

Republic of the Philippines Department of Health

OFFICE OF THE SECRETARY

1 February 2023

DEPARTMENT CIRCULAR No. 2023 - ()059

FOR:

ALL CENTERS FOR HEALTH DEVELOPMENT, NATIONAL DRUG **COMPLIANCE** OFFICES. **LEAGUES** PROVINCES AND MUNICIPALITIES, PROFESSIONAL HEALTH **BUREAUS AND REGIONAL** SOCIETIES. DIRECTORS OF OFFICES. BARMM MINISTER OF HEALTH, CHIEFS OF MEDICAL CENTERS AND SANITARIA, AND **OTHER**

CONCERNED

SUBJECT:

Health Technology Assessment Council (HTAC) Recommendation for the Inclusion of Deferasirox 90 mg and 180 mg film-coated tablet (FCT) for chronic iron overload due to repetitive blood transfusions in patients 2 years old and above in the Philippine National Formulary (PNF)

By virtue of Republic Act 11223, otherwise known as the Universal Health Care (UHC) Act, health technology assessment (HTA) shall be institutionalized as a fair and transparent priority-setting mechanism to provide financing and coverage recommendations on health technologies to be funded by the Department of Health (DOH) and the Philippine Health Insurance Corporation (PhilHealth).

Please be apprised that as of 24 January 2023, the Office of the Secretary approves the HTA Council recommendation to include deferasirox 90 mg and 180 mg film-coated tablet (FCT) in the PNF on the basis of the following:

- The Philippine FDA issued a Monitored Release-Certificate of Product Registration (MR-CPR) for deferasirox 90 mg and 180 mg FCT valid until 11 August 2027 and 31 August 2027, respectively.
- Results of Study F2102 reported by the European Medicines Agency show that the bioavailability (measured in AUC/ plasma concentration over time) of a strength-adjusted deferasirox FCT (GMR of 1.00 [90% CI: 0.932 to 1.078]) is comparable to deferasirox dispersible tablet (DT) (GMR of 0.98 [90% CI: 0.916 to 1.059]. However, peak deferasirox concentrations (C_{max}) of the FCT formulation is 30% higher than the DT formulation. As a result, the dosage strength per tablet was adjusted to account for the increase in peak concentrations. A retrospective exposure-response analysis was done (Study A2409) to investigate this increase and was found to not be clinically relevant and the expected efficacy to be comparable to DT. Additionally, results of a phase II, randomized open-label ECLIPSE study (Taher et al., 2017) which evaluated among others, clinical pharmacokinetics of both FCT and DT formulations, show that overall exposure to deferasirox was similar for both formulations, with slightly higher post-dose concentrations

- with FCT. The same study also evaluated the safety of FCT and DT formulations and found the results to show similar safety profiles for both formulations.
- Deferasirox is the first line treatment in United States for iron chelation therapy in (1) children ages 2 to 5 years old with beta thalassemia major who receive frequent blood transfusions when deferoxamine cannot be used or is inadequate and (2) for individuals aged 6 years old and above who have beta thalassemia major and who receive frequent blood transfusions. The summary of Clinical Practice Guidelines (CPG) for transfusion dependent thalassemia recommends the use of deferasirox.

Economic impact:

- Considering the total cost incurred for the treatment course per patient when using the proposed deferasirox 90 mg FCT and deferasirox 180mg FCT as compared to using the currently-listed deferasirox 125 mg DT and deferasirox 250 mg DT:
 - For the average pediatric patient (20-kg patient) there is no additional cost incurred for both minimum and maximum doses (Note: Dose adjustment increase is performed depending on laboratory test results) as a result of the following:
 - the proposed new forms follow the same price as the currently listed forms (price parity)
 - adjustment of the dosing regimen resulted in the same number of tablets per day required for FCT and DT formulations.
 - For an average adult patient (60-kg patient), depending on the required dose (i.e., minimum or maximum dose), there are cost savings to no additional cost incurred.
 - <u>Deferasirox 90 mg FCT (proposed) vs Deferasirox 125 mg DT(currently listed)</u>:
 - Minimum dose:
 - Php 90,045.50 savings per patient for 1-year duration of treatment
 - Php 450,227.50 savings per patient for 5-year duration of treatment
 - Maximum dose: No additional cost incurred
 - <u>Deferasirox 180 mg FCT (proposed) vs Deferasirox 250 mg DT (currently listed):</u>
 - Minimum dose: No additional cost incurred
 - Maximum dose:
 - Php 180,087.35 savings per patient for 1-year duration of treatment
 - Php 900,436.75 savings per patient for 5-year duration of treatment

Impact to patient compliance

• The HTAC also puts premium on the advantage of FCT in terms of improved patient compliance due to better palatability and enhanced patient satisfaction, as shown in two studies; one Phase 2 trial (<u>Taher et al., 2018 (ECLIPSE trial</u>) and one Phase 4 prospective study (<u>Wali et al., 2022</u>) that evaluated patient-reported outcomes.

