

Private sector survey of medical shortages

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1.0 Introduction

In recent months, disruptions to pharmaceutical supply chains have been reported as countries imposed export bans and/or restricted movement of goods or people within countries as a result of the COVID-19 pandemic. As part of a collaborative effort led by the Centre for Global Development, work has begun to develop methodologies and approaches designed to help understand how COVID-19 has impacted supply chains for vital medicines, and how the security of such supply chains can be supported going forward. This paper describes the results of a pilot of a questionnaire designed to elicit information from private sector wholesalers in 6 countries/regions regarding current and future shortages of a subset of essential medicines.

2.0 Methods and data sources

2.1. Countries

The countries/regions selected for this study were Kenya, Ghana, Nigeria, Francophone Africa, Pakistan and Jordan. These were chosen because they are low- and middle-income countries aligned with priority geographies of development partners, and because IQVIA has existing relationships with many of the major wholesalers in these countries, many sharing sales data with IQVIA on a monthly basis.

2.2 Products

In this study, “product” is defined as a particular molecule and pharmaceutical form combination, for example oral solid formulations of aciclovir or parenteral forms of ciprofloxacin.

62 products were selected for this study and they fall into four groups. The first group (22 products) were selected on the basis of the following criteria (i) sold through the private sector and recorded in IQVIA’s retail panel data in most of the selected countries; (ii) apparently dependent on India for finished product in one other country of interest to development partners (Ghana); and (iii) categorised as both Vital Essential Medicines in two national Essential Medicine Lists and as an Essential Medicine by the WHO. The second group (14 products) met the latter two criteria but were not widely distributed, or found, in the private sector in these countries. The third group consisted of just three products, these being added from the current WHO Essential Medicine List and chosen so as to ensure an adequate representation across product forms and therapy classes. The fourth group was selected on the basis of their showing some disruptions to supply in 2020 according to a separate analysis of India export data ([link to CGD/Maisha Meds website](#)).

2.3 Questionnaire design

The questionnaire aimed to understand which of the 62 products a wholesaler stocked, which were in shortage now or might be in shortage in three months, the reasons for shortage and the extent of the shortage. The extent of the shortage was to be measured by comparing wholesalers’ current sales and inventory with orders expected, together with order lead time. Reasons for shortage (5) were pre-

coded to facilitate completion. In countries where wholesalers have exclusive relationships with particular brands (Jordan and Pakistan), both brand and molecule names were listed.

The draft questionnaire was circulated to two wholesalers in Africa for comments prior to circulation to a broader group. This led to one important change – the addition of a section that allowed wholesalers to indicate which other products they stocked were in shortage. A copy of the final questionnaire is can be found in Appendix 1. The questionnaire was translated into French for distribution to the countries in Francophone Africa. Experience indicated that the questionnaire took between 1-1.5 hours to answer if all sections were completed.

2.4 Sample selection and data collection

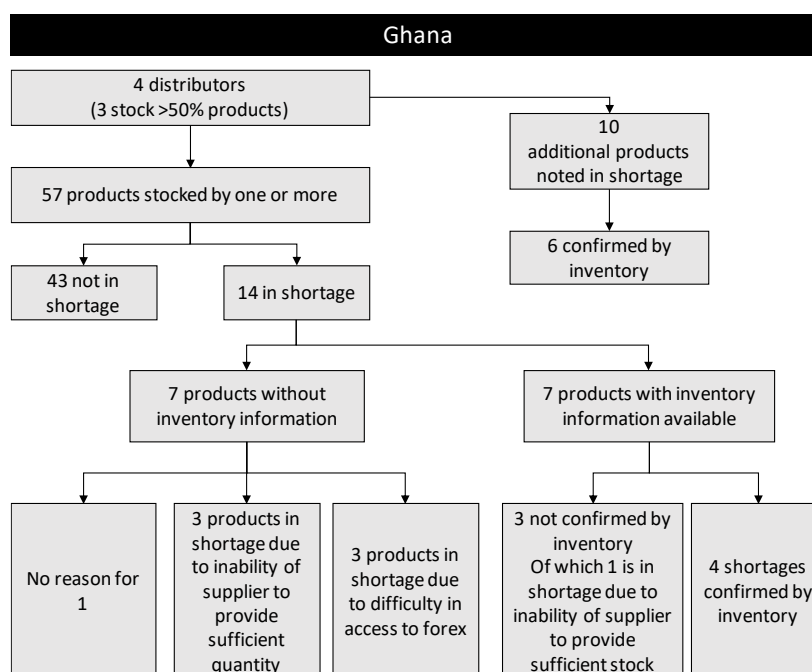
Wholesalers were selected purposively. Wholesalers were selected on the basis of the strength of their relationship with IQVIA, the likelihood of their being able to provide inventory information in a reasonable time frame, and the likelihood of their stocking and selling at least some of the 62 products. Data collection varied by country – some data were collected by email, others by phone or by face to face visits. Wholesalers received multiple follow-ups both to encourage completion of the questionnaire, but also to query or better understand particular responses. No financial incentives were provided. Questionnaires were distributed in August 2020.

