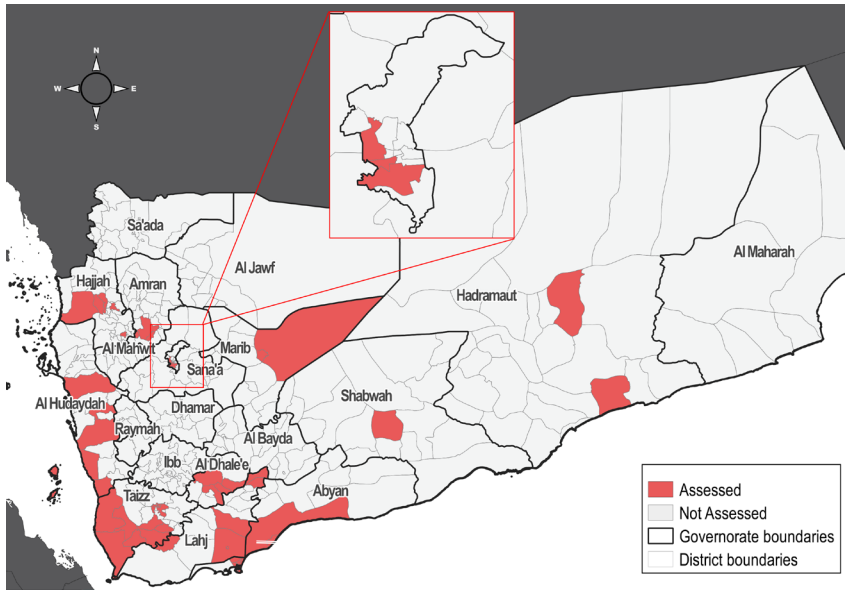
October 2022

REACH Informing more effective humanitarian action

RATIONALE

- This pilot was conducted to monitor the prices of over-the-counter (or non-prescription) medication and the cost of phone credit and a SIM card. These items are part of the essential goods and services in the Minimum Expenditure Basket (MEB), but are currently not regularly monitored in the market.
- In this pilot, enumerators visited pharmacies and vendors selling phone credit, as part of the monthly Joint Market Monitoring Initiative (JMMI) of October 2022. The **Methodology** followed the general JMMI approach, as outlined on page 4.
- Continuous monitoring of the items assessed in this pilot can be beneficial in providing evidence for the MEB and planning of cash and voucher assistance (CVA). It can also increase the overall understanding of the financial burden of households, particularly those with members who have health issues.
- To inform future monitoring, this pilot gathered the **limitations and lessons learnt**, which can be found on page 3.

ASSESSED DISTRICTS



OVER-THE-COUNTER MEDICATION

- The over-the-counter (or non-prescription) medications evaluated in this pilot are two common painkillers (ibuprofen and paracetamol), an antibiotics (azithromycin, the brand Zithromax was monitored), medication to regulate blood pressure (captopril, the brand Capoten was monitored) , and for the treatment of diabetes II (metformin hydrocloride, the brand Glucophage was monitored). The medication were selected from a list of essential medications that are included in the health component of the MEB. The selection process took into consideration the prevalent diseases and illnesses in Yemen and was compiled by the Yemen Health Cluster.[1]
- Of the assessed medication, **Zithromax is the most expensive medication** per tablet.
- The analysis of the medication prices revealed that, **on average, households in the IRG pay 32% more for the same medication as compared to the DFA**. A reason for the lower prices in DFA areas is the more favourable value of the Yemeni Rial (YER) in these areas. However, when the prices are compared in USD the opposite is observed; medicine prices found in the DFA are higher than the IRG in real terms. The higher USD price in the DFA could be due to various factors such as taxation, transportation cost, or high profit margins.
- Generally, there was a great **variation of the observed prices**. Enumerators indicated that the prices differ widely between pharmacies and that this effect might be prevalent in between rural and urban markets. Furthermore, it was reported that different brands of medicine are sold at different prices. This may have impacted the monitored prices (see limitations and lessons learnt).

WATER PURIFICATION TABLETS

- In addition, the price of water purification tablets (sodium dichloroisocyanurate/NaDCC) was monitored. However, this item was **available in only 47 of the 145 monitored pharmacies.** Enumerators reported that, aside from pharmacies, this item is available at **water treatment stations and health services,** and that they are sometimes distributed for free by health facilities or humanitarian organisations.
- The median price of 100 water purification tablets was 2,000 YER in the IRG. Different to the other pharmaceutical items, the price of this water purification tablets was higher in the DFA compared to the IRG. The measured cost in the DFA was 5,000 YER. However, **the number of price observations in the DFA (7 KIs) was too insufficient** to adequately triangulate the price of this item in the assessed areas in the DFA.