For more details, you may refer to *Annex A* on the summary of evidence reviewed and *Annex B* on the costing analysis.

Kindly disseminate this to all concerned officials in your areas of responsibility so that they may be appropriately guided in their procurement activities. All are enjoined to ensure rational procurement, distribution, and use of health technologies in all government and private facilities.

Your full cooperation in this endeavor is expected and highly appreciated.

For your information and guidance.

By Authority of the OIC-Secretary of Health:

ATTY. CHARADE MERCADO GRAND

Assistant Secretaryof Health Health Regulation Team Annex A. Summary of Evidence Reviewed

The ne	w dosage and net t of the medicine:	Yes	No	Remarks/Evidence
1.	Has good quality	✓		Deferasirox 90mg and 180 mg Film-Coated Tablet has a Certificate of Product Registration with the Philippine Food and Drug Administration (FDA) until 11 August 2027 and 31 August 2027, respectively, assuring the public of its quality.
2.	Has proven safety based on sound evidence	✓		 The active FDA MR-CPR for deferasirox 90mg and 180 mg Film-Coated tablet valid until 11 August 2021 and 31 August 2027, respectively, certifies for the safety of the product. Deferasirox 125 mg and 250 mg dispersible tablets are currently included in the Philippine National Drug Formulary (8th edition) which establishes the recognition of the product's safety by the Department of Health. Phase IV observational study supports established real-world safety of the product
3.	Has proven efficacy for the stated indication based on sound evidence	✓		 The active FDA MR-CPR for deferasirox 90 mg and 180 mg is valid until 11 August 2027 and 31 August 2027, respectively, certifying the efficacy of the product. Deferasirox 125 mg and 250 mg dispersible tablets are currently included in the Philippine National Drug Formulary (8th edition) which establishes the recognition of the product's efficacy by the Department of Health. Studies show comparability of bioavailability, efficacy, and safety profile of the FCT and DT formulations.
4.	Has favorable cost-effectiveness analysis	✓		Shifting from deferasirox 125 mg and deferasirox 250 mg DT to deferasirox 90 mg and deferasirox 180 mg FCT will not incur additional costs or result to cost savings depending on the following: For children Deferasirox 90 mg FCT to Deferasirox 125 mg DT: • Minimum dose: No additional cost incurred • Maximum dose: No additional cost incurred Deferasirox 180 mg FCT to Deferasirox 250 mg DT: • Minimum dose: No additional cost incurred • Maximum dose: No additional cost incurred For adults Deferasirox 90 mg FCT to Deferasirox 125 mg DT: • Minimum dose: Php 90,045.50 savings for 1 year duration of treatment; Php 450,227.50 savings for 5 year duration of treatment; Php 450,227.50 savings for 5 year duration of treatment Deferasirox 180 mg FCT to Deferasirox 250 mg DT: • Minimum dose: No additional cost incurred Deferasirox 180 mg FCT to Deferasirox 250 mg DT: • Minimum dose: No additional cost incurred Maximum dose: Php 180,087.35 savings for 1 year duration of treatment; Php 900,436.75 savings for 5 year duration of treatment

		For the average pediatric patient, there is no additional cost incurred a deferasirox 90 mg FCT and deferasirox 180mg FCT follow the same price a deferasirox 125 mg DT and deferasirox 250 mg DT, respectively (price parity). Also, this is coupled with the adjustment of the dosing regimen whice lead to the same number of tablets per day required for FCT and D' formulations. For the adult population, there are cost savings incurred as the total number of tablets required differ between the two formulations due to the rounding off to the nearest whole tablet which is observed in the actual practice.
5. Other considerations	✓	Reported increase in patient compliance due to better palatability and enhanced patient satisfaction

Annex B. Costing Analysis: Comparative costing analysis on the use of Deferasirox 90 mg and 180 mg film-coated tablet versus Deferasirox 125 mg and 250 mg dispersible tablet

Assumptions:

- Dosing regimen: All patients are chelation treatment naive.
- Management of adverse events: All patients will experience side effects (SE) once per year and incur SE cost. SE management is done up to the maximum duration
 allowable before follow up. Management of other side effects (ie. renal toxicity, hepatic toxicity, bone marrow suppression, hypersensitivity, lens opacity/deafness,
 teratogenicity), there is no recommended treatment aside from dose adjustment or discontinuation.
- Monitoring through laboratory tests: Patient serum ferritin did not deviate from expected trends.
- · Total expected number of users:
 - There are multiple diseases (ie. thalassemia, hemoglobin disorders, hereditary spherocytosis, aplastic anemia, myelodysplastic syndrome, paroxysmal nocturnal hemoglobinuria, other bone marrow failure syndromes) that may cause chronic iron overload due to repetitive blood transfusion, however, the deferasirox regimen will be the same for the management of those diseases. For this analysis, the number of thalassemia patients in the Philippines was used as the total expected number of users.
 - The 1-year costing for the expected number of users in both children and adults was computed using 2019 Global Burden of Disease data on prevalence.
 - o The 5- year costing expected number of users in children and adults was not computed, as the data on incidence in adults is unavailable.
- For the prices of laboratory and imaging tests, charity ward pricing of a government hospital (Philippine General Hospital) was used.

