



Method Paper

The Consumer Health Sustainability Challenge for Everyday Health Care

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Introduction

An aging population, a growing number of lifestyle-related diseases as well as rising costs of medications and health insurance are limiting the access to health care for more and more people and leaving behind the world's underserved communities. According to the World Health Organization (WHOⁱ), at least half of the world's population is currently unable to access basic medical services, including self-care products.

As part of the commitment to Sustainability, Bayer will support self-care initiatives by increasing access to our trusted brands and offering further support through partnerships. To improve health for people, families and communities, the Sustainability challenge for Everyday Health Care for Bayer's division Consumer Health is defined by the following target: Bayer aims to reach 100 million people in underserved communities to support their self-care by 2030. Our progress is presented with a Key Performance Indicator (KPI), measuring the **number of people in underserved communities whose self-care is supported by interventions from Bayer**. Since the KPI is defined specifically for Bayer's Consumer Health business, we cannot rely on standardized measuring methods. We defined a proprietary methodology based on available and reliable data and conservative assumptions.

This document aims to provide a general description of the applied methodology to calculate the respective KPI, as well as the different data sources used.

Definitions

In the following table, important terms are defined.

Key terms	Definition
Underserved communities	<p>All people who are either economically or/and medically underserved.</p> <ul style="list-style-type: none"> Economically underserved people are defined as people living under the poverty line of \$10/day, based on World Bank'sⁱⁱ and Pew's dataⁱⁱⁱ. Medically underserved people are defined as people who have limited access to health care services. Here, people in high-income countries with no national health care coverage and an income below a national poverty line based on country specific census data are considered to be medically underserved.
Self-care	The ability of individuals, families and communities to promote health, prevent disease, maintain health, and to cope with illness and disability with or without the support of a healthcare provider. ^{iv}
Supported by interventions from Bayer	Interventions which increase access to self-care of underserved communities, which can be self-care products, services and partnerships.

Methodology

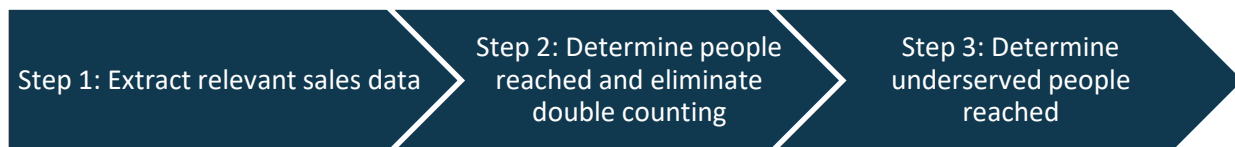
For this challenge, all Consumer Health business units and countries have been taken into scope.

The interventions from Bayer to increase access to self-care can be categorized into two channels:

- Commercial channels, which provide people in underserved communities with Bayer self-care products or services;
- Partnerships, which support people in underserved communities through direct partnerships, third-party partnerships or campaigns.

It is assumed that people in underserved communities with an income of \$2-10/day are reached by Bayer self-care products or services from commercial channels while people with an income of \$0-2/day are primarily served by providing products and services through partnerships. In the KPI derivation performed in 2019 and 2020, Bayer determined the reach based on data from commercial channels only. When respective partnerships are established in the future, in which Bayer has a major role by providing funds or product donations, their contribution to the target will be counted via the partnership channels.

In the commercial channels the process is divided into three steps to calculate the number of people in underserved communities whose self-care is supported by interventions from Bayer.



Step 1: Extract relevant sales data

Purpose	To determine the number of sold self-care products relevant for underserved communities.
Assumption	Underserved people buy smaller package sizes of products and specific brands.
Process	Sales volumes of self-care products in all countries are extracted from the SAP system. Brands, which are considered to be suitable for underserved communities, are identified and the data is filtered based on the respective brands. Filters for smaller package sizes are applied as well.
Output	Number of sold self-care products relevant for underserved communities by brand and country.

Step 2: Determine people reached and eliminate double counting

Purpose	To calculate the number of people reached based on the number of self-care products sold, taking the elimination of overlapping effects from multiple purchases by the same consumer into account.
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Assumption	Since we lack completeness of market data outside of the US, we apply the buying rates and overlap factors for this step based on US data to all countries in scope. Given that the US buying rates and overlapping factors are above world average, this model is a rather conservative estimation.
Process	The number of self-care products sold obtained in step 1 is divided by a buying rate and an overlapping factor to eliminate the double counting of consumers buying more than one unit of the same product as well as consumers buying products from more than one Bayer brand. Both parameters are derived from externally available US market data from the IRI US HH Panel (see below in the section Data Sources).
Output	Unique consumers reached by number of sold self-care products relevant for underserved communities by brand and country.

Step 3: Determine underserved people reached

Purpose	Determine the number of underserved people reached.
Assumption	Low-income penetration factor: We assume that people with lower income have a lower buying rate of Bayer products than people with high income.
Process	From Pew and CENSUS data, the share of underserved people in the total population of all countries is extracted. The shares are multiplied with the number of unique consumers reached in all countries resulting from step 2. Furthermore, taking the above-mentioned assumption into account, the number of consumers reached should be corrected for a lower Bayer product purchasing rate for the people in underserved communities. Therefore, a low-income penetration factor based on IRI data is applied.
Output	Number of consumers reached in underserved communities.

Data Sources

The following sources are used in our KPI derivation process.

Source	Description
Global Residence	The data are provided from Stephanet Consulting, a provider of data and research in the field of Business Immigration. The data source is used for determination countries with universal health care system.
Pew Research	The Pew Research Center is an American think tank. It provides the portion of economically underserved population in all key markets. The data is applied in the low-income filter in step 3.
SAP	SAP is the Enterprise Resource Process System used by Bayer. The data are extracted for sales volumes by brands and countries in step 1.
US Census	CENSUS data from the US. It provides the income rates to identify medically underserved population in high income countries in step 3.

US Data: IRI US HH Panel	IRI is a data analytics and market research company in the US. The data are not available to public. They are used in step 2 and step 3 to determine: <ul style="list-style-type: none"> - Buying Rate for normalizing in case of multiple purchases - Overlap correction factor for normalization for a single consumer purchasing multiple Bayer brands per year - Buying Rate for normalization of actual penetration for low income consumers
World Bank	A list of low-middle-income and high-income countries as per 1 July 2019 is obtained from this international financial institution, which is applied in the low-income filter in step 3.

Outlook

As described, the KPI calculated in 2019 and 2020 was based on the commercial channels only. From now on, we will add effects from new strategic initiatives to the existing commercial reach and incorporate input from partnerships. This paper will be updated accordingly.

ⁱ <https://www.who.int/news/item/13-12-2017-world-bank-and-who-half-the-world-lacks-access-to-essential-health-services-100-million-still-pushed-into-extreme-poverty-because-of-health-expenses>

ⁱⁱ <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups>

ⁱⁱⁱ https://assets.pewresearch.org/wp-content/uploads/sites/2/2015/08/Appendix-Tables_Global-Middle-Class_Aug-11-2015.pdf

^{iv} <https://www.who.int/news-room/fact-sheets/detail/self-care-health-interventions#:~:text=What%20is%20self%2Dcare%3F,support%20of%20a%20health%20worker.>