3.0 Results

In this section we describe the results of the wholesaler survey. Results are provided for each country in turn, and then for all countries combined. Comparisons are made, where appropriate, between the results of the wholesaler survey and the results of IQVIA’s work to detect significant declines in volumes in data it collects on a monthly basis from some of these countries.

3.1 Ghana

Nine wholesalers were approached and four completed the survey. Three of these stocked more than 50% of the selected products. Together these wholesalers traded in 57 of the 62 products in the survey. 14 out of these 57 products were highlighted by wholesalers to be in shortage now or were likely to be in shortage in three months’ time. Of these 14 products, 11 were traded by more than one wholesaler. However, in none of these cases were all wholesalers in shortage.



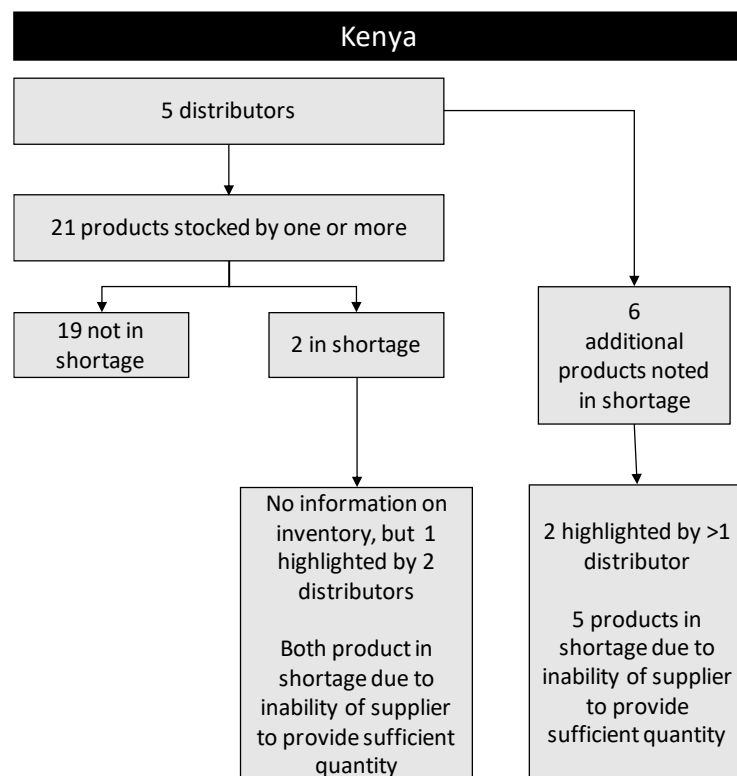
Inventory information was only provided for 7 of the 14 products that wholesalers indicated were in shortage. Out of these 7, inventory details indicate that current stock was less than average monthly sales – oral solid formulations of DOXYCYCLINE, SULFAMETHOXAZOLE + TRIMETHOPRIM,

AMIODARONE and AZATHIOPRINE. Only one of these however appeared to be in shortage if stock on order is taken into account. Current stock plus stock on order of oral solid formulations of DOXYCYCLINE was still less than monthly sales. For one of the remaining 3 products, the reason of shortage was listed as the inability of the supplier to provide sufficient stock. For the 7 products where inventory details were not provided, shortages were said to be due to the inability of their supplier to provide sufficient stock in three cases, and due to difficulty in accessing foreign currency in three cases. No reason was provided for shortage of the remaining product.

Respondents also highlighted 10 additional products that were in shortage now or would likely be in the near future. These are ACICLOVIR injection, FLUCLOXACILLIN capsules, FLUCLOXACILLIN suspension, AZITHROMYCIN capsules, AZITHROMYCIN suspension, VITAMIN C, and CEFUROXIME (no form specified) and the combination of AMOXICILLIN+CLAVULANIC ACID (no form specified). For 6 of these 10 products, inventory information confirmed the shortage. Only AZITHROMYCIN formulations were mentioned as being in shortage by more than one wholesaler.

3.2 Kenya

In Kenya, 5 distributors were approached and all 5 provided a response. These 5 distributors traded 21 of the 62 products in the survey. However only 2 products from these 21 were highlighted as being in shortage by any distributor - oral solid formulations of ALLOPURINOL and CIPROFLOXACIN. ALLOPURINOL capsules or tablets were traded by 2 importers, and both indicated that these formulations were in shortage. On the other hand, oral solid formulations of CIPROFLOXACIN were traded by 3 distributors, but only 1 indicated that these were in shortage. No respondents were willing to share inventory information, so inventory information is unable to be used to confirm the shortage. Shortages of ALLOPURINOL and CIPROFLOXACIN were attributed to suppliers not being able to provide sufficient stock.