INDICATION 1 - For Pediatric population: Chronic iron overload due to repetitive blood transfusions in patients > 2 years

PARAMETER	PROPOSED INCLU		CURRENTLY LISTED IN THE PNF			
	Deferasirox 90 mg film-coated tablet	Deferasirox 180 mg film-coated tablet	References	Deferasirox 125 mg dispersible tablet	Deferasirox 250 mg dispersible tablet	References
Part 1: COST OF MED	DICATION					
COST PER DOSAGE UNIT (in Php) [A]	Php 246.70	Php 493.39	Novartis, 2022	Php 246.70	Php 493.39	DPRI, 2022

NUMBER OF TABLETS NEEDED [B]	14 mg/kg to 28 mg/kg per day Note: The projected duration of treats patient. A 5-year duration of therapy this review for the projection of cost	TIF, 2022	20 mg/kg to 40 mg/kg Note: The projected dur a lifetime per patient. A therapy (DOT) is assum the projection of cost	ration of treatment is 15-year duration of ned in this review for	PNF, 2019	
	Average weight of adult pat	Expert opinion: PCHTM, 2022 PCMC, 2022	Average weight of ac	dult patient: 20kg	Expert opinion: PCHTM, 2022 PCMC, 2022	
	Per day: Min dose: (14 mg/kg per day x 20kg)/ 90 mg/tablet = 3 tablets per day Max dose: (28 mg/kg per day x 20kg)/ 90 mg/tablet = 6 tablets per day Note: Round to the nearest whole tablet	Per day: Min dose: (14 mg/kg per day x 20kg)/ 180 mg/tablet = 2 tablets per day Max dose: (28 mg/kg per day x 20kg)/ 90 mg/tablet = 3 tablets per day Note: Round to the nearest whole tablet	Expert opinion: PCHTM, 2022 PCMC, 2022	Per day: Min dose: (20 mg/kg per day x 20kg)/ 125 mg/tablet = 3 tablets per day Max dose: (40 mg/kg per day x 60kg)/ 125 mg/tablet = 6 tablets per day Note: Round to the nearest whole tablet	Per day: Min dose: (20 mg/kg per day x 20kg)/ 250 mg/tablet = 2 tablets per day Max dose: (40 mg/kg per day x 60kg)/ 250 mg/tablet = 3 tablets per day Note: Round to the nearest whole tablet	Expert opinion: PCHTM, 2022 PCMC, 2022
	For 1-year DOT: Min dose: 3 tablets per day x 365 days = 1,095 tablets in 1 year Max dose: 6 tablets per day x 365 days = 2,190 tablets in 1 year	For 1-year DOT: Min dose: 2 tablets per day x 365 days = 730 tablets in 1 year		For 1-year DOT: Min dose: 3 tablets per day x 365 days = 1,095 tablets in 1 year	For 1-year DOT: Min dose: 2 tablets per day x 365 days = 730 tablets in 1 year	

		Max dose: 3 tablets per day x 365 days = 1,095 tablets in 1 year	Max dose: 6 tablets per day x 365 days = 2,190 tablets in 1 year	Max dose: 3 tablets per day x 365 days = 1,095 tablets in 1 year	
	For 5-year DOT: ,Min dose: 3 tablets per day x 1,825 days = 5,475 tablets in 5 years Max dose: 6 tablets per day x 1,825 days = 10,950 tablets in 5 years	For 5-year DOT: Min dose: 2 tablets per day x 1,825 days = 3,650 tablets in 5 years Max dose: 3 tablets per day x 1,825 days = 5,475 tablets in 5 years	For 5-year DOT: "Min dose: 3 tablets per day x 1,825 days = 5,475 tablets in 5 years Max dose: 6 tablets per day x 1,825 days = 10,950 tablets in 5 years	For 5-year DOT: Min dose: 2 tablets per day x 1,825 days = 3,650 tablets in 5 years Max dose: 3 tablets per day x 1,825 days = 5,475 tablets in 5 years	
TOTAL COST OF MEDICATION PER PATIENT PER TREATMENT COURSE (in PhP) [C=AxB]	For 1-year DOT: Min dose: 1,095 tablets x Php 246.70= Php 270,136.50 Max dose: 2,190 tablets x Php 246.70 = Php 540,273.00	For 1-year DOT: Min dose: 730 tablets x Php 493.39 = Php 360,174.70 Max dose: 1,095 tablets x Php 493.39 = Php 540,262.05	For 1-year DOT: Min dose: 1,095 tablets x Php 246.70= Php 270,136.50 Max dose: 2,190 tablets x Php 246.70 = Php 540,273.00	For 1-year DOT: Min dose: 730 tablets x Php 493.39 = Php 360,174.70 Max dose: 1,095 tablets x Php 493.39 = Php 540,262.05	
	For 5-year DOT: Min dose: 5,475 tablets x Php 246.70 = Php 1,350,682.50 Max dose: 10,950 tablets x Php 246.70 = Php 2,701,365.00	For 5-year DOT: Min dose: 3,650 tablets x Php 493.39 = Php 1,800,873.50 Max dose:	For 5-year DOT: Min dose: 5,475 tablets x Php 246.70 = Php 1,350,682.50 Max dose:	For 5-year DOT: Min dose: 3,650 tablets x Php 493.39 = Php 1,800,873.50 Max dose:	

