Evaluation of the Impact
Of WHO Publications

Corporate evaluation commissioned

by the WHO Evaluation Office

**World Health
Organization**

Report by TDV Global inc.

Evaluation Team: Michael Ennis, Brian McKay, Mylan Ly, Elizabeth Dyke, Raywat Deonandan

170 Laurier Ave West, Suite 605
Ottawa, Ontario
K1P 5V5
Canada

Tel: 613-231-8555
www.tdvglobal.com

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Acronyms and Abbreviations

CO	WHO Country Office
EB	Executive Board
GPW	General Programme of Work
GRC	Guideline Review Committee
GRADE	Grading of Recommendations, Assessment, Development and Evaluations
KT	Knowledge Translation
HQ	WHO Headquarters
M&E	Monitoring and Evaluation
PPCG	Publishing Policy Coordination Group
RO	WHO Regional Office
WHA	World Health Assembly
WHO	World Health Organization
WER	Weekly Epidemiological Record
GPW	General Programme of Work
JIU	United Nations Joint Inspection Unit
IRIS	Institutional Repository for Information Sharing

Executive Summary

One of the constitutional responsibilities of the World Health Organization (WHO) is to provide objective and reliable information and advice in the field of human health.[1] WHO fulfils this role in part through its information products, "the materials that are issued or made accessible to the public, or to a defined target group of the public, by the Organization for the purpose of communicating health knowledge and guidance"[2].

The WHO approach to managing publications has changed in recent years, starting with a significant decentralization of the publication function occurring in 2000-2001. Since that time, WHO has developed a series of mechanisms to strengthen the quality of its information products (whether in print or electronic), notably in 2008 with the development of its publications policy.[3] The policy is designed to ensure that all WHO's information products comply with agreed standards of quality in terms of technical content, relevance and presentation; cost-effectiveness; and accessibility.

The overall purpose of this evaluation was to assess the impact of WHO publications by considering the reach, usefulness, and use of a sample of WHO information products as estimates for their impact. Through this assessment, the evaluation reflects and draws evidence to formulate recommendations aimed at improving the impact of WHO publications.

The evaluation addressed the following high level questions:
1. To what extent do WHO publications reach their intended audiences and what are their major gaps in reach and why did the latter arise?

2. What is the perceived usefulness of WHO publications (by information product type)?

3. To what extent are WHO publications used as references and as authoritative sources of information for decision-making in clinical, public health, and policy-making contexts?

4. What is the extent of implementation of WHO's publications policy and its influence in the impact of WHO publications?

The evaluation itself was conducted between December 2015 and September 2016 and used multiple lines of evidence including interviews, document review, case studies, surveys and bibliometrics. The scope of the evaluation covered 10 years and approximately 15,000 publications. Given this broad scope, only a general assessment is possible and it is likely that exceptions to the findings will be found in some WHO programmes.

Conclusions
WHO produces a number of high quality, high impact publications. There is no doubt that WHO is a credible organization and that health professionals throughout the world look to it for science-based guidance and advice. However, opportunities for improvement do exist. WHO must strive to

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[1] Constitution of the World Health Organization. http://apps.who.int/gb/bd/PDF/bd47/EN/constitution-en.pdf?ua=1&ua=1

[2] WHO eManual. VIII Information Products. http://emanual.who.int/p08/s01/Pages/default.aspx EXECUTIVE BOARD EB123/7 123rd Session. Provisional agenda item 6.2

[3] WHO publications policy. EXECUTIVE BOARD EB122/20

maximize the reach and impact it can have with the significant investment it is making in publications.

There were overarching comments received throughout the evaluation that WHO publishes too much and needs to prioritize its publications. That may be true, but the number of programmes in WHO is likely to grow and with it the need to publish. The global public health landscape is growing, not shrinking. What is clear however, is that resources will remain scarce and in order to maximize impact, resource allocation decisions will need to be more effectively made.

The following conclusions are presented by reach, use, usefulness and publications policy. In regards to **reach**, it was clear from the evaluation that there are mixed results in terms of the extent WHO publications reach their intended targeted audiences. There is a lack of basic monitoring information regarding the dissemination of WHO publications. There is evidence of out-dated and incomplete distribution lists when they do exist, and when quantitative information on reach does exist, it is limited in both time and scope. After consideration of all lines of evidence and findings, the general conclusion is that WHO publication are not fully reaching their intended audience, and during planning, all segments of the audience are not fully identified. Other important conclusions in regards to reach are:

- **Dissemination**: There is room for improvement in information dissemination. Before publications are initiated, there needs to be a more upfront planning on the purpose of the product, target audience(s), matching of formats and delivery methods to target audience(s), language and translation considerations and monitoring of the reach;

- **Targeting**: WHO generally targets national programme managers in Ministries of Health with technical information. The subsequent need for that knowledge to be adapted for the needs of other levels (e.g., policy makers, front-line practitioners, etc.) is less consistently addressed. This is reflective of the ongoing dynamic between WHO's "traditional" role as a technical, science-based, normative international organization, and the extensive needs of its members, including support at the implementation and operational levels. The result is that WHO products are often described as "too long, too technical" and need to be tailored to different audiences, for example, summaries of technical documents that are written in a more accessible, user-friendly format with a less technical language so they are more concise and clear.

- **Language**: Language is a barrier to reach, although the extent to which it is a barrier is difficult to determine. It would appear that for technical publications language is less of a barrier, but language is more of a barrier for publications that are aimed at policy-makers or operational/front-line workers. That may be because many technical professionals are comfortable in the English language, whereas front-line workers are more likely to require local languages. It should be noted that even the six official UN languages cover only half of the world's population, so while it is a good objective to have, it still falls very short of universal coverage.

Regarding **usefulness**, in general, WHO publications are perceived as being very useful. WHO is, however, facing an increasingly complex global health agenda which implies more needs, more stakeholders and more actors, without necessarily more resources. The frequent comments regarding WHO publications being either too long or too technical is an indication that there are important audiences whose needs are not being addressed by technical documents alone, and that

derivative products for other target audiences should be planned upfront and produced. There are examples of planning occurring, but it does not appear to be a systematic, programmatic approach and is not necessarily part of the upfront publication planning process. The articulation of how publications are intended to support the achievement of organizational and programme objectives has to be more explicit.

Regarding **use**, there is evidence that some WHO publications are used by countries as authoritative sources for decision making and policy making. That is especially true of guidance documents, and authoritative publications such as WER. In general, there is room for improvement to maximize the return on investment of publications. Better publication planning around target audiences and dissemination, more active dissemination and communication, and translation were some of the common themes that were identified as a means to improve the use and maximize the impact of WHO publications.

Regarding WHO **publications policy,** there have been significant developments in the WHO publications policy and procedure framework over the ten years of the evaluation period. Some milestone achievements include establishment of the Publishing Policy Coordination Group (PPCG), the Guidelines Review Committee (GRC), and the WHO handbook for guidelines development, and most recently the guidelines on open access. One gap identified by interviewees is the need for a publication strategy that defines the role of publications in achieving organizational and programmatic goals, sets priorities, monitors compliance, and be set in a knowledge translation framework. Also, quality assurance has been found to be inconsistent.

Recommendations

The broader context in which the recommendations are placed is that resources are scarce and in order to maximize impact, resource allocation decisions will need to be made so that priority products can be adequately translated and derivative products produced as needed to meet different target audiences within a programmatic area. Those decisions should be based on a rigorous planning process conducted with the context of a publication strategy that integrates a knowledge translation framework and takes into account organizational goals and priorities as well as specific programmatic objectives.

The following table presents each recommendation along with recommended specific actions.

Strategic Recommendation 1	Specific Actions
WHO should develop a **publication strategy** within a broader knowledge translation framework that provides the model for programmes to properly and rigorously plan, develop, disseminate and monitor their publications.	i. Establish an organizational **publications strategy within one year**. The strategy should incorporate a knowledge translation framework and encompass all types of programme publications, including external publications, and support publication priority setting and lay the framework for rolling out strategies at regional offices, clusters and departments. The strategy should be led by the highest levels of the organization. ii. Promote broader knowledge translation framework to all WHO staff through training, awareness raising and communications.

iii. WHO programmes should determine their **role in providing publications in support of policy making and programme implementation**. This would help to achieve clarity on how best to impact health outcomes by including guidance, on policy and implementation matters.

iv. Clarify the WHO publications policy, as established by EB 122/20, 123/and EB 129/4, by providing and promoting a coherent policy document and renewed guidance on its implementation and evaluation for the next five years.

v. Promote **current WHO procedures for publications**, as articulated in Chapter 8 of the WHO e-Manual, to ensure consistent, high quality WHO publications across organization.

Strategic Recommendation 2	Specific Actions
WHO Programmes should clearly identify **information needs and the target audiences** for their publications.	i. Formalize a **needs assessment process**, to be undertaken at the programme level, which ensures alignment of WHO publication approaches with target audience needs.
	ii. Promote an intra-WHO discussion aiming to establish **criteria to identify target audiences** for WHO publications. Consider defining a common approach to documenting the needs assessment and targeting process, within knowledge translation framework.
	iii. Systematically identify and prioritize target audiences and needs, and plan to address those needs by **tailoring publications** (e.g., more use of derivative products, producing shorter, less technical versions of lengthy technical documents to increase usefulness, produce in multiple languages, etc.) to target groups (such as policy makers and front-line practitioners, especially those in developing countries) to ensure relevance and usefulness and thereby maximizing the results from investment.