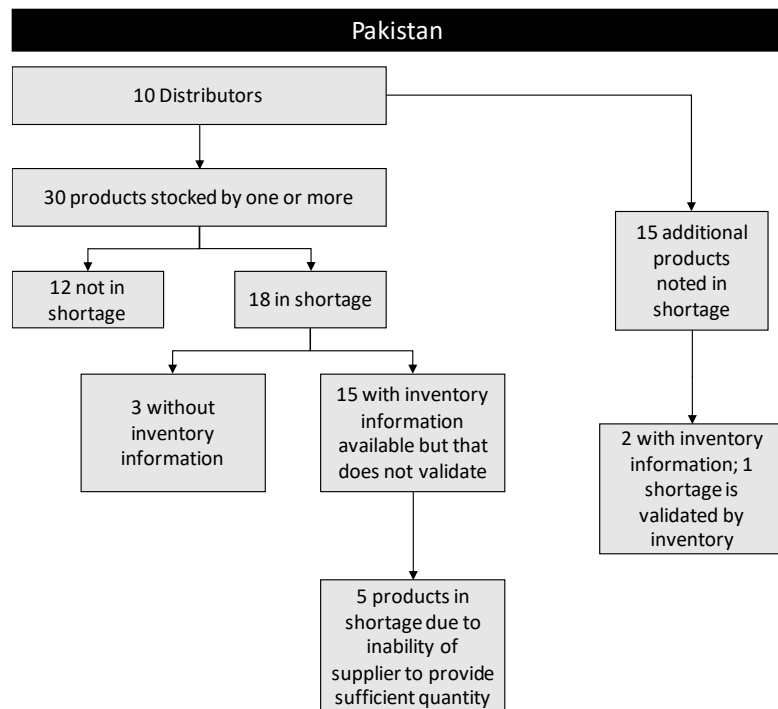
Importers also indicated that a number of additional products could be in shortage – oral solid formulations of DEFLAZACORT and parenteral formulations of TERLIPRESSEN, PANTOPRAZOLE, VANCOMYCIN and METOCLOPRMIDE. LACTULOSE (no form specified) was also mentioned as being in shortage. Of these 6 products, 2 were highlighted as being in shortage by more than one importer (parenteral forms of PANTOPRAZOLE and VANCOMYCIN). Shortages of all but the parenteral forms of TERLIPRESSIN were attributed to an inability of suppliers to provide sufficient stock.

In Kenya, work was also carried out to detect significant declines using routine data collected on a monthly basis from more than 20 major wholesalers (“Shortage Detection Model”). 10 products were included in both studies. Of these 10 products, three were found to have suffered a significant decline

post April 2020. However, the Shortage Detection Model did not indicate that ciprofloxacin oral solid formulations, highlighted by one of the wholesalers in Kenya as being in shortage, showed a significant decline. Allopurinol was not included in the Shortage Detection Model so no comparison can be made.

3.3 Pakistan

In Pakistan, 10 distributors were approached, and all 10 provided responses. Together they traded in 30 of the 62 products. Out of these 30 products, 18 were highlighted to be in shortage or as likely to be in shortage in the near future. For 15 of these 18 products inventory information was shared. However, this information did not indicate that any of these products were in shortage. Lack of product at suppliers was given as the reason for shortage of parenteral formulations of AMIKACIN, CEFTRIAXONE, DEXAMETHASONE, the oral solid formulation of RANITIDINE and inhaled SALBUTAMOL. Eleven of the products notified as being in shortage were stocked by more than distributor. In none of these cases, however, was shortage reported by all of the distributors that stocked these products.

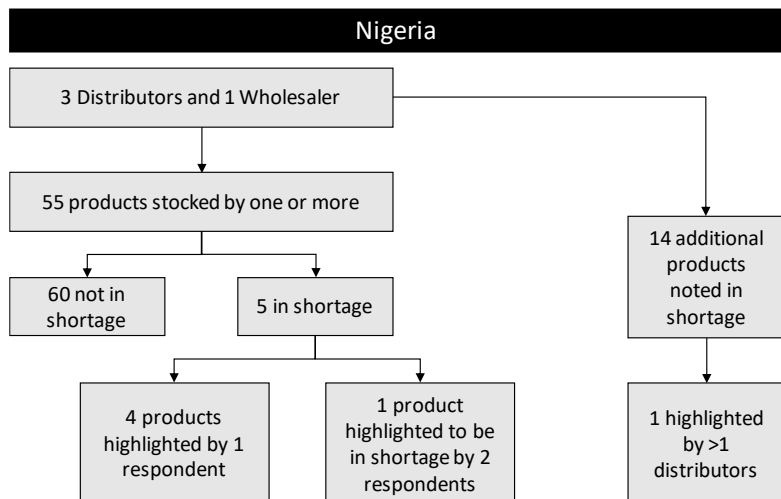


Distributors also indicated that an additional 15 products were in shortage. The distributors that stocked CEFOTAXIME and CHLORPHENAMINE also shared inventory information for these products. This information validated shortage of only CHLORPHENAMINE. Outside of shortage of stock at suppliers, the other main reason for shortage was a sudden increase in demand.