		5,475 tablets x Php 493.39 = Php 2,701,310.25	10,950 tablets x Php 246.70 = Php 2,701,365.00	5,475 tablets x Php 493.39 = Php 2,701,310.25	
Part 2 : OTHER COS	rs				
2.1. Cost of Managi	ng Side Effects				
	SAME COSTS APPLY FOR B	OTH INTERVENTION AND CO	ONTROL		1 <u>DPRI, 2022</u>
	Drugs for Management of Side	Effects:			2 PCHTM, 2022
	For diarrhea				3 Southstar Drug
Management of SEs	Treatment Regimen: 1 ta (ma foll Total number of Loperan Cost of Loperamide regi b. Oral Rehydration Salts (Potassium chloride, 75 n Unit Cost of ORS: Php 4 Treatment Regimen: As a	ORS) [75 mmol/L Sodium chloridenmol/L Glucose anhydrous] .79 per sachet 1 needed until resolution of symptomy-up if with no improvement in 3-5 regimen: 40 sachets	novement, given until with resolution common practice is to have pati 3-5 days ² 2. 10 mmol/L Trisodium citrate days (minimum of 2 days) 4 Common common common common citrate days) 4 Common citrate days (minimum of 2 days) 4 Common citrate days) 4 Common citrate days (minimum of 2 days) 4 Common citrate days) 4 Common citrate days (minimum of 2 days) 4 Common citrate days) 4 Common citrate days (minimum of 2 days) 4 Common citrate days) 4 Common citrate days (minimum citrate days	ents return for lihydrate, 20 mmol/L	4 PCMC, 2022 5 MIMS, 2022
	For abdominal pain c. Hyoscine 10 mg tablet Unit Cost of Hyoscine 10 Treatment Regimen: 1 ta Co we				

Total number of Hyoscine per regimen: 21 tablets

Cost of Hyoscine regimen: Php 130.20

For nausea and vomiting

d. Metoclopramide 10 mg tablet

Unit Cost of Metoclopramide 10 mg tablet: Php 8.00 per tablet 1

Treatment Regimen: 1 tab every 8 hours as needed for nausea and vomiting, given until resolution of symptoms;

Common practice is to have patients return for follow-up if without improvement within a

week²

Total number of Metoclopramide per regimen: 21 tablets

Cost of Metoclopramide regimen: Php 168.00

For skin rashes

e. Cetirizine 10 mg tablet

Unit Cost of Cetirizine 10 mg tablet: Php 4.50 per tablet 1

Treatment Regimen: 1 tablet once a day, given until resolution of symptoms; Common practice is to have patients

return for follow-up if without improvement in 1-2 weeks ²

Total number of Cetirizine per regimen: 14 tablets

Cost of Cetirizine regimen: Php 63.00

Total cost of Managing SEs:

Php 152.00 + Php 191.60 + Php 130.20 + Php 168.00 + Php 63.00 = **Php 704.80**

Note:

For the management of other side effects (ie. renal toxicity, hepatic toxicity, bone marrow suppression, hypersensitivity, lens opacity/deafness, teratogenicity), there is no recommended treatment aside from dose adjustment or discontinuation.

SAME COSTS APPLY FOR BOTH INTERVENTION AND CONTROL

Laboratory and Imaging Costs

Laboratory tests:

Laboratory Test	Frequency of use	Cost per test	Cost per test regimen
Serum Ferritin Test	Measured at least every 3	Php 1,915.00 ⁶	Php 7,660.00

6 PGH Cashier, 2022

	months; 4 times a year 4		
Serum Creatinine	Measured at least every 3 months; 4 times a year 4	Php 50.00 6	Php 200.00
Urinalysis (Urine Protein)	Measured at least every 3 months; 4 times a year 4	Php 240.00 ⁶	Php 960.00
Liver enzymes (ALT/AST)	Measured at least every 3 months; 4 times a year 4	Php 125.00 ⁶	Php 500.00
Complete Blood Count(CBC)	As needed or every 2-4 weeks, lifelong; 26 times a year 4	Php 180.00 ⁶	Php 4,680.00
Audiology (Includes the following tests: Pure tone audiometry, Tympanometry, Transient evoked oto-acustic emission test, Audio brainstem response test)	Yearly, as long as patient is in ICT ⁴	Php 2,325.00 ⁶	Php 2,325.00
Ophthalmology	Yearly, as long as patient is in ICT ⁴	FREE 6	FREE
Thyroid Function Test	Yearly, as long as patient is in ICT ⁴	Php 1,185.00 ⁶	Php 1,185.00

