INTRODUCTION
In 2022, the World Health Assembly set a target of 100% of people with type 1 diabetes having access to affordable insulin and blood glucose self-monitoring. Human insulin (regular and NPH) has been on the World Health Organization (WHO) List of Essential Medicines (EML) for decades. Glargine, a long-acting analogue insulin, was included in the EML in 2021. Previous studies have consistently shown analogue insulins are high priced, and unaffordable for those on low wages.¹,² So, between 10 March and 20 April 2023, the Addressing the Challenges and Constraint of Insulin Sources and Supply (ACCISS) Study took a global snapshot of the prices people currently pay for glargine insulin and its affordability.

DATA COLLECTION
Individuals from 47 countries collected the full price for all glargine products found in their closest private pharmacy and/or public sector pharmacy (or indicated they were free-of-charge to all).³ While these prices should not be considered representative of the country (as inter-country price variation often exists), they provide a point-in-time depiction of what people pay.

Strengths (100IU/ml and 300IU/ml), presentations (vials, pre-filled pens and cartridges), pack sizes and brands varied. Hence prices were standardised to 1000IU in US dollars ($US) with the median price calculated where multiple prices were reported for a country.⁴

Of the glargine products in the analysis, 69% were pre-filled pens, 18% were cartridges and 13% were vials. A total of 22 brands of glargine were found, although some were made by the same manufacturer but marketed using different trade names. Biosimilars from 13 manufacturers were found.

PRICE VARIATIONS
Glargine was provided free-of-charge in 14 of the 22 countries where public sector data was available (64%: eight high-income, four upper-middle, one lower-middle and one low-income

² Insulin Prices Profile, 2016, ACCISS Study. https://haiweb.org/what-we-do/acciss-reports/
³ The full retail price does not take into account any reimbursements, co-payments or subsidies
⁴ Using the exchange rate on Oanda for 24 March 2023
country). Full prices in the public sector were reported in eight countries. They ranged from $US 12.49 (Indonesia) to $US 45.23 (Canada). Median prices increased as the country income level increased, i.e., $US 23.53, $US 30.34 and $US 45.23 in lower-middle, upper-middle and high-income countries, respectively. See Figures 1 and 3.

Full prices in private pharmacies were collected in 42 countries. They varied from $US 9.10 (Afghanistan) to $US 172 (USA). Median prices were highest in lower-middle income countries ($US 42.30) and similar in the other three levels ($US 32.07-37.35). Wide price variations were seen within each level, particularly in high-income countries, i.e., $US 17 (Australia) to $US 172 (USA). In some countries people pay less than the full retail price due to reimbursements/co-pays/subsidies.

The originator brand Lantus® (Sanofi), and a biosimilar Abasaglar®/Basaglar® (Eli Lilly), were the most common brands found. Across the 15 countries where both were found in the private sector, the median price of Abasaglar/Basaglar ranged from 35% below that of Lantus to 26% higher for pre-filled pens in 3ml x 5 packs. There were insufficient prices in the public sector to make this comparison.

**Figure 1.** Median and range of patient prices, glargine 1000IU in $US, by World Bank Country Income Level
AFFORDABILITY
Glargine affordability was assessed as the number of days’ wages needed by the lowest paid government worker (or a person earning the minimum wage) to purchase 1000IU (approximately 1 month’s supply). In private pharmacies, glargine was less affordable in lower-resourced nations. While almost 10 days’ wages would be needed each month to purchase glargine in lower-middle income countries, less than one days’ wages would be needed in high-income countries (Figure 2). The poorest affordability was in Cameroon, Nigeria and Myanmar requiring 26.7, 20.2 and 20.0 days’ wages respectively, to purchase one month’s supply. There was limited data for the public sector. However, examples from Vietnam (4.7 days’ wages) and Russia (2.5 days’ wages) show, where people have to pay, glargine can be unaffordable even in this sector.

CONCLUSION
This snapshot survey demonstrates glargine prices are highly variable across countries. High prices are a burden when people must pay out-of-pocket. As this snapshot shows, glargine affordability is a serious issue, especially for people on a low wage living in lower-resourced countries. As part of Universal Health Coverage (UHC), and to achieve WHO’s target, governments must ensure glargine and other insulins are both available and affordable to all people who need them. UHC must also include insulin delivery devices, blood glucose self-monitoring devices, and care. Availability, prices and affordability of insulin and the associated devices need to be regularly monitored, with the findings made transparent to help people in accessing treatment.

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Figure 2. Affordability and range of glargine 1000IU, private sector, by World Bank Country Income Level

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5 Little price data was available for the public sector and not all countries provided the salary level.
Figure 3. Median patient price glargine 1000IU in $US, by country and sector

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