Table 1: Median price of assessed pharmaceutical items, per tablet (in YER)

Item	IRG	DFA
Captopril/Capoten (25 mg)	50	30
Azithromycin/Zithromax (500 mg)	500	333
Ibuprofen (400 mg)	45	40
Paracetamol (500 mg)	32	20
Metfromin Hydrocloride/Glucophage/ (500 mg)	70	44
Water purification/NaDCC (33 mg)	20	50[3]

[1] CMWG. 2022. Yemen Minimum Expenditure Basket: Operational Guidance Note.
[2] IRG: 1145 YER/USD. DFA 557 YER/USD. REACH. October 2022 JMMI Situation Overview.
[3] Validity of price observation is limited. Just 9 KIs reported on the price of water purification tablets in the DFA. All the reported prices came from Bayt Al-Faqiah, Bajil and As Sukhnah.

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Table 2: Median price of assessed pharmaceutical items, per pack

		IRG		DFA		Price difference between IRG and DFA			
Item	Tablets	YER	USD[2]	YER	USD	YER (IRG to DFA)		USD (IRG to DFA)	
Captopril/Capoten (25 mg)	10	500	0.44	300	0.54	200	40%	-0.10	-23%
Azithromycin/Zithromax (500 mg)	3	1500	1.31	1000	1.80	500	33%	-0.49	-37%
Ibuprofen (400 mg)	20	900	1.79	800	1.44	100	11%	-0.65	-83%
Paracetamol (500 mg)	10	321	0.28	200	0.36	121	38%	-0.08	-28%
Metfromin Hydrocloride/Glucophage/ (500 mg)	100	7000	6.11	4400	7.90	2600	37%	-0.79	-29%
Water purification/NaDCC (33 mg)	100	2000	1.75	5000[4]	8.98[4]	NA	NA	NA	NA

How to read a boxplot

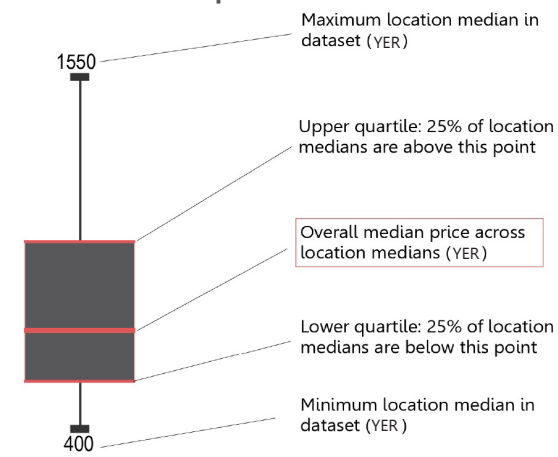
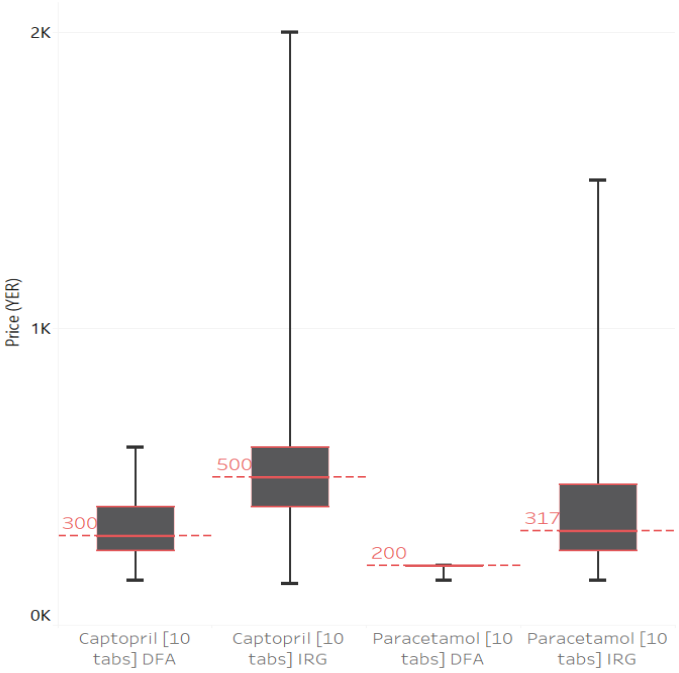
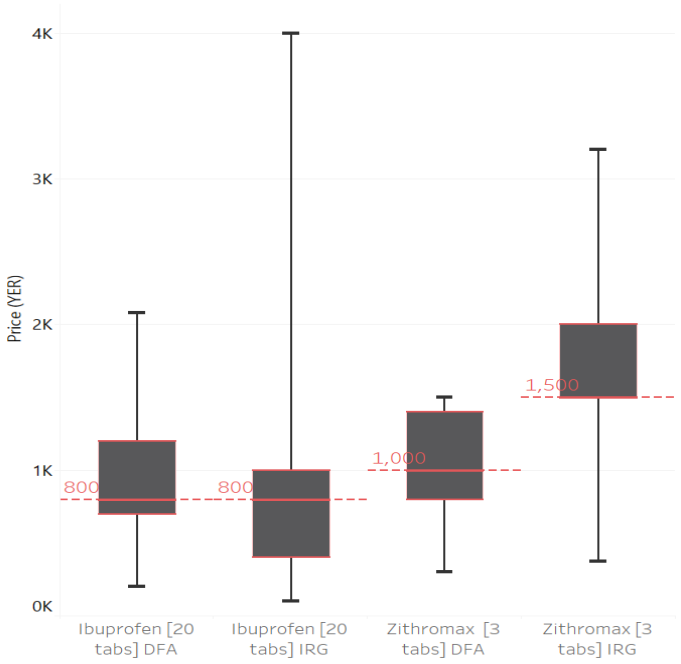
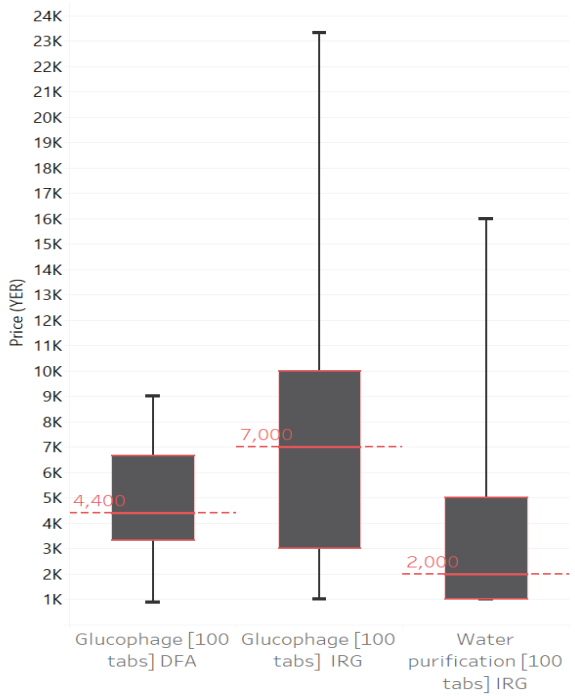