Total Cost of Laboratory Tests: For 1-year DOT: = Php 17,510.00 For 5-year DOT: = Php 87,550.00

	Imaging tests/ procedures:									
	Imaging Test/ Procedure									
	Yearly, as long as patient is 2D-echo in ICT 4 Php 750.00 6 Php 750.00									
	Total Cost of Imaging: For 1-year DOT: Php 750.00 For 5-year DOT: Php 3,750.00 Total cost of laboratory and imaging per patient for 1 year: Php 17,510.00 + Php 750.00 = Php 18,260.00 Total cost of laboratory and imaging per patient for 5 years: Php 87,550.00 + Php 3,750.00 = Php 91,300.00									
TOTAL COST OF OTHER COST ITEMS (Cost of Laboratory and Imaging + Cost of Managing SEs)	For 1-year DOT: Php 704.80 + Php 18,260.00 = F For 5-year DOT: Php 3,524.00 + Php 91,300.00 =									
PARAMETER	PROPOSED INC		Defenences	CURRENTLY LISTED IN THE PNF						
PARAMETER	Deferasirox 90 mg film-coated tablet	[일본 [[1] 1] - [1] -	References	Deferasirox 12 dispersible ta		Deferasirox 250 mg dispersible tablet	References			
Part 3 : TOTAL COS	T OF TREATMENT COURSE PE	R PATIENT (MEDICATIO	ON COST +	OTHER COSTS)						
TOTAL COST OF TREATMENT COURSE PER PATIENT (Cost of	For 1-year DOT: Min dose: TOTAL: Php 270,136.50 + Php 18,964.80 = Php 289,101.30	For 1-year DOT: Min dose: TOTAL: Php 360,174.70 + Php		For 1-year DOT: Min dose: TOTAL: Php 270,136.50 + Php		For 1-year DOT: Min dose: TOTAL: Php 360,174.70 + Php				

Medication + Other costs)	Max dose: TOTAL: Php 540,273.00 + Php 18,964.80 = Php 559,237.80	18,964.80 = Php 379,139.50 Max dose: TOTAL: Php 540,262.05 + Php 18,964.80 = Php 559,226.85	18,964.80 = Php 289,101.30 Max dose: TOTAL: Php 540,273.00 + Php 18,964.80 = Php 559,237.80	18,964.80 = Php 379,139.50 Max dose: TOTAL: Php 540,262.05 + Php 18,964.80 = Php 559,226.85			
	For 5-year DOT: Min dose: TOTAL: Php 1,350,682.50 + Php 94,824.00 = Php 1,445,506.50 Max dose: TOTAL: Php 2,701,365.00 + Php 94,824.00 = Php 2,796,189.00	For 5-year DOT: Min dose: TOTAL: Php 1,800,873.50 + Php 94,824.00 = Php 1,895,697.50 Max dose: TOTAL: Php 2,701,310.25 + Php 94,824.00 = Php 2,796,134.25	For 5-year DOT: Min dose: TOTAL: Php 1,350,682.50 + Php 94,824.00 = Php 1,445,506.50 Max dose: TOTAL: Php 2,701,365.00 + Php 94,824.00 = Php 2,796,189.00	For 5-year DOT: Min dose: TOTAL: Php 1,800,873.50 + Php 94,824.00 = Php 1,895,697.50 Max dose: TOTAL: Php 2,701,310.25 + Php 94,824.00 = Php 2,796,134.25			
INCREMENTAL COST (in Php) (Total cost of intervention per patient- Total cost of comparator per patient)	Deferasirox 90 mg FCT vs Deferasirox 125 mg DT For 1-year DOT: Min dose: Php 289,101.30 - Php 289,101.30= Php 0.00 (No additional cost incurred) Max dose: Php 559,237.80 - Php 559,237.80= Php 0.00 (No additional cost incurred) For 5-year DOT: Min dose: Php 1,445,506.50 - Php 1,445,506.50= Php 0.00 (No additional cost incurred) Max dose: Php 2,796,189.00- Php 2,796,189.00= Php 0.00 (No additional cost incurred) Deferasirox 180 mg FCT vs Deferasirox 250 mg DT For 1-year DOT:						

For 5-year DOT:

Min dose: Php 1,895,697.50 - Php 1,895,697.505= Php 0.00 (No additional cost incurred)
Max dose: Php 2,796,134.25 - Php 2,796,134.25= Php 0.00 (No additional cost incurred)