Strategic Recommendation 3	Specific Actions
WHO should develop a more proactive dissemination strategy.	i. Create an **active dissemination strategy** to promote the "pull" dissemination of publications, as well as the "push" or active dissemination for different types of documents. This would include dissemination planning, delivery channels, targeting and matching formats, language and delivery to targets. In countries/regions with unreliable or restricted internet access, consider appropriate dissemination approaches, which should include hard copy distribution.
	ii. Revise dissemination mechanisms (e.g., country office involvement, publications promotion, etc.) to **promote and support policy making and programme implementation.**
	iii. Keep an accurate, valid **community of publication users**

(e.g., mailing lists, etc.).

iv. Enhance WHO **foundational information management tools** to a standard befitting a knowledge-based organization by reviewing the functionality of:

- **The Institutional Repository for Information Sharing (IRIS)** to ensure it is accurate and up-to-date, and therefore more useful. Potential approaches include: reviewing functionality, procedures and quality assurance of IRIS; developing clear definitions, inclusion and exclusion criteria, procedures, quality assurance mechanisms and review processes for IRIS; and promoting awareness of IRIS capability.

- **Current WHO website** to increase searchability and website usability (e.g., ease of use of website, the placement of important information in appropriate areas). Potential approaches include: providing links between more popular publications (i.e., guidelines and flagship products) and other less-viewed documents and adding mechanisms to enhance website searchability (e.g., effective WHO search engines, improved online publications directory and metadata, etc.).

Strategic Recommendation 4	Specific Actions
WHO should better integrate quality assurance throughout the entire publication process, from initial planning to finalization.	i. **Review quality assurance compliance systems** and determine gaps in quality assurance function across programme areas and major offices. Identify common procedures and systems for monitoring. Reconsider role of Publishing Policy Coordination Group (PPCG), and/or clarify commitment and accountability of senior and executive management to quality assurance, at both HQ and Regional Offices.

ii. Encourage leadership and senior management to commit to **enforce compliance** with publication policies.

iii. Introduce/maintain **publication policies training** for relevant employees in HQ and ROs. Encourage attendance from Director Level (management) staff. Assess link between training and compliance.

iv. Review publications systems and procedures to identify **barriers and constraints to compliance**. Increase flexibility of e-Pub to suit varying needs of areas, while maintaining quality assurance and publications standards. Eliminate system duplications (i.e., use of paper-based and electronic systems at the same time).

v. To support quality assurance throughout the entire publication process, assess the need and function for

publication process quality assurance authorities and **resource those positions** as required.

Strategic Recommendation 5	Specific Actions
WHO should develop and implement an M&E framework to provide **monitoring information** on the reach, uptake and impact of WHO publications.	i. Establish a **monitoring system** to track dissemination, uptake and reach of WHO publications. Create a monitoring approach to track readership, possibly using web analytics. Consider end-of-publication surveys on webpages to track use and usefulness ii. Integrate the assessment of the impact of WHO publications as a cross-cutting component into future WHO **programme evaluations.**

Strategic Recommendation 6	Specific Actions
Programme publication strategies should include **translation plans** that are based on programme information needs assessments	i. Define translation needs and plan **translation strategies** in advance of publication production, irrespective of apparent resource constraints at that stage. Resource requirements should be contemplated by programmes as part of their programme strategies and as part of their information needs assessment. ii. **Promote translation in local languages**, including through partnering with local NGOs, academic institutions, government agencies, etc.

1. Background to the Evaluation

1.1 Context

One of the constitutional responsibilities of the World Health Organization (WHO) is to provide objective and reliable information and advice in the field of human health.[4] WHO fulfils this role, in part, through its information products, "the materials that are issued or made accessible to the public, or to a defined target group of the public, by the Organization for the purpose of communicating health knowledge and guidance"[5].

The WHO approach to managing publications has changed in recent years, starting with a significant decentralization of the publication function occurring in 2000-2001. Since that time, WHO has developed a series of mechanisms to strengthen the quality of its information products (whether in print or electronic), notably in 2008 with the development of its publications policy.[6] The policy is designed to ensure that all WHO's information products comply with agreed standards of quality in terms of technical content, relevance and presentation; cost-effectiveness; and accessibility. The Publishing Policy Coordination Group (PPCG) was further established to oversee the implementation of such policy. A series of subsequent policies and standards have been further developed, including the Guideline Review Committee (GRC), the WHO Handbook for Guideline Development, the clearances policies supported by the e-Pub system, the Open Access policy, the policy on Multilingualism, the WHO Copyright policy, the policy on attribution of authorship and acknowledgements and the policy for the use of WHO logo and the logos of other organizations.

During the period under review for this evaluation, 2005 to 2014, WHO produced approximately 1,000 publications a year; 75% of those were produced by WHO Headquarters (WHO HQ) and the rest by WHO Regional Offices (WHO ROs), including country offices (COs). WHO also distributed about 1.5 million print copies per year, mostly free of charge. However, there has been no evaluation conducted of the relevance, quality, and impact of these publications.

Various bodies have expressed a need for strengthening the publication function at WHO. A 2013 external review of WHO guidelines noted that improvements in guideline development methods, following the establishment of the GRC, were not even across the organization, while neither the GRC nor other quality standards were fully embedded across WHO.[7] The 2012 United Nations Joint Inspection Unit (JIU) review of Management, Administration and Decentralisation in WHO highlighted the need for improving the cost-effectiveness of the publication production processes, and recommended an external evaluation of the preparation of publications.[8] The WHO Reform Stage 2 evaluation in 2014 also reinforced this recommendation. Finally, the Executive Board (EB), at

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[4]   Constitution of the World Health Organization. http://apps.who.int/gb/bd/PDF/bd47/EN/constitution-en.pdf?ua=1&ua=1
[5]   WHO eManual. VIII Information Products. http://emanual.who.int/p08/s01/Pages/default.aspx EXECUTIVE BOARD EB123/7 123rd Session. Provisional agenda item 6.2
[6]   WHO publications policy: guidance on implementation and evaluation. EXECUTIVE BOARD EB123/7 123rd Session 14 April. Provisional agenda item 6.2
[7]   Sinclair D, ISba R, Kredo T, Zani B, Smith H, Garner P. World Health Organization Guideline Development: An evaluation. PLOS One 2013; 8(5): e63715. Doi: 10.1371/journal.pone.00063715
[8]   JIU Review of Management, Administration and Decentralisation in WHO. JIU/REP/2012/6

its 135th meeting, approved the "*Evaluation of the Impact of Publications in WHO*" as a strategic priority for the 2014-2015 workplan of the Evaluation Office.

1.2   Evaluation Objectives and Scope

The overall purpose of this evaluation was to assess the impact of WHO publications by considering the reach, usefulness, and use of a sample of WHO information products as estimates for their impact. Through this assessment, the evaluation presents evidence to formulate recommendations aimed at improving the impact of WHO publications. Please see **Annex A** for the Terms of Reference.

The evaluation addressed the following high level questions[9]:

1. To what extent do WHO publications reach[10] their intended audiences and what are their major gaps in reach and why did the latter arise?

2. What is the perceived usefulness[11] of WHO publications (by information product type)?

3. To what extent are WHO publications used[12] as references and as authoritative sources of information for decision-making in clinical, public health, and policy-making contexts?

4. What is the extent of implementation of WHO's publications policy[13] and its influence in the impact of WHO publications?

The scope of this evaluation involved publications, either in print or electronic media, produced by WHO between 2005 and 2014. The evaluation included publications in the six WHO official languages. For the purpose of this evaluation, WHO information product categories were classified in the following categorization:

1. **Advocacy material**

2. **Technical Publications**
    a. World Health Reports /Global Reports
    b. Technical Information Products (programme/thematic based and country based)
    c. Training Materials/Manuals

3. **Guidelines**

4. **WHO-HQ and Region-based journals** (including Weekly Epidemiological Record and WHO Bulletin)

5. **External publications**
    a. Articles in peer-reviewed journals

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[9]   Definitions for reach, usefulness and use are taken from Tara Sullivan, Molly Strachan and Barbara Timmons, 2007. *Guide to Monitoring and Evaluating Health Information Products and Services*, USAID, 2007.

[10] **Reach**: The breadth and saturation of product dissemination. It describes the extent to which information is distributed and redistributed to different target audiences, and is referred to by organizations and individual users.

[11] **Usefulness**: The perceived quality of information products and services in terms of being appropriate, applicable, and practical. Usefulness may include such aspects as user satisfaction, quality, innovation, and relevance.

[12] **Use**: The application of knowledge gained from an information product. It is the way in which information products are absorbed and applied to institute or implement changes.

[13] **Implementation of Publications Policy**: The extent of implementation of the WHO publications policy based on the application of its strategies, such as (i) the mechanisms for clearance and approval; (ii) the categorization of products; (iii) the cost-effectiveness mechanisms in the production and dissemination, (iv) the support for publishing; (v) the Open Access Policy; (vi) the policy on Multilingualism; (vii) the WHO Copyright policy, (viii) the Authorship policy and (xix) the policy for the use of WHO and other logos.

       b.   Articles in non-peer reviewed journals

       c.   Book chapters and books, including textbooks

The evaluation did not include communication materials, such as notes for the media, press releases, official WHO statements, and general text included in the body of the WHO website; nor did it include Governing Bodies documentation.

1.3   Theory of Change

The theory of change for the evaluation of the impact of WHO publications, which forms the basis of the evaluation, is presented in the Logic Model found in **Annex B**[14]. The full evaluation matrix is found in **Annex C**.