Figure 1: Price distribution of assessed medication*







[4] Validity of price observation is limited. Just 9 KIs reported on the price of water purification tablets in the DFA. All the reported prices came from Bayt Al-Faqiah, Bajil and As Sukhnah.

PHONE CREDIT AND SIM CARD

- Of the four network providers active in Yemen, the interviewed vendors indicated that **people in the community mostly use Yemen Mobile (90%)**. The remaining vendors reported the usage of Sabafon (6%) and YOU (4%). Y Telecom was never reported.
- The enumerators were asked to record the price of the least expensive bundle or prepaid package that provided access to at least 1 GB of internet data and 100 minutes of call time, valid for one month. However, the observed offers cast doubt whether this method was followed consistently; In total, 26 unique offers were recorded, 12 of which were very infrequently reported (less than 3 key informants). This resulted in a limited opportunity for internal triangulation of the offers and prices. In response, REACH attempted to verify the offers and prices through the Yemen Mobile website and with the review of participating organizations in the JMMI. **Through this triangulation process, 7 out of the 26 offers were verified.** The high number of unverified prices raises questions about the validity of the methodology, and this is discussed in the limitations and lessons learned section.
- The verified prices can be found in Table 3. The most commonly reported bundle (reported by 35 KIs) includes 4 GB and 300 minutes and costs median **2,400 YER**. Of the verified prices, the most cost-effective option is a bundle of 1 GB and 300 minutes for **1,500 YER** (6 KIs).
- When purchasing mobile phone minutes as a stand-alone package (excluding internet), **REACH verified the median price for 100 minutes at 1,200 YER (27 KIs). For 1 GB of internet purchased as a stand-alone package, the median price of 3,500 YER (19 KIs) and 2,000 YER (3 KIs) was verified**.
- Enumerators confirmed that the most affordable mobile phone credit is through 3G internet, which has also the widest coverage.
- Enumerators reported a price variation between mobile network branches and general phone shops, which generally charges an additional fee. It was not possible to analyse regional differences due to a wide variety in phone credit monitored. It should be noted that the Yemen Mobile website does not mention regional prices.
- The **price of a SIM card was reported at a median of 2,400 YER**. According to the vendor KIs interviewed, a SIM card is usually purchased as a **one-off payment** (86%) rather than as a monthly payment (14%).
- When buying minutes and internet as a bundle or separately, **a SIM card is typically not included**. Out of the bundles monitored, 17% included a SIM card, and in 6% of the cases where internet and minutes were bought separately, a SIM card was included.
- The period in which a SIM card remains valid, after the credit has run out, differs between 30 days (28%), 40 days (16%), 60 days (15%) and 90 days (25%), or longer (17%).

