

IAHPC Opioid Price Watch



Project
Proposal

BACKGROUND

The relief of suffering is considered one of the primary goals of Medicine¹. The World Health Organization (WHO) recognizes palliative care and pain relief as critical public health issues^{2,3,4}. They are essential components of care and they should be guaranteed to all patients regardless of the diagnosis, prognosis, socioeconomic condition, gender, race or geographic location. Palliative care and pain treatment have also been recognized as human rights issues based on international treaties, conventions and international consensus signed by many states and adopted by multilateral organizations - these rights apply to all conditions where pain and suffering occur⁵.

Efforts should be made to include palliative care and pain relief in national health policies, and to ensure adequate education of health care professionals, patients and caregivers. Both therapeutic approaches need access to appropriate services and medicines, however while medicines for the relief of mild pain are widely available and affordable, access to strong opioids for legitimate medical purposes for the relief of moderate and severe pain still needs to be guaranteed.

The Single Convention on Narcotic Drugs recognizes that “the medical use of narcotic drugs continues to be indispensable for the relief of pain and suffering and that adequate provision must be made to ensure the availability of narcotic drugs for such purposes”; and the International Narcotics Control Board (INCB) has asked governments to make these medicines available for pain relief.

Still in many countries limited or no access to these essential medicines is a significant problem. Low and middle income countries have the worst situation: developing countries with about 80 percent of the world population account merely for about 6 % of global morphine consumption. The result is that millions of patients with both chronic non-malignant and degenerative progressive diseases suffer for long periods of time without appropriate pain treatment.

Barriers to access

Access to strong opioids is limited due to several reasons, including among others, stringent drug control laws and regulations, lack of education and high prices^{6,7,8}. Their use in both developed and developing countries is significantly affected by prices^{9,10,11,12}: in developing countries they have been reported to be more expensive than in developed nations (as a percentage of personal purchasing power)¹³, and prices in small cities and rural areas are higher than in large cities^{14,15,16}.

High prices distort the delivery of medical treatment - without equitable access to strong opioids the basic right to pain treatment and relief of suffering cannot be fulfilled. The high cost of medicines has been recognized by many organizations and governments as a barrier and many countries have adopted subsidy programs to facilitate access to essential medicines¹⁷.

The WHO and Health Action International (HAI) developed a method to study and evaluate the price of medicines as a measure of access and appropriate treatment¹⁸; it provides recommendations to investigators, and baseline methods for developing studies and interpretation of findings. Several reports comparing the prices of medicines across countries have been conducted, and they have proven to be useful in comparing access to care and appropriate treatment and in some cases have prompted governments to take action to lower the cost of medicines. Several studies have examined the availability,

prices and affordability of essential medicines^{19,20}, however few surveys have focused specifically on opioid medicines; and there is limited information on how much they cost and where they are available and affordable.

DESCRIPTION

This project will result in a global map representing the retail price of opioid medications throughout and within different countries of the world and will be called Opioid Price Watch (OPW). Collecting information and showing a global picture on the cost of opioid medicines may increase awareness about the difficulties that many patients face in accessing appropriate care, and may serve as a basis to identify and analyze issues that could help civil society, advocates, governments and policy makers to take the appropriate steps needed to improve access to opioid medicines.

Opioid Price Watch is a component in the IAHPC agreement of work with the WHO in the organization's application for formal relations with the UN organization. The project will provide critical information and enable the WHO Access to Controlled Medications Program in the analysis of barriers to controlled medicines, when assisting countries on improving access.

OPW is funded by a grant from the US Cancer Pain Relief Committee.

Goals and objectives

The main goal of the Opioid Price Watch project is to improve access to strong opioids for legitimate medical use, through dissemination of information on their prices, availability and affordability. The objectives of the OPW are:

1. to show price patterns among regions, countries and cities in access to strong opioids as reflected in differences in unit price, cost of treatments per month, affordability and differences in prices paid to prices available on the international market,
2. to provide information on their availability in different places in the world, and
3. to allow for further analysis on the lack of availability and affordability to opioid analgesics and subsequently suggest possible strategies address the identified problems.

Methodology

The study will be designed following the checklist for cross-sectional studies of the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE).²¹ An ethics review board from the Fundacion Federacion Medica de Buenos Aires (FEMEBA) in Argentina, approved the study.