The inputs into the publication process include both institutional resources and human resources. Institutional resources include strategic direction, policies, procedures, financial resources and technology. Human resources include technical experts and researchers, WHO Press, WHO Library, the PPCG and the GRC. The activities relate to the various stages of the publication process and include needs identification, planning, content development, quality assurance and clearance, translation, dissemination, and monitoring and evaluation.

The outputs are WHO publications, categorized as advocacy material, technical publications, guidelines, WHO-HQ and region-based journals, and external publications. Publications are also referred to as information products.

The results of the publication process are defined in terms of its **reach**, **usefulness** and **use.** These measures are estimates for the impact of publications

The result for **reach** is *"target audiences have access to WHO publications*". The evaluation assesses the policies and procedures that are in place to develop dissemination strategies, distribution information (i.e., push, pull, and referrals), as well as factors such as language and distribution media.

There are two result statements for **usefulness**, one related to User Satisfaction and the other is related to Quality. In regards to User Satisfaction, the result statement is, "*the content and presentation of WHO publications addresses the needs of target audiences*". User satisfaction is assessed by the target audiences' satisfaction with:

- **Content of the publication**: it is relevant, it is addressing a need, it is addressing a priority;

- **Presentation**: it is formatted in the appropriate form including language; and

- **Delivery**: it is distributed in the appropriate form that makes it accessible.

The second result statement is related to Quality, and is, " *WHO publications perceived as authoritative, credible, reputable and trustworthy*". The evaluation collects data on a range of these

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[14]   The theory of change and Logic Model have been adapted from Tara Sullivan, Molly Strachan and Barbara Timmons, 2007. *Guide to Monitoring and Evaluating Health Information Products and Services*, USAID, 2007.

factors to assess the achievement of these results, including presentation and delivery of publications, content and quality.

The result statement for **use** is related to the application of knowledge gained from WHO publication in the areas of policy and standards, health programmes and practices, stakeholder awareness, research and training. From the use of WHO publications in these varied areas, the theory of change presumes that in the long-term, there will be improved health outcomes at the individual and community levels.

The following table provides an overview of the definitions and results:

Table 1: Theory of Change

Variable	Definition	Result Statement
Reach	The extent to which WHO publications reach their intended audiences.	Target audience have access to WHO publications.
Usefulness	The perceived quality of WHO publications in terms of being appropriate, relevant, applicable and practical.	The content and presentation of WHO publications address the needs of target audience. WHO publications perceived as authoritative, credible, reputable and trustworthy.
Use	The application of knowledge gained from WHO publications with regards to decision-making in clinical, public health and policy-making contexts.	Evidence-based WHO publications that: • Contribute to international collaboration on policy, norms and standards; • Contribute to the enhancement of national programmes and practices; • Increase stakeholder awareness of health issues; • Guide health research agendas and methods; and • Inform and update training and educational programmes

1.4   Approach

The evaluation approach incorporated multiple lines of evidence, as identified in the evaluation matrix found in Annex C, including:

i.   **Interviews**: a total of 115 interviews were conducted, of which 106 were unique[15] (64 WHO and 42 external interviews (Member State representatives, partners, donors). Interviews were conducted in English, French and Spanish. The majority of external interviews were conducted in support the Programme Case Studies. Please see **Annex D** for interviewee list.

ii.   **Document Review**: relevant documents such as publication policies and related studies were reviewed. See **Annex E** for list of documents reviewed.

iii.   **Internal Survey**: an online survey was targeted to WHO staff. All Assistants to the Director General, Department Directors and Directors of Programme Management were invited to distribute the survey among the relevant staff in their respective offices. 202 WHO staff responded to the survey. See **Annex F** for internal survey results.

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[15]   Some interviewees were interviewed twice. 106 individuals were interviewed.

iv. **External Survey**: an online survey was distributed to Member States representatives and other partners, there were 352 responses. The survey was administered in English, French Spanish and Russian. See **Annex G** for external survey results.

v. **Programme Case Studies**: five WHO programme case studies were selected: HIV, Road Safety, Immunization, Patient Safety and Ebola Response. See **Annex H** for a summary of the case studies.

vi. **Product Case Studies**: for each of the five programme case study areas, two publications were randomly selected for further assessment, for a total of 10 product case studies. Please see **Annex I** for a summary of the product case studies.

vii. **Bibliometrics**: a bibliometric analysis was conducted based on a population of approximately 15,000 publications and categorized as per the evaluation Terms of Reference (see section 1.2). The final sample consisted of 1502 publications from the five categories[16], of which 981 were randomly selected from the WHO's Institutional Repository for Information Sharing (IRIS) and 521 were forced into the sample to ensure coverage of programme and product case studies. All WHO guidelines and flagship publications[17], such as World Health Reports and World Health Statistics were included in the grouping of 521 publications. See **Annex J** for a summary of the bibliometric approach and results.

There were certain limitations in regards to the data collection along the multiple lines of evidence. The scope of the evaluation covered 10 years and approximately 15,000 publications. The number is approximate because WHO has not tracked all its publications during that period. The implementation of IRIS and the e-Pub[18] was in part to address this issue and ensure capture of all publications. Given the broad scope of the evaluation, only a general assessment is possible and it is likely that exceptions to the findings will be found in some WHO programmes. Cost-effectiveness was also not included in the scope of the evaluation.

In regards to interviews, there were 64 WHO officials interviewed and 42 external interviewees. Internal WHO interviews were not queried on the use of WHO publications in order to avoid any potential bias. They were asked questions on reach, usefulness and the WHO policy.

In regards to bibliometrics, some of the challenges in data collection and analysis have become findings of this evaluation and led to recommendations in terms of the WHO website and IRIS, for example, the IRIS data required considerable cleaning, and in many cases data fields were incomplete.[19] There were also no web analytics available from the WHO website. The number of views and downloads is data from IRIS only.   The following box highlights some of the important terminology and considerations employed in the bibliometric analysis:

Box 1: A Note on Bibliometrics:

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[16]   The Bulletin of the World Health Organization and the Weekly Epidemiological Record were included in the bibliometric analysis under the category of WHO HQ journal

[17]   Flagship products were a category and products identified by the evaluators for comparative purposes, and included a selection of World Health Reports and World Health Statistics Reports from 2005 to 2014, amongst others for a total of 19 publications. See Annex J for more details.

[18]   e-Pub is an electronic publication process management tool developed by WHO.

[19]   This is possibly due to the data exporting function. The information was provided to the evaluators in excel format.

Views and download data were extracted from WHO's IRIS system, peer-reviewed citations from Google Scholar[20], grey citations from Google[21], and social media presence from Twitter[22].

Social media analysis focused exclusively on Tweets[23], since they tend to be public and unprotected, as compared with Facebook mentions, which are often immeasurable due to privacy walls.

Impact factors employed were: view rate, download rate, tweet rate, rates of citation in the peer-reviewed academic literature, and rates citation in the grey (non-academic) literature, as well as combinations of the above and expressions of all of the above by year since publication, rather than by the total data collection period.

The term "altmetrics" refers to any non-traditional tool for measuring article impact beyond simple academic citation rates. Therefore, both grey literature citation rates (that we captured through Google) and social media presence (that we captured through Twitter searches) qualify as altmetrics. Our use of the term describes the general definition of altmetrics, and not the specific use employed by the company whose name is also Altmetrics.

"Open access" refers to an attribution of a publication or product that allows it to be accessed by a consumer without direct payment. In more formal applications, "open access" can describe various levels of permissible copyright violation[24]. Open access in the present report specifically refers to documents that a reader may access and cite without having to pay. It does not refer to any ability to modify or commercialize the content. Therefore, it is irrelevant to our analysis that the documents are copyrighted by WHO; it is only relevant that they are accessible free of charge. In our sample, almost all of the documents qualify as "open access" under this definition, in that they are accessible cost-free, except those papers offered by external journals, for which a paid subscription is required.

In regards to the surveys, the follow up on the surveys was hampered by limitations in the distribution lists and contact mechanisms, leading to a response rate of 8.5% for the external survey. In addition, there may be some selection bias in the external survey. Information from the external survey should be viewed as coming from individuals who i) had been successfully reached by the publication and therefore ii) were highly likely to be part of a targeted audience.

In regards to document review, there was very limited monitoring information on the impact of WHO publications. In a few cases there were studies done by specific programs on the uptake of

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[20] Google Scholar is considered a comprehensive scholastic search engine which would capture all electronic citations, perhaps erring toward overestimating impact. WHO Library actively engaged Google Scholar to include WHO publications

[21] Google as a measure of grey literature presence is ideal in that it allows for distinguishing between scholastic citation (via Google Scholar) and non-scholastic (via the main Google search function), with the latter having sufficient nuance to distinguish news reports and blogs from machine-generated meta-citations and from Twitter content.

[22] Please note that Twitter was created in 2006, therefore our searches were unrestricted by date, given that our search period is for 2004-2014. Tweets are a measure of the extent to which titles were shared, but not of the extent to which that sharing resulted in additional views or uploads. For such nuance, it is advisable that smarter metrics capturing technology be embedded into the IRIS website such that more information about incoming traffic can be elucidated.

[23] Tweets are an indicator of the extent to which titles are shared. There are three important caveats: (i) just because a title is shared, it does not necessarily follow that that title was read, cited or incorporated into practice or policy; (i) the search looked for mentions of actual document titles, not abbreviations or links, thus possibly not capturing those tweets that were merely descriptive and not proscriptive; and (iii) the search was for titles in their top two languages, though almost all Tweets are in English.