INDICATION 2 - Adult: Chronic iron overload due to repetitive blood transfusions in patients > 2 years

D. D. METER	PROPOSED I	PROPOSED INCLUSION		CURRENTLY LI	STED IN THE PNF	
PARAMETER	Deferasirox 90 mg film-coated tablet	Deferasirox 180 mg film-coated tablet	References	Deferasirox 125 mg dispersible tablet	Deferasirox 250 mg dispersible tablet	References
Part 1: COST OF MEDI	CATION					
COST PER DOSAGE UNIT (in Php) [A]	Php 246.70	Php 493.39	Novartis, 2022	Php 246.70	Php 493.39	<u>DPRI, 2022</u>
NUMBER OF TABLETS NEEDED [B]	14 mg/kg to 28 mg/kg per day for lifetime Note: The projected duration of treatment is a lifetime per patient. A 5-year duration of therapy (DOT) is assumed in this review for the projection of cost to the government.		TIF, 2022	Note: The projected a lifetime per patien therapy (DOT) is ass	kg per day for lifetime duration of treatment is at. A 5-year duration of sumed in this review for ost to the government.	PNF, 2019
	Average weight of a	dult patient: 60 kg	Expert opinion: PCHTM, 2022 PCMC, 2022	Average weight o	f adult patient: 60kg	Expert opinion: PCHTM, 2022 PCMC, 2022
	Per day: Min dose: (14 mg/kg per day x 60kg)/ 90 mg/tablet = 9 tablets per day	Per day: Min dose: (14 mg/kg per day x 60kg)/ 180 mg/tablet = 5 tablets per day	Expert opinion: PCHTM, 2022 PCMC, 2022	Per day: Min dose: (20 mg/kg per day x 60kg)/ 125 mg/tablet = 10 tablets per day	Per day: Min dose: (20 mg/kg per day x 60kg)/ 250 mg/tablet = 5 tablets per day	Expert opinion: PCHTM, 2022 PCMC, 2022

	Max dose: (28 mg/kg per day x 60kg)/ 90 mg/tablet = 19 tablets per day Note: Round to the nearest whole tablet	Max dose: (28 mg/kg per day x 60kg)/ 90 mg/tablet = 9 tablets per day Note: Round to the nearest whole tablet	Max dose: (40 mg/kg per day x 60kg)/ 125 mg/tablet = 19 tablets per day Note: Round to the nearest whole tablet	Max dose: (40 mg/kg per day x 60kg)/ 250 mg/tablet = 10 tablets per day Note: Round to the nearest whole tablet	
	For 1-year DOT: Min dose: 9 tablets per day x 365 days = 3,285 tablets in 1 year	For 1-year DOT: Min dose: 5 tablets per day x 365 days = 1,825 tablets in 1 year	For 1-year DOT: Min dose: 10 tablets per day x 365 days = 3,650 tablets in 1 year	For 1-year DOT: Min dose: 5 tablets per day x 365 days = 1,825 tablets in 1 year	
	Max dose: 19 tablets per day x 365 days = 6,935 tablets in 1 year	Max dose: 9 tablets per day x 365 days = 3,285 tablets in 1 year	 Max dose: 19 tablets per day x 365 days = 6,935 tablets in 1 year	Max dose: 10 tablets per day x 365 days = 3,650 tablets in 1 year	
	For 5-year DOT: Min dose: 9 tablets per day x 1,825 days = 16,425 tablets in 5 years	For 5-year DOT: Min dose: 5 tablets per day x 1,825 days = 9,125 tablets in 5 years	For 5-year DOT: Min dose: 10 tablets per day x 1,825 days = 18,250 tablets in 5 years	For 5-year DOT: Min dose: 5 tablets per day x 1,825 days = 9,125 tablets in 5 years	
	Max dose: 19 tablets per day x 1,825 days = 34,675 tablets in 5 years	Max dose: 9 tablets per day x 1,825 days = 16,425 tablets in 5 years	Max dose: 19 tablets per day x 1,825 days = 34,675 tablets in 5 years	Max dose: 10 tablets per day x 1,825 days = 18,250 tablets in 5 years	
TOTAL COST OF MEDICATION PER	For 1-year DOT: Min dose:	For 1-year DOT: Min dose:	For 1-year DOT: Min dose:	For 1-year DOT: Min dose:	