Seven of the products notified as being in shortage by the distributors in Pakistan were also included in IQVIA's work to detect significant declines in the data collected on a routine basis from multiple distributors and wholesalers in Pakistan ("Shortage Detection Model"). Only two of these 7, however, were found to show significant declines at a market level post April 2020 – the oral formulations of ACICLOVIR and AMIODARONE.

3.4 Nigeria

In Nigeria, 10 distributors and wholesalers were approached but only three distributors and one wholesaler provided a response. Distributors trade in fewer products than wholesalers. Distributors trade only in those products owned by those manufacturers for which they have exclusive agreements. Together they traded in 55 of the 62 products surveyed, with 52 of these being traded



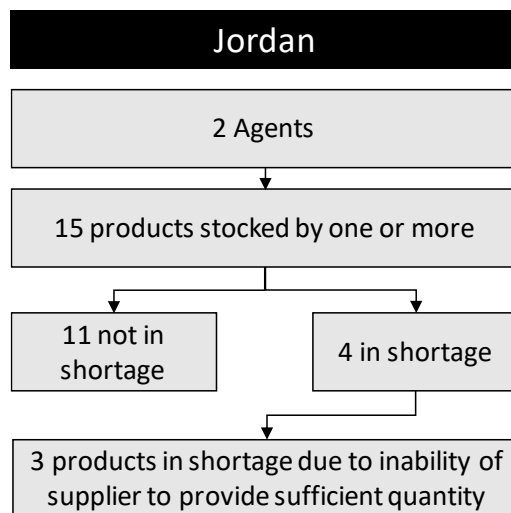
by the one wholesaler alone. Out of the 55 traded products, respondents highlighted 5 products to be in shortage or as likely to be in shortage in the near future – parenteral forms of BUPIVACAINE and CEFTRIAXONE and oral solid formulations of IBUPROFEN, SULFAMETHOXAZOLE + TRIMETHOPRIM and CIPROFLOXACIN. All of these 5 products were traded by more than one wholesaler, but in no case did all wholesalers stocking the

product indicate that the product was in shortage. However, two of the four respondents stocking parenteral forms of CEFTRIAXONE indicated that it was or would be in shortage in the near future. No respondent shared inventory details No respondent linked shortages to an inability of supplier to provide stock. The main reasons given in Nigeria for product shortage were an inability to access foreign currency and a change the amount of credit available from suppliers.

Respondents also highlighted a further 14 other products as being in shortage. Of these, only the combination of ARTEMETHER + LUMEFANTRINE was highlighted by more than 1 respondent. Again, the key reasons for shortage were given as access to credit from suppliers and access to foreign currency.

3.5 Jordan

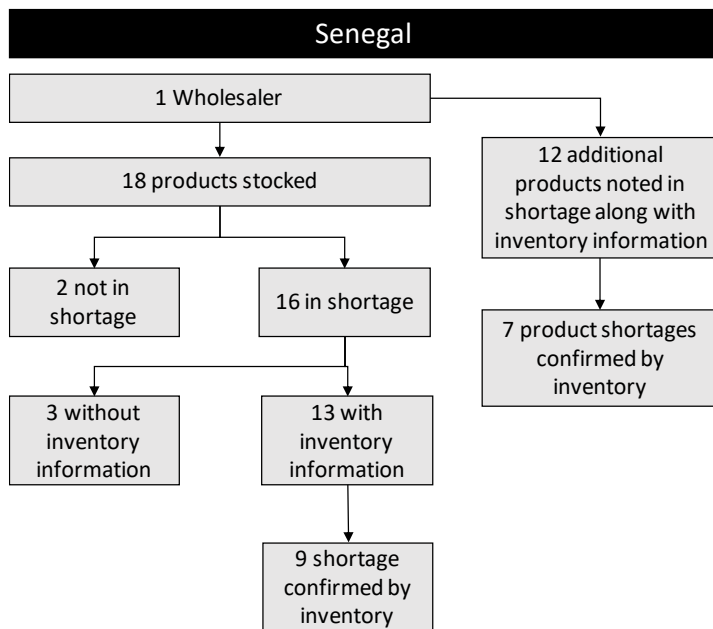
12 agents were approached in Jordan, but responses were received from only two. Together they traded in 15 of the 62 products. Out of these 15 products, the agents highlighted 4 products as being in shortage now or in the near future. These 4 products are: parenteral forms of AMIKACIN and NALOXONE and oral solid formulations of RANITIDINE and CIPROFLOXACIN. The agents shared inventory information on only one product, and that information did not suggest that the product was in shortage. Of these 4 products, shortages of the parenteral forms of NALOXONE and the oral solid formulations of RANITIDINE and CIPROFLOXACIN were said to be due to a shortage at the supplier. Of the products highlighted to be in shortage by suppliers, only ciprofloxacin was included in IQVIA’s work to detect significant declines. Whilst one agent in Jordan indicated in the survey that ciprofloxacin was in shortage, the Shortage Detection Model indicated no significant decline in ciprofloxacin volumes at total private market level.