Table 3: Price of monitored bundles, in YER[5]

Network provider	Internet	Minutes	Median	Min	Max	n
Yemen Mobile	4 GB	300	2400	2400	3800	34
Yemen Mobile	200 MB	300	1500	1000	1500	15
Yemen Mobile	1 GB	600	2500	1500	2500	8
Yemen Mobile	1 GB	300	1500	1500	1500	6
Yemen Mobile	600 MB	500	2000	2000	2500	5

Table 4: Median price of separate package, in YER[6]

Network provider	Package	Price	n
Yemen Mobile	1 GB	3500	31
Yemen Mobile	100 minutes	1200	27

LIMITATIONS AND LESSONS LEARNT

- **Enumerators reported a difference in prices between medicine brands.** As the survey did not specify which brands to track for all of the monitored medication, this may have caused confusion among enumerators regarding the brands of medicine that should be monitored. Further investigation is needed to determine if monitoring specific brands is necessary, and if so, training for enumerators should be provided to ensure consistency and adherence to minimum quality standards, such as checking the dosage per tablet and verifying expiration dates and packaging.
- Enumerators reported that the prices between pharmacies differ. **Further monitoring could provide more insights into the nature of this price variation, such as the extent of the divergence in prices between urban and rural markets**.
- The number of observations for water trucking prices in the DFA was insufficient to ensure adequate triangulation. Additional monitoring with more pharmacies than assessed in this pilot could provide insights into the availability of water purification tablets in the DFA, and the price.
- **It was difficult to standardise the monitoring of phone credit.** Enumerators were instructed to collect the prices of the most economical option to obtain at least 1 GB of mobile internet and 100 minutes of phone calling, but it is difficult to verify if this method was followed consistently. **The diversity of providers, packages, and deals in the market made it challenging to select the most affordable option**

[5]Only the prices of bundles and packages that have been verified by participating partners and/or the Yemen Mobile website are included.

[6] Refers to internet or minutes purchased as a stand-alone package, excluding other kind of phone credit.

in a unified manner across all key informants, and may cause challenges to identify the most affordable option. This lack of standardisation, coupled with the challenges faced during data cleaning, may have contributed to the high number of unique types of phone credit monitored and the prevalence of unverified prices. Standardisation of monitoring may be improved in the future if a specific phone package is monitored. For example, based on the most commonly purchased mobile phone packages by customers and by providing further training for enumerators.

- The availability of phone credit prices online is useful to verify monitoring efforts, but **the publicly available data casts doubt on the necessity of market monitoring**. Nonetheless, if relying on prices advertised by mobile network providers, it should be noted that enumerators reported that phone credit sold at general (phone) shops will charge a small mark-up. Therefore, the price paid by **consumers dependent on (phone) shops, compared to mobile network branches, for purchasing phone credit will be higher than the prices advertised by mobile phone operators**. The value of the mark-up was not assessed in this pilot and could be assessed in future.
- To improve the accuracy of the data, REACH decided to only disaggregate prices for the IRG and DFA and not at more local levels, and used medians to reduce the impact of outlier values. However, it should be noted that the validity of the collected data is weaker than for established assessments. **Challenges were faced in the data-checking process due to the novelty of tools and indicators.** This led to multiple rounds of follow-ups with the data collection partners to correct data errors, and REACH omitted obvious outliers from the dataset that were not identified or solved during the follow-ups. **The challenges faced during data checking and the lessons learned from this pilot will help improve the survey in the future by adding clarification and building numerical checks to ensure more accurate and reliable data collection.**

METHODOLOGY OVERVIEW

- Enumerators were trained in market monitoring as part of their ongoing participation in the JMMI. Data was collected in the first week of October, as part of the regular monthly data collection using the structured JMMI tool. Participating organisations were briefed on the questions and methodology of the pilot beforehand.
- In total, 145 KIs from pharmacies and 138 KIs selling phone credit were interviewed in 42 districts from 11 governorates. Initially, partners were requested to collect 3 price observations per district for the items being piloted. However, this proved to be unrealistic due to limitations in partners' capacity. For this reason, and because this was a pilot monitoring, data is not disaggregated below the level of the IRG and DFA. Phone credit was not disaggregated because of the high variety in the monitored offers.
- Outlier data was reviewed and cross-checked with the partner organizations through further follow-up. REACH analysed the prices using the median values. For the medication items, REACH standardized the prices to a specific number of tablets per medicine. After the analysis, REACH conducted a second round of triangulation, in which the analysed prices were verified with the experiences of some of the data collection partners and online sources.

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