[24] For example, documents with certain "Creative Commons" copyrights allow their readers to read, modify, and re-publish copyrighted content, whereas others do it; yet all versions of that license would technically be considered "open access."

their work, but these studies were few. There was often a lack of simple distribution list information available to know the reach of the publications, at least in hard copy. There had been some external assessments conducted in regards to WHO guidelines, and these were reviewed.

The evaluation collected limited evidence from country office and regional office publications. The findings, conclusions and recommendations of this report are, however, applicable to all publications, regardless of the publishing office.

1.5   How to Read this Report

The following sections present the evaluation findings, conclusions and recommendations. Evaluation findings are presented as by Evaluation Question, and Evaluation Sub-question as per the Evaluation Matrix (see **Annex B**)

- Section 1 presents the background of the evaluation in terms of context, evaluation objectives and scope, theory of change and approach;
- Section 2 presents the evaluation findings related to the reach of WHO publications;
- Section 3 presents the evaluation findings related to the perceived usefulness of WHO publications;
- Section 4 presents the evaluation findings related to the extent to which WHO publications are used;
- Section 5 presents the evaluation findings related to the extent of implementation of the WHO's publication policy; and
- Section 6 and Section 7 presents the evaluation's conclusions and recommendations.

This report often refers to a knowledge translation[25] (KT) framework[26]. Knowledge translation is the synthesis, dissemination, exchange and ethically-sound application of knowledge[27]. There are international best practices in knowledge translation in public health and mounting evidence of the importance of knowledge translation on health outcomes. There are various knowledge translation models and this report does not promote any one model over another. For the purposes of consistency and clarity, we have selected a simplified model as developed by the Canadian Institutes of Health Research and the Public Health Agency of Canada, and shown in Figure 1[28].

Within this KT framework, there are the following two approaches to dissemination:

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[25] **Knowledge Translation (KT):** the term *translation* is used to mean the process and steps needed and taken to ensure effective and widespread use of evidence-based programs, practices, and policies. Thus *translation* is a term for putting knowledge from research or practice into action.

[26] **Knowledge Translation framework:** there are various examples of KT frameworks. It is simply the approach to be taken to Knowledge Translation, usually identified as stages or steps. For example: Identify Problem; Identify, Review and Select Knowledge; Adapt Knowledge to Local Context; Assess Barriers to Use; Select, Tailor and Implement Interventions; Monitor Use: Evaluate outcomes; Sustain; Repeat.

[27] Her Majesty the Queen in Right of Canada (2012). Knowledge Translation Planning Primer. Accessed at: http://publications.gc.ca/site/eng/434858/publication.html

[28] Her Majesty the Queen in Right of Canada (2012). Knowledge Translation Planning Primer. Accessed at: http://publications.gc.ca/site/eng/434858/publication.html

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Figure 1: Knowledge Translation Model

- **Passive dissemination**: sometimes referred to as "diffusion", or "just let it happen". It is unplanned, uncontrolled. For example, publishing in peer reviewed journals, posting on websites, indexing in databases or libraries; and
- **Active dissemination**: active process to communicate results to potential users by targeting, tailoring and packaging the message for a particular target audience. For example, user driven dissemination strategies, media engagement, knowledge brokers, networks.

The assessment of reach looks at three modes of dissemination: push, pull and referral[29]. The evaluation framework (see **Annex C**) developed specific indicators for each mode.

- **Push (or primary distribution)**: Producers of knowledge plan and implement approaches to push (disseminate) knowledge toward audiences who they believe need to receive it;
- **Pull (or secondary distribution)**: Knowledge users plan and implement strategies to pull knowledge from sources they identify as producing knowledge that is useful to their decision making; and
- **Third Party Referrals and Citations:** Generally refers to selection of a publication for inclusion in bibliographic databases (e.g., PubMed, BioMed Central, EMBASE, etc.), as well as other publically available health-oriented databases. Typically such databases record bibliographic information such as authors, journal citation, abstract, and links to the full text.

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[29] Modes of dissemination taken from Tara Sullivan, Molly Strachan and Barbara Timmons, 2007. *Guide to Monitoring and Evaluating Health Information Products and Services*, USAID, 2007.

2.   What is the extent to which WHO publications reach their intended target audience(s)?

2.1   Summary of findings

The general conclusion drawn from the evidence that is presented in the following sections is that WHO publications are not fully reaching their intended audience nor are all segments of the audience fully identified. However, given the lack of monitoring data, it is difficult to quantify the extent to which WHO publications reached their target audience(s).

The bibliometric data in the following sections show that WHO publications are downloaded, viewed and cited. Looking at the other evaluation questions and lines of evidence however, it can be concluded that there is room for improvement. In general, there is no common approach or method to targeting audiences and knowledge translation frameworks are not used. Incomplete publication planning results in gaps in reach. It is recognized that targeting may be more of a challenge for some programmes than others and therefore will require varying degrees of rigour, structure, time and effort.

Information dissemination planning varies across WHO. There is a reliance on posting documents on websites, sometimes without sufficient promotion and awareness-raising. The WHO electronic environment (e.g., WHO website, IRIS.) can be hindersome, given identified weaknesses in search function and publication metadata[30]. Improving monitoring information on reach (and use and usefulness) would greatly assist programmes and the organization in identifying areas for improvement.

In terms of targeting and reaching different language groups, despite having a policy on multilingualism, there is no corporate, strategic approach to translation, and the result is that there are significant differences in reach across language groups.

2.2   How does WHO target audiences?

Findings:
- There is no common approach or method to targeting audiences;
- There is limited documentation of targeting, dissemination planning or general publication planning making assessment of achievement of reach difficult; and
- Knowledge translation is not systematically considered when targeting audiences.

Evidence on targeting audiences was mainly collected through internal interviews, case studies and document review. The evaluation identified various methods of targeting audiences, including stakeholder consultation via formal structures/committees, surveys, or reliance on WHO staff opinion, in many cases an individual. However, there appears to be no systematic or documented process to determine if a publication is based on a knowledge translation need and has been planned in a format and language that maximizes its reach and usefulness to a well-defined target

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[30]   During the review process for this report, it was clarified that WHO is very active in contacting Google Scholar to ensure that WHO content from IRIS is referenced and discoverable.

audience. As an example, many internal interviewers expressed that a single publication often "targets" multiple audiences, but this can lead to challenges in language (e.g., level of technical detail, official languages, etc.), format (e.g., document length, document vs webpage, etc.) and dissemination planning.

The above findings are generalized, and it is clear that the challenges of target audiences vary across programmes and types of publications. For example, it may be easier to identify the "traditional audience" of a technical publication on a specific issue or disease than it is for a global report on an emerging public health issue.

A review of the case studies validated the findings from internal interviews, indicating that targeting could be improved by better up-front planning that includes target segmentation, communication and information dissemination planning. Target segmentation assists in identifying the need for developing different (or derivative) products for different target audiences. The publication planning process should be documented, it should engage experts both internal and external to WHO, as well as other stakeholders including representatives from the proposed target audience.

2.3   Are there gaps due to targeting?

Findings:
- Gaps due to targeting are a result of inconsistent and incomplete publication planning; and
- There are emerging multi-sectoral interventions that present new challenges in targeting.

There are gaps in reach due to targeting. These gaps in reach are primarily due to inconsistent and incomplete publication planning. Almost half of internal survey respondents indicated they believed there were gaps in the dissemination reach of their last publication (see following table).

Internal Survey Question 10a: Gaps in Dissemination

Question: To what extent were there gaps in the dissemination strategy to this publication that hindered its reach to the intended audience?						
	5 = Completely	4 = Mostly	3 = Somewhat	2 = To a minor extent	1 = Not at all	Not applicable
	5 (4.2%)	15 (12.6%)	32 (26.9%)	23 (19.3%)	13 (10.9%)	31 (26.1%)

Most internal survey comments referred to poor information dissemination planning by expressing that there are no formal strategies, translation of publications makes dissemination difficult to non-English speaking countries, and that the very important role of Country Offices in the dissemination of publications is not being fully utilized or incorporated in planning.[31]

This finding was also supported by interviews. Most interviewees believe that there are gaps in targeting, but beyond traditional audiences (e.g., Ministries of Health in developing countries, policy makers, health practitioners, etc.) there is no consensus opinion on whether WHO should target audiences at other levels of the health system (e.g., operational or front-line level, etc.). Depending

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[31]   See Annex F, Questions 10 a and 10b

on a number of factors (e.g., programme, publication type, etc.) there can be audiences that are not targeted sufficiently and perhaps should be. For example, the majority of interviewees noted that while WHO is recognized for its normative role, there is an ongoing demand for more operational guidance and information at the clinical level or for shorter, concise formats for policy makers. This implies a requirement for derivative products and tailored dissemination strategies for a different target audience, which is not presently occurring in a systematic manner.

As illustrated in the case studies, WHO programs may have a broader audience outside of the health sector, which would require special attention to address the needs of these stakeholders. The Road Safety programme is an example of a multi-sectoral partnership that involves non-health sector stakeholders, such as the private sector (e.g., car companies, construction and engineering firms, etc.) and other government departments (e.g., Ministries of Transport, municipal urban planning and enforcement officials, etc.). This programme strives to target the right stakeholders, but acknowledges that a multi-sectoral partnership does present unique challenges.

2.4   To what extent is the intended reach achieved?

Findings:
- Information dissemination can be improved for those audiences that are targeted;
- Improved monitoring of reach (and use and usefulness) is required;
- There is an over-reliance on passive dissemination[32] without requisite promotion and communication to draw the targeted audience;
- Information dissemination planning is not always done for publications;
- There is evidence of downloads and views of WHO publications, but it is not possible to ascertain from this alone if reach was achieved; and
- The bibliometric analysis[33] found:
  - few documents enjoyed a strong social media presence,
  - both guidelines and flagship products were downloaded and viewed more than were other documents,
  - guidelines are statistically more likely to achieve great reach, in terms of mean downloads and views per year than publications in all other categories, and
  - flagship and technical publications were found to have higher impact factors than other publications.