PATIENT PER TREATMENT COURSE (in PhP) [C=AxB]	3,285 tablets x Php 246.70 = Php 810,409.50 Max dose: 6,935 tablets x Php 246.70 = Php 1,710,864.50	1,825 tablets x Php 493.39 = Php 900,436.75 Max dose: 3,285 tablets x Php 493.39 = Php 1,620,786.15		3,650 tablets x Php 246.70 = Php 900,455.00 Max dose: 6,935 tablets x Php 246.70 = Php 1,710,864.50	1,825 tablets x Php 493.39 = Php 900,436.75 Max dose: 3,650 tablets x Php 493.39 = Php 1,800,873.50		
	For 5-year DOT: Min dose: 16,425 tablets x Php 246.70 = Php 4,052,047.50 Max dose: 34,675 tablets x Php 246.70 = Php 8,554,322.50	For 5-year DOT: Min dose: 9,125 tablets x Php 493.39 = Php 4,502,183.75 Max dose: 16,425 tablets x Php 493.39 = Php 8,103,930.75		For 5-year DOT: Min dose: 18,250 tablets x Php 246.70 = Php 4,502,275.00 Max dose: 34,675 tablets x Php 246.70 = Php 8,554,322.50	For 5-year DOT: Min dose: 9,125 tablets x Php 493.39 = Php 4,502,183.75 Max dose: 18,250 tablets x Php 493.39 = Php 9,004,367.50		
Part 2 : OTHER COSTS							
2.1. Cost of Managing	Side Effects					T"	
	SAME COSTS APPLY FOR BOTH INTERVENTION AND CONTROL					1 <u>DPRI, 2022</u>	
Drugs for Management of Side Effects: For diarrhea					2 PCHTM, 2022		
	a. Loperamide 2 mg tablet Unit Cost of Loperamide 2 mg tablet: Php 3.80 per tablet Treatment Regimen: 1 tablet as needed after every bowel movement, given until with resolution of					3 <u>Southstar Drug</u>	
Management of SEs						4 PCMC, 2022	
		5 <u>MIMS, 2022</u>					
	patients return for follow-up if with no improvement in 3-5 days ² Total number of Loperamide tablet per regimen: 40 tablets Cost of Loperamide regimen: Php 152.00						

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b. Oral Rehydration Salts (ORS) [75 mmol/L Sodium chloride, 10 mmol/L Trisodium citrate dihydrate, 20 mmol/L Potassium chloride, 75 mmol/L Glucose anhydrous]

Unit Cost of ORS: Php 4.79 per sachet 1

Treatment Regimen: As needed until resolution of symptoms (minimum of 2 days)⁴ Common practice is to patients return for follow-up if with no improvement in 3-5 days; 12 sachets per day ⁵

Total number of ORS per regimen: 60 sachets

Cost of ORS regimen: Php 287.40

For abdominal pain

c. Hyoscine 10 mg tablet

Unit Cost of Hyoscine 10 mg tablet: Php 6.20 per tablet 1

Treatment Regimen: 1 tablet every 8 hours as needed for abdominal pain, given until resolution of symptoms; Common practice is to have patients return for follow-up if still with

intolerable pain after 1 week²

Total number of Hyoscine per regimen: 21 tablets

Cost of Hyoscine regimen: Php 130.20

For nausea and vomiting

d. Metoclopramide 10 mg tablet

Unit Cost of Metoclopramide 10 mg tablet: Php 8.00 per tablet 1

Treatment Regimen: 1 tab every 8 hours as needed for nausea and vomiting, given until resolution of

symptoms; Common practice is to have patients return for follow-up if without

improvement within a week2

Total number of Metoclopramide per regimen: 21 tablets

Cost of Metoclopramide regimen: Php 168.00

For skin rashes

e. Cetirizine 10 mg tablet

Unit Cost of Cetirizine 10 mg tablet: Php 4.50 per tablet 1

Treatment Regimen: 1 tablet once a day, given until resolution of symptoms; Common practice is to

have patients return for follow-up if without improvement in 1-2 weeks ²

Total number of Cetirizine per regimen: 14 tablets

Cost of Cetirizine regimen: Php 63.00

	Total cost of Managing SEs: Php 152.00 + Php 287.4 Note: For the management of other single hypersensitivity, lens opacity/deadjustment or discontinuation.				
	* SAME COSTS APPLY FOR Laboratory tests:	6 PGH Cashier, 2022			
Laboratory and Imaging Costs	Laboratory Test	Frequency of use	Cost per test	Cost per test regimen	
		Measured at least every 3 months; 4 times a year 4			
	Serum Ferritin Test		Php 1,915.00 ⁶	Php 7,660.00	
	Serum Creatinine	Measured at least every 3 months; 4 times a year 4	Php 50.00 ⁶	Php 200.00	
	Urinalysis (Urine Protein)	Measured at least every 3 months; 4 times a year 4	Php 240.00 ⁶	Php 960.00	
	Liver enzymes (ALT/AST)	Measured at least every 3 months; 4 times a year 4	Php 125.00 ⁶	Php 500.00	
		As needed or every 2-4 weeks, lifelong; 26 times a year 4			
	Complete Blood Count(CBC)		Php 180.00 ⁶	Php 4,680.00	
	Audiology	Yearly, as long as patient is in ICT ⁴	Php 2,325.00 ⁶	Php 2,325.00	