Working group IAHPC formed the following working group of experts in the field, composed of board members and representatives of organizations working in global issues:

Liliana De Lima (USA)

Tania Pastrana (Germany)

Lukas Radbruch (Germany)

Roberto Wenk (Argentina)

In addition, the following individuals will be providing expert advice and guidance to the methodology:

Dele Olawale Abegunde (Switzerland)

Eduardo Bruera (USA)

James Cleary (USA)

Arthur Lipman (USA)

Barbara Milani (Switzerland)

Anne Nguyen (Switzerland)

Willem Scholten (Switzerland)

Study design: This will be a pilot cross-sectional descriptive study.

The opioids to be included in OPW were selected using the following criteria: Those

- included in the 17th edition of the WHO Model List of Essential Medicines (EML)⁴
- included in the IAHPIC List of Essential Medicines not included in the WHO EML⁵
- not included in any of the lists above for which the International Narcotics Control Board (INCB) reports consumption by member states.¹⁷

Based on this criteria, the following medications and formulations were included:

- Fentanyl [transdermal patches (TP)]
- Hydromorphone [injectable, oral solid immediate release (IR), oral solid slow release (SR) and oral liquid]
- Methadone (oral liquid and oral solid)
- Morphine [injectable, tablet (IR and SR) and liquid], and
- Oxycodone (oral solid IR and SR)

Excluded from the study were medications/formulations which require special delivery technology and/or skills.

Sample selection: Sampling will be done according to the following criteria:

1. IAHPIC members will be listed by countries in alphabetical order.
2. Countries will be stratified by their Gross National Income (GNI) using the World Bank categories: Low Income Countries (LIC), Low Middle Income Countries (LMIC), Upper Middle Income Countries (UMIC) and High Income Countries (HIC).¹⁸
3. IAHPIC members will be listed by their corresponding country's GNI and each list will be randomized.¹⁹
4. The first 10 participants in each category will be selected, resulting in 40 potential participants. Selected individuals will be contacted by e-mail and invited to participate. Whenever one declines the invitation or if he/she does not reply, the next individual in the list will be invited.

Participants in the project will be informed of the objectives of the study, total estimated time to complete the survey, that their names will be acknowledged and that the data presented will be linked to their countries. A signed informed consent will be submitted by all before completing the survey.

Participants will be asked to select the pharmacy located closest to a public health facility which provides diagnostic and treatment services for patients with life-threatening conditions. They will be asked, if available, to provide the lowest dispensing price of the smallest selling unit of the lowest strength of each medication/formulation. If available free of charge this will also be recorded. Pharmacy address will be recorded to avoid potential duplication.

Annex 1 includes the definitions of the terms applied in OPW. These will be distributed to the participants.

Data collection: A web based on-line survey will be used to collect information; in case of difficulty completing the online survey, the IAHPHPC will send a form to record the data. Annex 2 includes the data collection form.

Data management: Survey results will be collected in a database to allow data search, analysis, display and update. The following steps will be taken:

1. Convert local currency to US dollars according to official exchange rate on the day the data was collected.
2. Calculate the unit price²² by dividing the price of pack by the number of tablets / capsules / patches.
3. Calculate the price in USD for 30 days of treatment using the defined daily doses (DDD)²³ for all opioids except methadone. For the later, use a morphine equianalgesic dose²⁴.
4. Monthly prices will be obtained by multiplying the number of units needed for the DDDs and the equianalgesic methadone dose by 30, and then by the unit prices.
5. Calculate the affordability²⁵ of 30 days of treatment with a DDD of immediate release oral morphine
6. Calculate the differences between the treatments with immediate release morphine with the international prices²⁶

Data Analysis and discussion of the results: The working group will analyze the results, discuss the findings and offer possible interpretations and reasons behind the findings.

Reporting and dissemination

A paper will be prepared with the results of the OPW pilot study and submitted for publication in a peer reviewed journal with interest in issues related to public health, global health and access to medicines. In a future step, data will be uploaded and displayed in a flash map located in the IAHPHPC server. A dynamic application hosted in the IAHPHPC website will allow fast and simple on-line access to OPW information. Survey results will be geographical displayed with combination of visual and text information with an interactive, database-driven flash map that includes all continents and countries.