In terms of reach for target audiences, there is room for improvement in the dissemination of publications. It was noted by interviewees and confirmed in case studies that monitoring information on reach (as well as use and usefulness) is lacking and is an impediment in gauging how best to improve the product dissemination process. Monitoring information helps inform whether the intended audiences are being reached and also identify areas for improvement.

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[32] Passive dissemination is unplanned, uncontrolled dissemination. For example, publishing in peer reviewed journals, posting on websites, indexing in databases or libraries. Active dissemination are active processes to communicate results to potential users by targeting, tailoring and packaging the message for a particular target audience. For example, user driven dissemination strategies, media engagement, knowledge brokers, networks.

[33] Bibliometrics is an important line of evidence for this question. Please refer to Section 1 for an explanation of the bibliometrics approach, terminology and indicators.

According to internal interviews, there is an over-reliance on passive dissemination (e.g., posting documents on websites, etc.) and hoping people locate the publication and pass on to others. Interviewees expressed that opportunities exist for more active dissemination. As one interviewee commented, WHO is perhaps still in the transition phase from paper to electronic publications, and still has not determined how to maximize dissemination. Numerous suggestions were received through interviews and case studies on possible activities to improve dissemination. Potential approaches for more active dissemination included better use of social media, email notifications of new publications, improving the WHO website for searchability, channel distribution, launches, and workshops / conferences. These suggestions are best considered in the framework of a publication strategy that includes all knowledge translation aspects such as targeting, formats, language, translation, dissemination, and awareness, including communications.

While most interviewees quoted resources as a barrier to active dissemination, many interviewees also noted that publications expertise could be improved and that cost-neutral improvements are available. It is positive that almost all (97%) of the documents examined in the bibliometric study were freely available online. The exceptions were those publications available only in closed access academic journals.

In regards to the actual dissemination of publications, planning is undertaken to varying degrees but is far from universal. For example, according to the internal survey responses, the perception of WHO staff is that they do dissemination planning at least 55% of the time. Of course, a further 31% indicated that this was only done somewhat, to a minor extent, or not at all. Of the 55% of staff who state they do dissemination planning, it was not possible to determine the type or quality of process used in the planning. From internal interviews, varying dissemination approaches were identified, ranging from reusing previous distribution lists that were not kept current to developing new dissemination plans based on thorough needs assessments.

Internal Survey Question 8: Information Dissemination (see Annex F)

Question: With regards to the last WHO publication you worked on: To what extent did you develop a specific dissemination strategy aimed at the intended audience of this publication?						
	5 = Completely	4 = Mostly	3 = Somewhat	2 = To a minor extent	1 = Not at all	Not applicable
	21.8%	32.8%	16.0%	8.4%	6.7%	14.3%

Bibliometric analysis[34] provides some insight into reach but is unable to match actual reach to intended or planned reach. This section present the following bibliometric indicators related to reach:

- copies distributed, extent of open access, social media presence;

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[34] Bibliometrics is an important line of evidence for this question. Please refer to Section 1 for an explanation of the bibliometrics approach, terminology and indicators.

- mean number of views and downloads per year[35];
- mean impact factors, peer reviewed citations rates, grey citation rates; and
- mean downloads.

According to the bibliometric analysis, few documents enjoyed a strong social media presence, but those that did tended to be the large flagship products, such as World Health Statistics reports. Both guidelines and flagship products were downloaded and viewed more than other documents. Guidelines are statistically more likely (p < 0.001)[36] to achieve great reach, in terms of mean downloads and views per year than publications in all other categories (i.e., advocacy, technical publications, HQ and region-based journals, and external publications). The following tables provide a summary of some of the analysis, looking at the five categories of publications, flagship publications and products sampled from the five programme case studies. Total sample refers to the entire bibliometric sample (1,502) (see **Annex J**).

Table 2: Bibliometric Indicators for Push Dissemination 2005-2014[37]

	Copies Distributed (estimated by mean number of views + downloads)[38]	Extent of Open access	Social Media Presence[39] (mean number of tweets and re-tweets)
Total Sample	1,246	97%	5
Advocacy material	425	100%	1
Technical publications	723	100%	7
WHO and region based journals[40]	878	100%	4
Guidelines	2,645	100%	5
External publications	843	Not applicable[41]	4

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[35] The term "mean" in the tables refers to the arithmetic mean, commonly called "average." The mean is a statistical measurement of the central tendency of a range of data points, and is therefore not sensitive to extremes of range or outliers. Therefore, a class of documents with mostly unaccessed titles, but with one or two highly accessed titles, will nevertheless elicit a moderate mean score, which would be incorrectly interpreted to mean that all of the titles in that class reflect a moderate accessibility rate. In other words, mean scores should be read with an understanding that they are unduly influenced by a handful of extremely popular documents.

[36] A p-value of less than 0.05 traditionally denotes statistical significance. The lower the p-value, the less likely that a measured difference is due to chance. Therefore, there is a probability of a less than 0.1% (0.001) that WHO guidelines achieve greater reach than publications in all other WHO publication categories.

[37] Note however that Twitter was only created in 2006

[38] Source: WHO's IRIS

[39] Social media presence refers to the number of times the title of a given document was mentioned on Twitter. This information was collected using Twitter's search function. Please note that in most cases, it is the mean numbers of each indicator type that is reported, and not the total amount.

[40] WHO and region-based journals include African Health Monitor, Bulletin of the World Health Organization, Eastern Mediterranean Health Journal, Weekly Epidemiological Record, Pan American Journal of Public Health, Public Health Panorama, WHO South-East Asia Journal of Public Health, Western Pacific Surveillance and Response.

[41] External publications are variably open or closed access. It is impossible to estimate that extent.

	Copies Distributed (estimated by mean number of views + downloads)[38]	Extent of Open access	Social Media Presence[39] (mean number of tweets and re-tweets)
Flagships Publications	2,065	100%	126
Analysis: Almost all documents are openly accessible. Guidelines and flagship products are accessed more frequently than the overall sample, while flagship products are the most tweeted.			
Road Safety	2,699	96%	4
Patient Safety	1,101	99%	1
HIV	1,194	100%	1
Immunization	3,874	90%	3
Ebola	954	94%	1

In addition, it is important to remember that the download and view numbers reflect IRIS data alone. It is entirely possible, if not probable, that the bulk of access is via sources other than IRIS. Individuals could share documents privately, and institutions might keep copies in their own repositories to be accessed by their employees. As a result, all IRIS view and download numbers are underestimates of those documents' true access rates.

Table 3: Bibliometric Indicators for Pull Dissemination 2005-2014

	Mean number of views per year	Mean number of downloads per year
Total Sample	25	334
Advocacy material	8	69
Technical publications	22	261
WHO and region based journals	21	320
Guidelines	31	985
External publications	25	375
Flagships Publications	13	706
Analysis: When the duration of documents presence on-market was considered (access rates per year), it was found that flagship products tended to be viewed less often than the rest of the sample, but were downloaded at a much greater rate. This suggests that those seeking flagship products are not simply curious browsers, but are seeking reference materials.		
Road Safety	19	511
Patient Safety	26	371
HIV	13	159
Immunization	86	1,228

	Mean number of views per year	Mean number of downloads per year
Ebola	52	589

Table 4: Bibliometric Indicators for Impact Factors 2005 - 2014

	Mean Impact Factor (peer reviewed citation rate)	Mean peer reviewed citation[42] rate per year	Mean number of grey citations[43]	Mean grey citation rate per year
Total Sample	57	17	298	90
Advocacy material	11	1	1	1
Technical publications	106	22	155	31
WHO-HQ and region based journals	42	18	564	93
Guidelines	53	20	245	163
External publications	27	7	309	82
Flagships Publications	546	169	971	145
Analysis: While guidelines achieve greater reach as shown in Table 2 and Table 3, technical publications show a significantly higher impact factor. It is believed that guidelines are read primarily by immediate practitioners, while technical documents are read more by non-academic scientists and policymakers. Practitioners are less expected to publish and therefore to cite source materials, thus explaining why guidelines would be less cited than technical documents. This does not necessarily mean that guidelines are less used, or that their content is less likely to be incorporated into practice or policy.				
Road Safety	46	12	45	21
Patient Safety	31	9	388	0
HIV	25	3	1,019	0
Immunization	179	61	1,353	1
Ebola	33	1	116	0

Figure 2 below presents "pull" information for the five categories of publications. WHO Guidelines are statistically more likely (p < 0.001) to achieve greater reach through mean downloads and views per year.

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[42] Peer-reviewed citations are the number of times the given document has been officially cited in academic literature. This information was collected from Google Scholar, sometimes via third party software, Harzing's "Publish or Perish".

[43] Grey citations refer to the number of times that the given document was mentioned or linked-to in non-academic spaces on the Internet, such as in news articles, NGO websites, or personal blogs. This information was collected using Google searches.