3.6 Senegal and Cameroon

Multiple wholesalers were approached in Senegal and Cameroon but only one responded in each country. In Senegal, the wholesaler traded in 18 of the 62 products surveyed. Of these 18 products, 16 were said to be in shortage currently or in the near future. This inventory information indicated

that for 9 of these products current inventory was less than average monthly sales, but that number reduces to just four if stock currently on order is taken into account. Current stock plus ordered stock of parenteral forms of DEXAMETHASONE GENTAMICIN, VITAMIN B1 + THIAMINE, and the oral solid forms of SPIRONOLACTONE was still less than average monthly sales.



The wholesaler also highlighted 12 additional products that could be in shortage currently or in the near future. The inventory information for these 12 products confirms the shortage for 7 of the products, although again, if stock currently on order is taken into account, these products do not appear to be in shortage. The major reason highlighted by the wholesaler for shortages was an inability of the supplier to provide sufficient quantity.

Analysis of the routine sales data collected from all major wholesalers in Senegal indicated that many products do appear to have suffered significant

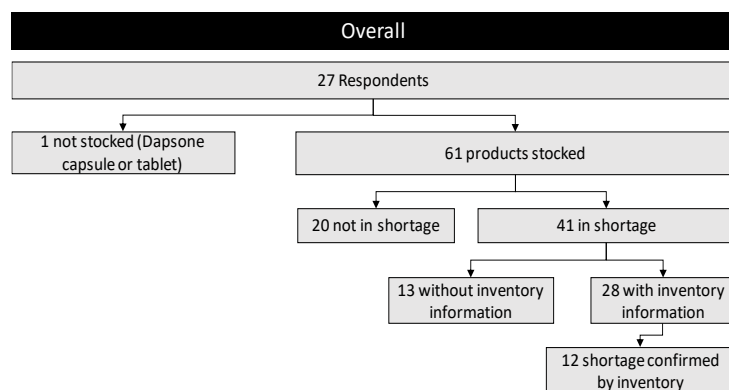
declines post April 2020. And of the five products found to be in shortage in the wholesaler survey, three were also found to be in significant decline post April 2020 in the routine sales data work— oral liquid forms of METRONIDAZOLE, oral solid forms of AMIODARONE and parenteral forms of METHYLPREDNISOLONE.

In Cameroon, the wholesaler that responded did not trade in any of the products that were mentioned in the questionnaire. However, the wholesaler indicated that 5 additional products could be in shortage in Cameroon. For 4 of the 5 products highlighted to be in shortage, the reason attributed to their shortage was the inability of the supplier to provide sufficient stock. For the remaining product, the wholesaler indicated that a change to the credit afforded to them by their supplier had made it difficult for them to get supplies.

3.7 Consolidated summary

In total 27 distributors or wholesalers responded to the survey across the 7 countries. Together they stocked 61 of the 62 products, and at least 42 of these were said to be in shortage by at least one respondent (see Appendix 2 and Appendix 3).

Of the 61 products, 37 were stocked by 5 or more wholesalers, and of these 37, only 18 were said to be in shortage by at least one fifth of those that stocked them. Of these 18 products, three products were



said to be in shortage by at least one third of the wholesalers that stocked them – oral formulations of ALLOPURINOL, AZATHIOPRINE and RANITIDINE.

Overall 41 products were said to be in shortage by at least one wholesaler, and of these, shortage was confirmed in 12 cases by inventory information provided by those wholesalers.

56 products were stocked by at least one wholesaler in 2 countries or more. Of these 56 products, only 15 were reported as being in shortage in 50% or more of the countries where wholesalers were found to stock them. No product was found to be in shortage in all the countries where it was stocked. The products most commonly reported as being in shortage (two thirds or more of countries) were: oral solid formulations of AZATHIAPRINE, CARBAMAZEPINE, AMIODARONE, CIPROFLOXACIN, RANITIDINE and SULFAMETHOXAZOLE+TRIMETHOPRIM (see Appendix 4).

3.8 Comparison with the results of the Shortage Detection Model

23 of the products surveyed were also included in the work to detect significant declines post April 2020 using routine data collected from 22 low- and middle-income countries (“Shortage Detection Model”). A comparison of the results is shown below (Table 1).