	Ophthalmology	Yearly, as long as patient is in ICT ⁴ Yearly, as long as patient is in ICT ⁴	FREE ⁶ Php 1,185.00 ⁶	FREE Php 1,185.00	
	For 1 year DOT: = For 5 years DOT: = Imaging tests/ procedures:	Php 17,510.00 = Php 87,550.00			
	Imaging Test/ Procedure 2D-echo	Frequency of use Yearly, as long as patient is in ICT 4	Php 3,530.00 ⁶	Cost per test regimen Php 3,530.00	
	Total Cost of Imaging: For 1-year DOT: F For 5-year DOT: F				
	Total cost of laboratory and ima Php 17,510.00 + Php 3,530.0 Total cost of laboratory and ima Php 87,550.00 + Php 17,65				
TOTAL COST OF OTHER COST ITEMS (Cost of Laboratory and Imaging + Cost of Managing SEs)					
PARAMETER	PROPOSED INCLUSIO	N References	CURRENTI	LY LISTED IN THE PNF	References

	Deferasirox 90 mg film-coated tablet	Deferasirox 180 mg film-coated tablet		Deferasirox 125 mg dispersible tablet	Deferasirox 250 mg dispersible tablet	
Part 3: TOTAL COST	OF TREATMENT COU	RSE PER PATIEN	T (MEDICATION O	COST + OTHER COS	STS)	
TOTAL COST OF TREATMENT COURSE PER PATIENT (Cost of Medication + Other costs)	For 1 year DOT: Min dose: TOTAL: Php 810,409.50 + Php 21,840.60 = Php 832,250.10 Max dose: TOTAL: Php 1,710,864.50 + Php 21,840.60 = Php 1,732,705.10	For 1 year DOT: Min dose: TOTAL: Php 900,436.75 + Php 21,840.60= Php 922,277.35 Max dose: TOTAL: Php 1,620,786.15 + Php 21,840.60 = Php 1,642,626.75		For 1 year DOT: Min dose: TOTAL: Php 900,455.00 + Php 21,840.60 = Php 922,295.60 Max dose: TOTAL: Php 1,710,864.50 + Php 21,840.60 = Php 1,732,705.10	For 1 year DOT: Min dose: TOTAL: Php 900,436.75 + Php 21,840.60 = Php 922,277.35 Max dose: TOTAL: Php 1,800,873.50 + Php 21,840.60= Php 1,822,714.10	
	For 5-year DOT: Min dose: TOTAL: Php 4,052,047.50 + Php 109,203.00 = Php 4,161,250.50 Max dose: TOTAL: Php 8,554,322.50 + Php 109,203.00 = Php 8,663,525.50	For 5-year DOT: Min dose: TOTAL: Php 4,502,183.75 +Php 109,203.00 = Php 4,611,386.75 Max dose: TOTAL: Php 8,103,930.75 + Php 109,203.00 = Php 8,213,133.75		For 5-year DOT: Min dose: TOTAL: Php 4,502,275.00 + Php 109,203.00= Php 4,611,478.00 Max dose: TOTAL: Php 8,554,322.50 + Php 109,203.00= Php 8,663,525.50	For 5-year DOT: Min dose: TOTAL: Php 4,502,183.75+ Php 109,203.00= Php 4,611,386.75 Max dose: TOTAL: Php 9,004,367.50 + Php 109,203.00= Php 9,113,570.50	

INCREMENTAL COST (in Php)

(Total cost of intervention per patient- Total cost of comparator per patient)

Deferasirox 90 mg FCT vs Deferasirox 125 mg DT

For 1 year DOT:

Min dose: Php 832,250.10 - Php 922,295.60 = - Php 90,045.50 (Cost savings of using Deferasirox 90 mg

FCT)

Max dose: Php 1,732,705.10 - Php 1,732,705.10 = Php 0.00 (No additional cost incurred)

For 5-year DOT:

Min dose: Php 4,161,250.50 - Php 4,611,478.00 = - Php 450,227.50 (Cost savings of using Deferasirox 90

mg FCT)

Max dose: Php 8,663,525.50 - Php 8,663,525.50= Php 0.00 (No additional cost incurred)

Deferasirox 180 mg FCT vs Deferasirox 250 mg DT

For 1 year DOT:

Min dose: Php 922,277.35 - Php 922,277.35= Php 0.00 (No additional cost incurred)

Max dose: Php 1,642,626.75- Php 1,822,714.10 = - Php 180,087.35 (Cost savings of using Deferasirox 180

mg FCT)

For 5-year DOT:

Min dose: Php 4,611,386.75 - 4,611,386.75 = Php 0.00 (No additional cost incurred)

Max dose: Php 8,213,133.75 - Php 9,113,570.50 = - Php 900,436.75 (Cost savings of using Deferasirox 180

mg FCT)

Note: There are cost savings incurred as the total number of tablets required differ between the two formulations due to the rounding off to the nearest whole tablet which is observed in the actual practice.