Figure 2: Mean Downloads and Views per Year by Publication Type 2005-2014
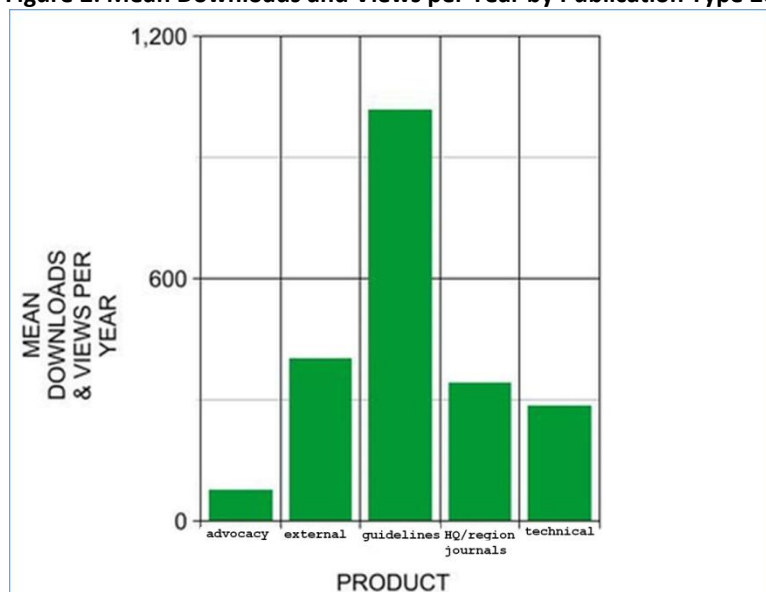
Source: Bibliometric analysis using IRIS data

2.5   How does WHO target different language groups?

Note that the findings in this regard are similar to earlier sections as it is the same process, i.e., publication planning.

Findings:
- Despite having a policy on multilingualism, there is no corporate, strategic approach to translation;
- There are programmes and publications that address translation in a conscious and systematic manner;
- There are segments of the target audience whose first language is not English that have no issue with language, but there is also a large segment of the target audience (approximately 36%) who do find it a barrier whose language needs are not being addressed by WHO.

According to interviews, case studies and document review, there is inconsistent and informal targeting of different language groups. The weakness in upfront dissemination planning and targeting also impacts on plans for translation. While cost and time are major limiting factors in translation planning, the most interviewees felt that these factors can be better managed and mitigated.

The document review confirmed that there is a WHO policy on multilingualism[44], however this policy is not mandatory and is treated more as a guide. The result is there is no corporate, strategic approach to translation. The Multilingualism Plan of Action outlined recommendations in 2007 that would impact publications (e.g., multilingual web editors, setting translation priorities, standardized terms for translation, XML typesetting, etc.) and IRIS. It was not determined through interviews or document review whether those recommendations had been accepted and implemented.

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[44]   See EB 121/6, EB121/6 Corr.1, and WHA61.12

There are examples of programmes and products that have tried to address the language issue as best they can within the resource parameters of their programmes. For example, the WHO Bulletin has translated abstracts of all articles in all official languages since 2009, and many Global Reports are accompanied by executive summaries in all official languages.

According to interviews and case studies, there is commonly held belief in WHO that most of their target audience (i.e., Ministries of Health) speaks English. However, the external survey indicated that 36% of respondents whose first language is not English reported that language is "somewhat to completely" a barrier. This finding was supported by the programme case studies which found that language is a major barrier for non-English speakers. Compare this to the internal survey, where 52% of respondents reported that their most recent publication was not translated into any language. So in summary, there are segments of the target audience whose first language is not English that have no issue with language, but there is also a segment of the target audience (approximately 36%) who do find it a barrier and are not being targeted by WHO.

2.6   Are there significant differences in reach across the language groups?

Findings:
- There are significant differences in reach across language groups;
- In many cases, there are English-only publications; and
- Reach increases when documents are translated.

Given the above finding, there are significant differences in reach across language groups because in many cases, there are English-only publications. As mentioned above, more than one third (36.3%) of external survey respondents, whose first language is not English, reported that the languages of WHO publications are "somewhat to completely" a barrier.

The bibliometric analysis indicates that the six most frequently used languages in WHO publications are indeed the WHO official languages, but there are large discrepancies across the groups. Given that there is no corporate strategy in regards to translation, nor any systematic and documented means by which decisions are made during publication planning, it is difficult to determine if this is appropriate.

Table 5 shows that, according to the sample, almost all documents (92.9%) are published in English, and that includes those that were published only in English as well as those published in English and other languages. The next most popular language is French (28.1%). That is, 28.1% of documents are published in French, including those published only in French and those published in French as well as other languages.

Table 5: 10 Most Frequently Used Languages in WHO Publications

Language	Number of documents	Percentage of sample[45]
English*	1393	92.9
French*	421	28.1

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[45]   Percentage of the bibliometric sample of 1502 publications

Language	Number of documents	Percentage of sample[45]
Spanish*	266	17.7
Russian*	187	12.5
Chinese*	127	8.5
Arabic*	122	8.1
Portuguese	79	5.3
Japanese	36	2.4
Thai	13	0.9
Romanian	10	0.7

* denotes WHO official language

There is evidence to support that reach increases when documents are translated. When publications are translated, there is evidence of pull dissemination (i.e., views and downloads) and referrals (i.e., citations) that are comparable to English publications. This indicates a demand for publications in other languages. As an example, when Patient Safety publications are translated into French, Spanish, Russian and Chinese there is evidence of statistically significant relationships between language and impact counts (i.e., views, downloads and referrals).

According to the bibliometric analysis, there is a relationship between the number of languages in which a document is published, and the extent of its reach, with the two phenomena significantly well correlated (r_s =0.317, $p < 0.001$). As an example, documents published in one to six languages enjoyed zero to 5,000 mean downloads and views over the search period. There was some variation from one to six languages, but that variation was within the expected error of the analysis. Beyond six languages, the mean downloads and views jumped beyond 10,000 views, well beyond the earlier variation within the sample. In other words, adding a 7th language caused the access rate to spike to a statistically significant degree.

2.7   Does the support (e.g., web only, print) affect reach? If so, is the right media being used?

Finding:
- Please see Findings under 2.4 regarding information dissemination

Please see Section 2.4 for findings on information dissemination. In general, choosing the right media should be a function of a well thought out publication strategy, and that is generally not occurring in a structured or systematic way. Electronic publication is a positive development but according to programme case studies, there does continue to be a demand/need for hard copy distribution mostly due to issues of internet access and bandwidth (i.e., impacted by size of documents) in many developing countries as well as remote regions. IRIS tries to alleviate this problem in countries with low connectivity by compacting the file size of the electronic publications files so that they remain "downloadable" in low-bandwidth locations.

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3.   What is the perceived usefulness of WHO publications?

3.1   Summary of findings

To address this question, the evaluation assessed publication alignment to global strategies, to user needs, user satisfaction, perceptions of usefulness and quality of the publications. In general, external audiences who are part of the target audience for a particular publication find WHO publications relevant, of high quality and useful. In addition, during the period of this evaluation, there have been areas of significant improvement, for example in the area of guideline development.

When looking at the entirety of responses, the evaluation was able to identify areas for improvement in publication planning (e.g., dissemination, targeting audience, needs identification, etc.), responsiveness to changing health priorities, language (i.e., comprehensibility) of publications, and the need for monitoring information in regards to publications and user feedback information.

In regards to target audiences and needs, WHO is facing an increasingly complex global health agenda which implies more needs, more stakeholders and more actors, without necessarily more resources. At the same time, given the expected outcomes of WHO as articulated in its Twelfth General Programme of Work (GPW), the solution goes beyond provision of technical information and guidance documents. WHO has to produce technical documents; it is a scientific, evidence-based, norm-setting international organization. The audience for those publications includes the scientific and technical community and national level programme managers. Frequent comments regarding WHO publications being either too long or too technical is an indication that there are important audiences whose needs are not being addressed by these technical documents, and that derivative products for other target audiences should be planned upfront and produced. There are examples of planning occurring, but it does not appear to be a systematic, programmatic approach and is not necessarily part of the upfront publication planning process. The articulation of how publications are intended to support the achievement of organizational and programme objectives has to be more explicit.

Other important findings are related to the planning process as highlighted above. There is a lack of priority setting in publishing, which may result in a higher than required volume of publications. WHO itself is not sure how many publications were produced during the period under evaluation. The volume of publications has ramifications that were not directly captured in the evaluation questions below, but, throughout the evaluation, interviews and case studies had noted issues that were being raised regarding audience saturation (i.e., too much information), low priority publications produced, and publications produced without full quality assurance (including cataloguing). Priority setting for WHO publications will continue to be a difficult undertaking given the varying Member States' needs and requests, competing research agendas, global initiatives, and donor priorities.

3.2   How does WHO respond to global strategies and priorities through its publications?

Findings:
- WHO publications in general respond to global strategies; and
- There are circumstance that due to its mandate it responds to needs of members that may not be part of a global strategy or priority, or are driven from WHO programmes.

There was a mixed findings from both internal and external interviewees. In general, there were numerous examples of publications responding to or setting the global strategies and priorities. Relevant examples included work in road safety, the Sustainable Development Goals (SDGs), tobacco control, the Global Vaccine Action Plan, and some HIV guidelines. There is likely many other examples from across the many WHO programmes.

Other responses are more nuanced, ranging from WHO showing leadership and working with partners to develop a publication that helps set a health agenda, to WHO responding with a publication later than it should. There are also examples of WHO responding to a unique request from a single Member State made at the World Health Assembly. There was also recognition from some internal interviewees that there are some supply-driven publications produced by the organization, and that this is an area where better alignment is needed between publications and the goals/needs of programmes.

From the internal survey, most WHO staff (74.8%) reported that the last publication they worked on directly supported global health priorities mostly or completely, and some (20.1%) felt that it did somewhat or to a minor extent.