Table 1: Comparison of the results of the wholesaler survey and the Shortage Detection Model

	Product	# Wholesalers trading	% reporting shortage	Results of Shortage Detection Model*
No decline reported in Wholesaler Survey	AMLODIPINE + TELMISARTAN Capsules or tablets	3	0%	No sig. decline
	BECLOMETASONE Inhalers or Disks	3	0%	No sig. decline
	MEROPENEM Injections or Infusions	11	0%	No sig. decline
	MUPIROCIN Topical Ointments or Creams	5	0%	Sig. decline
	OXYTOCIN Injections or Infusions	4	0%	No sig. decline
Limited reporting of decline in Wholesaler survey	METRONIDAZOLE Suspensions or Syrups	10	10%	Sig. decline
	PARACETAMOL Capsules or tablets	9	11%	No sig. decline
	ACICLOVIR Capsules or tablets	9	11%	Sig. decline
	METOCLOPRAMIDE Capsules or tablets	7	14%	No sig. decline
	DIGOXIN Capsules or tablets	6	17%	No sig. decline
	AMIKACIN Injections or Infusions	10	30%	No sig. decline
	CARBAMAZEPINE Suspensions or Syrups	5	20%	No sig. decline
	FLUOXETINE Capsules or tablets	5	20%	No sig. decline
	HYDROCHLOROTHIAZIDE Capsules or tablets	5	20%	No sig. decline
	OMEPRAZOLE Capsules or tablets	10	10%	No sig. decline
	VALPROIC ACID ORAL LIQUID	4	25%	Sig. decline
CIPROFLOXACIN Capsules or tablets	11	27%	Sig. decline	
Higher reporting of decline in Wholesaler survey	DEXAMETHASONE Injections or Infusions	8	25%	No sig. decline
	PYRIDOSTIGMINE Capsules or tablets	4	25%	No sig. decline
	CARBAMAZEPINE Capsules or tablets	7	29%	No sig. decline
	METHYLPREDNISOLONE Injections or Infusions	5	40%	Sig. decline
	AZATHIOPRINE Capsules or tablets	5	40%	No sig. decline
	AMIODARONE Capsules or tablets	4	75%	No sig. decline

* significant decline when comparing April/May 2020 with pre-pandemic period (March-April 2020). For more details see (link to report)

Overall there is very little agreement between the two methods. In particular it is important to note that of the 6 products where more than 25% of wholesalers highlighted a shortage, only one was found to show a significant decline in volumes across the full range of 22 low and middle income countries. Having said that, it is also true that there were significantly more countries included in the

Shortage Detection Model, and this may therefore explain some of the differences. However, and as noted above, even at the country level, there is little agreement between the two methods.

4.0 Discussion

This pilot survey was completed, either completely or partially, by 27 respondents across 7 countries. Experience indicates that when completed, the questionnaire took about 1 to 1.5 hours. Inventory information was provided by under half of all respondents, reflecting, for the most part, a reluctance to share what is regarded as commercially sensitive information.

The response rate in some countries was disappointingly low, and this despite the sample being chosen according to the strength of their relationship with IQVIA. Whilst it may not have helped that the questionnaires were distributed at a time of summer and religious holidays, it is also likely that the extent of the information that was needed also acted as a disincentive, and/or that the benefits to each individual wholesaler of survey completion were insufficient. The only incentive offered to wholesalers was a summary of the results.

The bulk of the time needed to complete the survey is spent on providing the requisite inventory information on those products that wholesalers had highlighted as being in shortage. The importance of such information is however clear. In many cases the inventory information did not indicate that the product was in shortage. At times it seemed to indicate only that the wholesaler needed to re-order. In any future roll-out of the survey, the definition of shortage may need to be made more explicit.

The results of this pilot survey also indicate that shortages, at least as interpreted by respondents, do not affect all wholesalers equally. In only one case where a product was stocked by more than one wholesaler did all wholesalers indicate that the product was in shortage. This would further suggest that if a wholesaler survey is to be used to identify product shortages, then responses need to be received from wholesalers serving at least half of that product market, and this may pose something of a challenge given the fragmentation of the private sector supply chain. Similarly, it is clear that shortages do not affect all countries equally. There is very little consistency in products highlighted as being in shortage across the different countries. This echoes the results from the earlier work on the Shortage Detection Model where countries in the same region, and served by the same major wholesalers, displayed very different volume trends for the same products.

Having said that there are some similarities between the results of the Shortage Detection Model and the wholesaler survey, it is clear that overall there is little agreement whether that be at product level, across countries or even at country level. Such differences may be due to several different reasons. Wholesalers in the survey may not have served the majority of the market for those products identified as showing a significant decline by the Shortage Detection Model. It is also possible that the shortages detected by the Shortage Detection Model had resolved by the time of the wholesaler survey. The Shortage Detection Model ran on data up to May/June, whilst the wholesaler survey was carried out in August. Alternatively, of course, it may be that the Shortage Detection Model identified significant declines that are not indicative of shortage, but of a change in demand.

This pilot survey indicates that the information required to establish the existence of a market shortage can be collected from wholesalers. However, such a survey can only be used on its own if

the major suppliers for each product market respond, and if these respondents can be persuaded to provide inventory information that can be used to describe the extent of the shortage. In countries where routine data are collected, an alternative approach could be used that would both improve response rates and lead to more robust results. In such countries, the Shortage Detection Model could be used to identify potential shortages, and then wholesalers could be asked simply whether they agree, and if not, why the routine data might be suggesting a significant decline in volume.