Access to the map and the information will be universally accessible to all.

1. Geolocation in a flash map the cities where the participating pharmacies are located.
2. Information retrieved from the database – when clicking on a city the application zooms in to show the following data regarding a 30 day treatment with a DDD of oral immediate release morphine.

- a. Its price in USD
- b. The comparison of its price with the international price
- c. Its affordability

Further clicking will zoom in to show the following additional data.

- a. The date the information was collected
- b. The name of the city
- c. The availability of the selected strong opioids on day the data is collected
- d. The unit prices of each available strong opioids, and
- e. The price in USD of a 30 day treatment with each of the available strong opioids.
- f. The year of the MSH drug price indicator guide

The information will be displayed according to WHO regions.

Future surveys, showing the changes in prices may be implemented; the system will display a template to show the changes – if any - in prices, affordability and comparison with the international prices.

Project limitations

Although OPW follows a methodology similar to the one used by HAI/WHO, the later does not include controlled medications. Opioids are internationally controlled, thus availability as well pricing is impacted by additional factors, such as mark-ups resulting from safety and security measures required by the national laws on the manufacturing, importation, distribution, storage and dispensation. This survey will be unable to determine the extent of the impact of these measures on the dispensed price of the medication.

This study will be based on the data collected from external collaborators, and it will not be possible to determine how well they will follow the instructions.

This study will be a one-day cross-sectional survey. Out of stock occurs frequent, especially in LIC and MLIC, strong opioids the results on availability might differ in a longitudinal survey. However, the results may be able to reflect the situation that patients in need of opioids may face in any given day.

The study will be based on a sample of data of a local pharmacy in the selected countries which is not representative of the whole country.

OPW will indicate differences in opioid prices among different locations. With the exception of morphine IR tablet, it does not take into account the differences in purchasing power among countries.

Annex 1 - Definitions

Accessibility refers to the extent that patients can obtain the opioid medications they need for pain relief - patient access is not possible unless opioids are available and affordable.

Affordability: total number of days' wages required to purchase a 30-day treatment of medications by the lowest paid unskilled government worker.

Availability: refers to the existence of the opioid medication in stock at the pharmacy, to be dispensed to patients arriving at the pharmacy with a legitimate medical prescription on the day the survey is completed.

Buyer price: government international competitive bidding, or tender price obtained by the organizations listed, and usually include insurance and transportation charges.

Defined Daily Dose (DDD): The DDD is the average maintenance dose per day for a drug used for its main indication in adults established by the WHO Collaborating Centre for Drug Statistics Methodology²¹. The DDD is a quantity measure for statistical purposes only and not to be used as treatment guideline.

Dispensed price includes the dispensing pharmacy selling price plus any fees and any sales taxes, if applicable.

International buyer reference price: reference prices will be taken from the Management Sciences for Health (MSH) international drug price indicator guide²⁴ - if the MSH Median Buyer Price is not available, the MSH reported buyer price will be used. If not available, the Median Supplier Price or the only MSH Supplier price will be used.

Percentage of buyer price: difference between the reported dispensed price and the international buyer reference price.

Unit price: refers to the price per individual tablet, capsule or patch.

Annex 2 - OPW Prices collection form – sample

This form is to be used for your guidance only – to submit the prices, use the online form available in <http://hospicecare.com/opioids/reports/add>

The overall objective of this study is to improve access to strong opioids for legitimate medical use, through dissemination of information on their availability, prices, and affordability.

Note: This survey applies **only** to prices of opioids for use **outside of the hospital** (not for in-patients).

Instructions - Please complete the steps described below.

Gathering the information:

- If **NONE** of the opioids included in this study are available at any time in your country, select this option and submit your survey. Otherwise, please continue.
- Select a public health facility which provides diagnostic and treatment services for patients with life-threatening conditions such as HIV and cancer.
- Select the closest private pharmacy to this facility and ask to speak to the Chief Pharmacist or the person in charge.
- Show him/her the letter introducing you as a participant in this study.
- Inquire if at least one of the opioids included in the study are available. If opioids are not available or the pharmacist is unwilling to cooperate, go to the next nearest pharmacy. Continue this process until you locate one which has at least one opioid available.
- In your selection you may include licensed retail pharmacies or hospital pharmacies allowed to dispense opioids to ambulatory patients. Exclude unlicensed drug stores and drug sellers in the informal sector.