3.3   To what degree are WHO publications based on needs? Are they addressing priority needs?

Findings:
- There is no standard, formal needs assessment process;
- WHO guidance and technical publications are addressing needs of certain target audiences, in particular the technical audience;
- There may be some misconception on part of WHO staff on how well they are identifying target audience needs; and
- Lack of priority setting results in high volume of publishing.

Based on document review, interviews and case studies, the evaluation found that there is no standard and documented needs assessment process for publications. The lack of formal needs assessment makes it difficult to assess how well publications are addressing needs. Needs identification should be part of the publication planning process and is difficult to isolate needs identification from a programme or organizational objectives, targeting and other publication planning elements.

Nonetheless, from interviews, case studies and surveys the evaluation found that there is room for improvement in regards to better identifying and addressing needs of the target audience. There is considerable leeway given to HQ-based technical units in the definition of needs. In many instances that process may comprise of some form of advisory committee, which may or may not have

representatives from regional and/or country level, and partners. Some programmes, such as vaccines, have a direct link to national level, as well as expert committees (SAGE) with a great deal of input from academia. In other instances, there may be global strategies or needs identified by Member States that are responded to, but the publication details may be left to the technical units and may not be developed further to address the needs of specific programme audiences or for audiences at country level.

In regards to the different types of WHO publications, based on interviews and case studies, WHO guidance and technical publications are addressing needs of target audiences, in particular the technical audience. As per previous findings however, this does not mean they are reaching nor identifying the entire target audiences. According to the external survey, WER is highly aligned to needs, and the WHO Bulletin, although broad in scope, does address relevant topics. For example, from the external survey most WER readers (83%) and WHO Bulletin (77.4%) readers agreed or strongly agreed that the publications address relevant topics[46]. It is unclear, from the evidence collected, whether advocacy and external publications are addressing needs.

According to the internal survey, most WHO staff (80.9%) reported that they mostly or completely understood the information needs of their target audience. Yet less than half (48.7%) reported that their latest publication was guided by a needs assessment, and a further 22.7% did not know if the publication did or did not have a needs assessment. Compare this with the point of view of external stakeholders. According to the external survey, the majority of readers (66.8%) of selected WHO publications reported that the publications generally address their priority health information needs mostly or completely, while one third reported this 'somewhat' or 'to a minor extent'. [47] This finding highlights a potential misconception on part of WHO staff on how well they are identifying target audience needs and on whether there is room for improvement.

In reference to global strategies and priorities, where reportedly WHO has mixed success (see Section 3.2 above), there was an illuminating comment made by one interviewee that helps to explain the challenge:

> *"There are two dimensions to WHO work. First, the global public good and much of the documentation is of that nature and much of the work is in that area. But the second side is country specific and a much smaller group of beneficiaries tied to a geographic area. Any benefit may or may not go beyond that what we have at the global level. What we have not done is think through publications for the two levels. At the country level it is really about adapting to local context. Both sides are important, but often we do not look at both."*

Given the challenge of assessing needs, it is not a surprise that the ability to focus on priority needs is even more unclear. First, what are those priority needs? There were many comments received from internal interviewees that stated WHO has so many programmes and is involved in so many

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[46]   There is likely some self-selection bias in these findings given that respondents were asked to answer questions related to a publication they had recently read.
[47]   The same self-selection bias may apply.

things, that as a result, there are too many publications being produced. One regional office interviewee noted that their office had produced 1,500 publications in a year and seriously questioned the need for that degree of publication work. Given there is no centralized control over publications[48], their strategy was to set a high quality standard and then focus on key, flagship publications meeting those standards for their particular office.

3.4   Are users satisfied with the publications produced by WHO?

Findings:
- There is a relatively high degree of user satisfaction;
- There is a lack of monitoring mechanisms to get feedback on WHO publications; and
- Areas for improvement were noted in dissemination, translation, and being responsive to changing health priorities, needs and target audiences.

As mentioned previously, there is a lack of structured, formal monitoring of WHO publications, and that includes formal feedback mechanisms. Nonetheless, based on interviews, case studies and the external survey, the evaluation found that there is a relatively high degree of user satisfaction.

When thinking of a type of WHO publication they are most familiar with, most external survey respondents (85.6%) were satisfied or very satisfied with WHO publications and most respondents (84.2%) viewed WHO publications as useful. This result may seem in contradiction to earlier findings in regards to the need for improved needs assessment and target audience identification. However, it is also a self-selection bias in the external survey, in that respondents were asked to respond to a WHO publication that they had recently read. It is likely that the respondent falls within the intended target audience for that publication if they are reading it. The question is if during the needs assessment process the need is matched to a well-defined target audience and that audience is reached.

Interviewees and case studies also indicated a high level of satisfaction with WHO publications, although areas for improvement were noted in dissemination, translation, and being responsive to changing health priorities, needs and target audiences. The following questions were from the external survey (please see Annex G):

External Survey Question 17b: Level of Satisfaction

Question: What is your level of satisfaction with this WHO publication? [49]							
	5 = Very satisfied	4 = Satisfied	3 = Neutral	2 = Dissatisfied	1 = Very dissatisfied	Mean	Std. Dev.
	30.8%	54.8%	13.0%	1.4%	0.0%	4.15	0.69

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[48]   There are varying degrees of a centralized publishing function in some of the Regional Offices. In all cases however this does not extend to approvals over publishing which rests with programmes, but rather to the quality assurance of publications.

[49]   Respondents could select specific product case study publications, or types of publications. Most respondents selected types of publications such as WHO Bulletin, global reports, World Health Reports, guidelines, policy papers, WER, etc.

External Survey Question 17c: Usefulness

Question: Do you find the content of this WHO publication useful?						
5 = Extremely useful	4 = Mostly useful	3 = Somewhat useful	2 = Marginally useful	1= Not at all useful	Mean	Std. Dev.
40.4%	43.8%	14.4%	1.4%	0.0%	4.23	0.74

The external survey asked specific questions in regards to the 10 product case studies. The product case studies (see **Annex I**) were randomly selected and in some instances there were very few or no survey respondents who had read the publication. The following table provides a summary where there was a response. The table includes the mean response provided for each question for each publication.

Table 6: User Satisfaction with Specific Products (Source: External Survey)

Publication	Number of Responses[50]	What is your level of satisfaction with the publication?[51]	Did you find the content of the publication useful?[52]	Has the publication changed any of your views on the subject matter?[53]
Preventing HIV/AIDS in young people: a systematic review of the evidence from developing countries (2006)	26	4.2	4.12	2.88
Antiretroviral drugs for treating pregnant women and preventing HIV infection in infants: recommendations for a public health approach (2010)	38	4.32	4.42	3.44
Economic benefits of keeping vaccines at ambient temperature during mass vaccination: the case of meningitis A vaccine in Chad (2013)	21	4.14	4.0	3.33
Sustaining GAVI-supported vaccine introductions in resource-poor countries (2011)	20	4.19	4.0	3.35
WHO guidelines for safe surgery: safe surgery saves lives (2009)	37	4.32	4.22	3.94
Prevalence of adverse events in the hospitals of five Latin American countries: results of the "Iberoamerican study of adverse events" (IBEAS) (2011)	14	3.93	3.79	3.43
Contact tracing during an outbreak of Ebola virus disease (2014)	11	4.09	4.18	2.9

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[50]　Survey respondents who indicated they had read the publication.
[51]　1 very dissatisfied, 2 dissatisfied, 3 neutral, 4 satisfied, 5 very satisfied
[52]　1 not at all useful, 2 marginally useful, 3 somewhat useful, 4 mostly useful, 5 extremely useful
[53]　1 not at all, 2 to a miner extent, 3 somewhat, 4 mostly, 5 completely

Publication	Number of Responses[50]	What is your level of satisfaction with the publication?[51]	Did you find the content of the publication useful?[52]	Has the publication changed any of your views on the subject matter?[53]
No data due to insufficient responses				
First United Nations Global Road Safety Week: a toolkit for organizers of events (2006)	3			
Strengthening Road safety legislation: a summary for government decision-makers (2014)	3			
Preventing the introduction of Ebola virus into the Eastern Mediterranean Region: enhanced preparedness is the key (2014)	1			

3.5 Does the format, language and dissemination affect perceptions of usefulness?

Findings:

- Language (comprehensibility) affects perception of usefulness.

There was contradictory information from interviews, case studies and the external survey. Language (i.e., comprehensibility, not official languages) affects perceptions of usefulness according to interviews and case studies. Perceptions of usefulness depend upon if an individual is part of the targeted audience for a particular publication. For example, many interviewees stated that WHO publications are too long, too technical and need to be more user-friendly, especially for policy makers. Yet others consider that the level of technical detail is required in order to support evidence-based decision-making.

External survey respondents were satisfied with the format, and dissemination of publications, but again this finding is conditioned by a self-selection bias in responses. Most respondents (84%) were either satisfied or very satisfied with the format of the WHO publication they had in mind, with a few who were neutral about it (14.6%). Most respondents (84%) felt satisfied or very satisfied with the language of the WHO publication they had in mind and viewed it as appropriate and comprehensible, a few felt neutral about it (10.4%). Most respondents were satisfied or very satisfied (77%) with the publication's method of dissemination; some were neutral (18.9%).

More detailed survey responses were provided for the specific product case studies. The following table provides the mean responses on the Likert scale with 1 being unsatisfied and 5 being very satisfied.