Appendix 1: Questionnaire



Final
questionnaire.xlsx

Appendix 2: Wholesaler Survey – Products said to be in shortage

S. no.	Product	# respondents that stock	# respondents indicating shortage	# respondents providing inventory	% of inventory response confirming shortage	% of responses stating “inability of supplier to provide sufficient quantity” as a reason of shortage
1	ACICLOVIR Capsules or tablets	9	1	Yes (1)	0%	-
2	ALLOPURINOL Capsules or tablets	11	3	No	-	67%
3	AMIKACIN Injections or Infusions	10	3	No	-	67%
4	AMIODARONE Capsules or tablets	4	3	Yes (3/3)	33%	33%
5	AMITRIPTYLINE Capsules or tablets	5	1	No	-	-
6	AZATHIOPRINE Capsules or tablets	5	2	Yes (2/2)	50%	50%
7	BETAMETHASONE Injections or Infusions	2	1	Yes (1/1)	0%	-
8	BUPIVACAINE Injections or Infusions	5	1	No	-	-
9	CALCIUM FOLINATE Injections or Infusions	2	1	No	-	100%
10	CARBAMAZEPINE Capsules or tablets	7	2	Yes (1/2)	0%	-
11	CARBAMAZEPINE Suspensions or Syrups	5	1	No	-	-
12	CEFTRIAZONE Injections or Infusions	14	3	Yes (1/3)	0%	67%
13	CIPROFLOXACIN Capsules or tablets	11	3	Yes (1/3)	-	67%
14	DEXAMETHASONE Injections or Infusions	8	2	Yes (2/2)	50%	100%
15	DIGOXIN Capsules or tablets	6	1	Yes (1/1)	0%	100%
16	DOXYCYCLINE Capsules or tablets	9	3	Yes (3/3)	33.33%	67%
17	ENALAPRIL Capsules or tablets	4	1	No	-	100%
18	FLUCONAZOLE Capsules or tablets	8	1	Yes (1/1)	0%	-
19	FLUOXETINE Capsules or tablets	5	1	Yes (1/1)	0%	-
20	GENTAMICIN Injections or Infusions	8	1	Yes (1/1)	100%	100%
21	HYDROCHLOROTHIAZIDE Capsules or tablets	5	1	No	-	100%
22	IBUPROFEN Capsules or tablets	10	1	No	-	-
23	LISINAPRIL Capsules or tablets	7	1	Yes (1/1)	0%	-
24	METHYLPREDNISOLONE Injections or Infusions	5	2	Yes (2/2)	50%	100%
25	METOCLOPRAMIDE Capsules or tablets	7	1	Yes (1/1)	0%	-
26	METRONIDAZOLE Suspensions or Syrups	10	1	Yes (1/1)	100%	100%
27	MORPHINE Injections or Infusions	1	1	Yes (1/1)	0%	-
28	NALOXONE Injections or Infusions	2	1	No	-	100%
29	OMEPRAZOLE Capsules or tablets	10	1	No	-	-
30	PARACETAMOL Capsules or tablets	9	1	Yes (1/1)	100%	100%
31	PHENOBARBITAL Injections or Infusions	4	1	Yes (1/1)	0%	100%
32	PREDNISOLONE Capsules or tablets	10	2	Yes (2/2)	0%	50%
33	PYRIDOSTIGMINE Capsules or tablets	4	1	Yes (1/1)	0%	-
34	RANITIDINE Capsules or tablets	5	3	Yes (1/3)	0%	67%
35	SALBUTAMOL Inhalers or Disks	7	1	Yes (1/1)	0%	100%
36	SPIRONOLACTONE Capsules or tablets	6	1	Yes (1/1)	100%	100%
37	SULFAMETHOXAZOLE + TRIMETHOPRIM Capsules or tablets	8	3	Yes (2/3)	100%	67%
38	VALPROIC ACID Capsules or tablets	6	1	No	-	100%
39	VITAMIN A/RETINOL Capsules or tablets	4	1	Yes (1/1)	100%	100%
40	VITAMIN B1/THIAMINE Injections or Infusions	3	1	Yes (1/1)	100%	100%
41	VALPROIC ACID ORAL LIQUID	4	1	No	-	-

Appendix 3: Wholesaler Survey – Products said not be in shortage

S. no.	Product	Total # of wholesalers trading
1	AMLODIPINE + TELMISARTAN Capsules or tablets	3
2	AMPHOTERICIN B Injections or Infusions	1
3	BECLOMETASONE Inhalers or Disks	3
4	BUDESONIDE Inhalers or Disks	4
5	CEFOTAXIME Injections or Infusions	7
6	CLOXACILLIN Suspensions or Syrups	2
7	HYDRALAZINE Capsules or tablets	5
8	HYDRALAZINE Injections or Infusions	3
9	HYDROCORTISONE Topical Ointments or Creams	9
10	MEROPENEM Injections or Infusions	11
11	MIFEPRISTONE#MISOPROSTOL Capsules or tablets	3
12	MUPIROCIN Topical Ointments or Creams	5
13	OXYTOCIN Injections or Infusions	4
14	PACLITAXEL Injections or Infusions	1
15	SOFOSBUVIR Capsules or tablets	2
16	SOFOSBUVIR + VELPATASAVIR Capsules or tablets	1
17	SULFADIAZINE Topical Ointments or Creams	5
18	TELMISARTAN Capsules or tablets	3
19	TETRACYCLINE Capsules or tablets	4
20	VITAMIN B6/PYRIDOXINE Injections or Infusions	2