When you locate a pharmacy that has available at least one of the opioids included in the study, complete this form and submit the information:

- State in your local currency the lowest retail dispense price of the smallest selling dose and unit for the opioid formulations available on the day you complete this form.
- Some examples to guide you:
- For dry formulations: if in your country fentanyl patches are available in doses of 25, 50 and 75 mcg/h and the smallest selling unit the patient can buy is a box of 5 patches, then report on the price of the 25mcg/h patch, box of five. In the data collection form under the column Smallest selling dose write 25 mcg/h in the first box and 5 patches in the second box.
- For another dry formulation: If the smallest dosage unit of methadone in your country is 10mg in a bottle of 10 tablets/capsules, place 10mg in the first box and 30 in the second box.
- For liquid formulations: if in your country morphine is available in oral liquid in 10mg/5mL and the smallest unit the patient can buy is a bottle of 20mL, then report the price of the whole bottle. In the data collection form under the column Smallest selling dose, place 10/5 in the first box and 20 in the second box. If morphine is available in 10m/mL in a 10 mL bottle, place 10/1 in the first box and 10 in the second box.
- Record if the available opioids are free for the patient
- Record the opioids included in the study that are not available (NA).

For the purpose of the study:

- The dispensed price includes the pharmacy selling price plus any dispensing fees and any sales taxes, if applicable to patients. Available refers to availability for purchase by patients arriving at the pharmacy with a medical prescription at the moment the survey is completed.

The online form requires you to complete your name, last name, city and country of residence and your email address.

The additional questions in the survey are the following:

- If NONE the opioids listed in this study are available at ANY TIME in your country, please check this box
- If opioids are available in your country ONLY in hospital pharmacies (and not in street pharmacies) check this box

Number of pharmacies you visited before finding one which has at least one opioid in stock (if available in your country): *

Note: All the identification and contact information will be confidential. The purpose of asking for this information is to prevent potential duplication from the same sources. The pharmacy address will be used to calculate access based on population.

Opioid	Not available in the pharmacy on the day of the survey	Free (at no cost for the patient)	If patient has to pay, write in numbers the amount he/she is required to pay (in your local currency)	Smallest selling dose <small>(total units for dry formulations or total volume for liquid formulations)</small>
Fentanyl (transdermal patches)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input style="width: 50px; height: 20px;" type="text"/> <input style="width: 50px; height: 20px;" type="text"/>
Hydromorphone ampoule, injectable	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input style="width: 50px; height: 20px;" type="text"/> <input style="width: 50px; height: 20px;" type="text"/> <input style="width: 50px; height: 20px;" type="text"/>
Hydromorphone oral liquid	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input style="width: 50px; height: 20px;" type="text"/> <input style="width: 50px; height: 20px;" type="text"/> <input style="width: 50px; height: 20px;" type="text"/>
Hydromorphone oral solid immediate release	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input style="width: 50px; height: 20px;" type="text"/> <input style="width: 50px; height: 20px;" type="text"/>
Hydromorphone oral solid, prolonged release	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input style="width: 50px; height: 20px;" type="text"/> <input style="width: 50px; height: 20px;" type="text"/>
Methadone oral liquid	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input style="width: 50px; height: 20px;" type="text"/> <input style="width: 50px; height: 20px;" type="text"/> <input style="width: 50px; height: 20px;" type="text"/>
Methadone oral solid	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input style="width: 50px; height: 20px;" type="text"/> <input style="width: 50px; height: 20px;" type="text"/>
Morphine ampoule, injectable	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input style="width: 50px; height: 20px;" type="text"/> <input style="width: 50px; height: 20px;" type="text"/> <input style="width: 50px; height: 20px;" type="text"/>

Morphine oral liquid	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Morphine oral solid, immediate release	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>	<input type="text"/>	
Morphine oral solid, prolonged release	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>	<input type="text"/>	
Oxycodone oral solid, immediate release	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>	<input type="text"/>	
Oxycodone oral solid, sustained release	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>	<input type="text"/>	

Pharmacy address: *

Select the appropriate category (select one): *

Licensed retail pharmacy___

Licensed hospital pharmacy___

Comments: Provide any comments you think may be helpful (max 150 words)

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