Appendix 4: Country level analysis of shortage reports

	# countries where at least 1 respondent stocks	# countries where at least 1 respondent reported shortage	% countries reporting shortage
DAPSONE Capsules or tablets	0	0	-
AMPHOTERICIN B Injections or Infusions	1	0	0%
CLOXACILLIN Suspensions or Syrups	1	0	0%
PACLITAXEL Injections or Infusions	1	0	0%
SOFOSBUVIR + VELPATASAVIR Capsules or tablets	1	0	0%
MORPHINE Injections or Infusions	1	1	100%
AMLODIPINE + TELMISARTAN Capsules or tablets	2	0	0%
BECLOMETASONE Inhalers or Disks	2	0	0%
BUDESONIDE Inhalers or Disks	2	0	0%
HYDRALAZINE Injections or Infusions	2	0	0%
MIFEPRISTONE#MISOPROSTOL Capsules or tablets	2	0	0%
SOFOSBUVIR Capsules or tablets	2	0	0%
TELMISARTAN Capsules or tablets	2	0	0%
VITAMIN B6/PYRIDOXINE Injections or Infusions	2	0	0%
CEFOTAXIME Injections or Infusions	3	0	0%
HYDRALAZINE Capsules or tablets	3	0	0%
MUPIROCIN Topical Ointments or Creams	3	0	0%
OXYTOCIN Injections or Infusions	3	0	0%
SULFADIAZINE Topical Ointments or Creams	3	0	0%
TETRACYCLINE Capsules or tablets	3	0	0%

HYDROCORTISONE Topical Ointments or Creams	4	0	0%
MEROPENEM Injections or Infusions	5	0	0%
METRONIDAZOLE Suspensions or Syrups	6	1	17%
GENTAMICIN Injections or Infusions	5	1	20%
IBUPROFEN Capsules or tablets	5	1	20%
OMEPRAZOLE Capsules or tablets	5	1	20%
PARACETAMOL Capsules or tablets	5	1	20%
ACICLOVIR Capsules or tablets	4	1	25%
FLUCONAZOLE Capsules or tablets	4	1	25%
METOCLOPRAMIDE Capsules or tablets	4	1	25%
PHENOBARBITAL Injections or Infusions	4	1	25%
SALBUTAMOL Inhalers or Disks	4	1	25%
AMITRIPTYLINE Capsules or tablets	3	1	33%
BUPIVACAINE Injections or Infusions	3	1	33%
CARBAMAZEPINE Suspensions or Syrups	3	1	33%
DIGOXIN Capsules or tablets	3	1	33%
FLUOXETINE Capsules or tablets	3	1	33%
LISINAPRIL Capsules or tablets	3	1	33%
PYRIDOSTIGMINE Capsules or tablets	3	1	33%
SPIRONOLACTONE Capsules or tablets	3	1	33%
VALPROIC ACID Capsules or tablets	3	1	33%
VITAMIN A/RETINOL Capsules or tablets	3	1	33%
VITAMIN B1/THIAMINE Injections or Infusions	3	1	33%
PREDNISOLONE Capsules or tablets	6	2	33%
ALLOPURINOL Capsules or tablets	5	2	40%
CEFTRIAZONE Injections or Infusions	5	2	40%
DEXAMETHASONE Injections or Infusions	5	2	40%
BETAMETHASONE Injections or Infusions	2	1	50%
CALCIUM FOLINATE Injections or Infusions	2	1	50%
ENALAPRIL Capsules or tablets	2	1	50%
HYDROCHLOROTHIAZIDE Capsules or tablets	2	1	50%
NALOXONE Injections or Infusions	2	1	50%
VALPROIC ACID ORAL LIQUID	2	1	50%
DOXYCYCLINE Capsules or tablets	4	2	50%
METHYLPREDNISOLONE Injections or Infusions	4	2	50%
AMIKACIN Injections or Infusions	6	3	50%
AZATHIOPRINE Capsules or tablets	3	2	67%
CARBAMAZEPINE Capsules or tablets	3	2	67%
AMIODARONE Capsules or tablets	4	3	75%
CIPROFLOXACIN Capsules or tablets	4	3	75%
RANITIDINE Capsules or tablets	4	3	75%
SULFAMETHOXAZOLE + TRIMETHOPRIM Capsules or tablets	4	3	75%