Table 7: Satisfaction with format of specific publications (Source: External Survey)

Publication	Number of Responses	Satisfaction with the format and style of the publication?	Satisfaction with language (appropriate, comprehensible)?	Satisfaction with method of dissemination?
Preventing HIV/AIDS in young people: a systematic review of the evidence from developing countries (2006)	24	4.24	4.2	4.04
Antiretroviral drugs for treating pregnant women and preventing HIV infection in infants: recommendations for a public health approach (2010)	37	4.27	4.38	4.22
Economic benefits of keeping vaccines at ambient temperature during mass vaccination: the case of meningitis A vaccine in Chad (2013)	21	4.25	4.1	4.0
Sustaining GAVI-supported vaccine introductions in resource-poor countries (2011)	20	4.05	4.37	4.0
WHO guidelines for safe surgery: safe surgery saves lives (2009)	35	4.26	4.26	4.17
Prevalence of adverse events in the hospitals of five Latin American countries: results of the "Iberoamerican study of adverse events" (IBEAS) (2011)	14	4.0	4.21	4.07
Contact tracing during an outbreak of Ebola virus disease (2014)	11	3.82	4.09	4.09
No data due to insufficient responses				
First United Nations Global Road Safety Week: a toolkit for organizers of events (2006)	3			
Strengthening Road safety legislation: a summary for government decision-makers (2014)	3			
Preventing the introduction of Ebola virus into the Eastern Mediterranean Region: enhanced preparedness is the key (2014)	1			

3.6   Is there a comparative advantage of WHO publications over those published by other stakeholders?

Findings:

- WHO publications are viewed as authoritative but there is no clear comparative advantage over similar, non-WHO publications.

External interviewees generally view WHO publications as authoritative but there is no clear comparative advantage over non-WHO publications that could be identified by the evaluation. It is recognized that WHO plays an important normative role, specifically through recommendations and

guidelines. In this regard, WHO is credible, has a recognizable brand, and scientific integrity based on a systematic approach. Bibliometrics noted, however, that when WHO guidelines were compared with a random sample of CDC-branded guidelines[54] there was no statistical difference in impact between them. This implies there is no particular comparative advantage of WHO over other credible organizations in regards to guidelines.

In regards to journals and technical publications there was no clear comparative advantage of WHO publications over comparable publications. As an example, WHO flagship products[55] are most accessed and they are particularly well shared through Twitter, and are more cited in the academic literature than WHO non-flagship products. However, when comparing WHO to non-WHO journals focusing on similar global health content, the non-WHO journals were found to have significantly more citations. As the following table illustrates, external journals have more impact in terms of h- and g- indices, than have WHO branded journals.

Table 8: Bibliometric Analysis of Comparative Advantage of WHO Publications

	WHO journals	Non-WHO journals	p-value
Mean citations	9587	36427	0.119
Mean h-index	25	76	0.043
Mean g-index	40	125	0.045

In other areas, such as partnership programmes or emergencies, WHO may not be the lead expert in all areas, although often it plays a leading role in coordination. In such cases its comparative advantage, if any, may be much more narrowly defined. As an example, many partnerships are cross-sectoral. The UN Collaboration on Road Safety is a good example. The programme has five pillars[56] and certain areas (e.g., the built environment and how to better construct roads or building safer vehicles, etc.) are not areas of competence for WHO and are addressed by partners. The WHO expertise is in other areas, such as post-crash response.

3.7   What is the quality level of WHO publications (credible, authoritative, trustworthy, reputable)? Any shortcomings?

Findings:
- WHO publications are viewed by external stakeholders as being of high quality, but with variations across publication types and regions; and
- There have been areas of significant improvement during the evaluation period.

According to case study interviews, WHO publications are viewed by external stakeholders as being of high quality. Interviewees did note that there are variations across regions and different publications types, such as advocacy materials, are sometimes not meeting desired quality levels.

There have been areas of significant improvement, for example, in regards to guidance documents. The establishment of the GRC has been viewed as positive, although there are still questions around

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[54]   Controlled for subject matter
[55]   Flagship publications defined as World Health Reports and World Statistical Reports
[56]   See the Global Plan for Decade of Action on Road Safety 2011-2020 at
       http://www.who.int/roadsafety/decade_of_action/plan/plan_english.pdf?ua=1

appropriateness of using the GRADE methodology for all circumstances (e.g. the need to include observational studies in public health versus relying on RCTs).

In terms of bibliometrics, quality can be assessed by taking usefulness (as measured by citations) as a proxy measure of quality. Usefulness can be estimated further, looking at non-academics and the measures of grey citations and social media mentions are estimates of reach, or of re-broadcast, but just because a document has been shared, it does not necessarily follow that it has been read or used.

Documents concerning awareness-raising (i.e., advocacy materials) are the least shared and cited. Technical documents are the most cited in the academic literature, whereas articles in the WHO regional journals are most cited in the grey literature. Based on the h- and g-indices of WHO-branded journals, which are comparable though lower than those of leading journals in the same fields, it appears that the academic community sees WHO journals as being of high calibre.

Flagship documents as a category were not among the five original product types used by the evaluation (see Section 1.2). Flagship documents are therefore distributed among the five categories listed in Table 9 below.

Table 9: Mean Impact by Product type

Product	Peer-reviewed Citations	Grey Citations
Advocacy material	11	1
External publications	26	305
Guidelines	53	245
WHO HQ[57] & Regional journals	42	566
Technical publications	106	154

Flagship documents were the most shared and the most viewed and downloaded, however, they were not the most cited. The table below presents a summary of citation rates by product type. Its intent is not to compare WHO with non-WHO publications, but rather to provide a sense of the extent to which different product types are shared by readers. These data suggest that, within the WHO universe of documents, technical publications are most shared by the academic audience, whereas academic publications in WHO peer-reviewed journals are more shared in the lay media. This is a somewhat ironic finding, which may speak positively to the extent to which WHO journals are publishing content that is widely applicable to more than just technical readers, for example poignant commentaries and advocacy papers.

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[57]   The WHO Bulletin and Weekly Epidemiological Record (WER) are within the category of WHO HQ journals.

Figure 3: Mean Peer Reviewed Citations by Publication Type 2005-2014
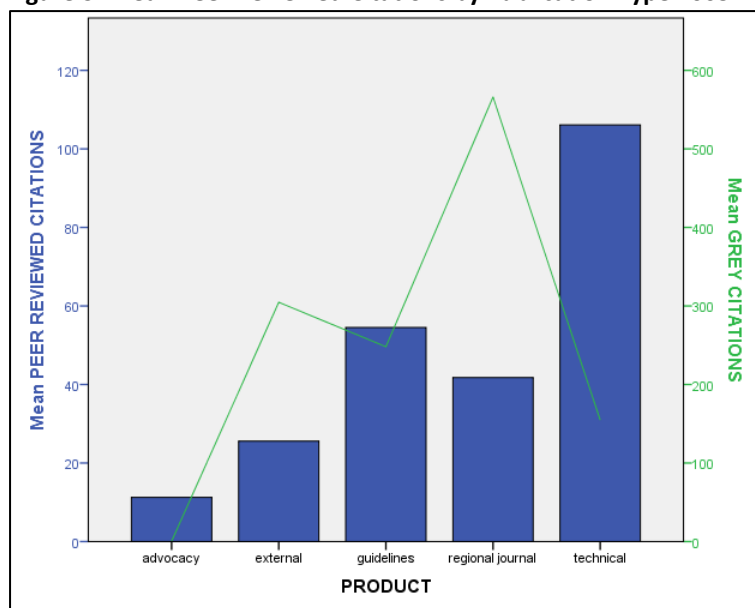
4. What is the extent to which WHO publications are used as references and as the authoritative sources for decision-making in clinical, public health and policy-making contexts?

4.1 Summary of findings

There is evidence that WHO publications are being used by countries as authoritative sources for decision-making in a public health and policy-making context. This is especially true of guidance documents and authoritative publications.

In terms of WHO publications being used at the operational level, it is unclear the degree to which policies and practices are actually implemented, although some programmes have demonstrated success in that regard. Interviews, both internal and external, noted that WHO programmes are often not clear on who their target audience is, with a "traditional" view of WHO being an international standard and norm setting organization on the one hand, and others viewing its role as much more operational, focusing on institutional strengthening at the country level. It is clear that at the operational level, for example, training of health care officials may be required or to support the implementation of new policies, or information disseminated to that audience in a specific way relevant to their context. There are different target audiences along the causal chain and the evaluation found that there is no consensus or clarity on WHO target audiences for their publications, derivative products and possible implementation support.

Direct attribution of a single publication to a health outcome is difficult to assess at any level be it global, regional or national, given the causal chain and number of factors that influence outcomes. To better understand the causal chain in achieving health outcomes and role of publications, a more calibrated approach is required to assess programme impact versus impact from any one publication. That would require undertaking programme based evaluations that integrate an assessment of publications as one output of perhaps many.

In general, the evaluation found that there is room to improve the results derived from the publications that are produced. Better publication planning around target audiences and dissemination, more active dissemination and communication, and translation were some of the common themes that were identified as a means to improve the use and maximize the impact of WHO publications.

4.2 What is the perceived impact of WHO publications on the health policies, strategies and healthcare practices?

Findings:
- There is evidence that WHO programmes have had an impact at policy level in Member States;
- WHO guidelines are viewed as having the most impact at the health policy level;
- The evaluation was not able to draw conclusions on the impact at the practitioner level, with the exception of the Ebola emergency response; and
- It is difficult to determine the impact of publications *in isolation* of other programme activities

There is evidence that WHO programmes have had an impact at the health policy level in Member States. In the previous sections of this report, it was demonstrated that guidelines had very good reach and are found useful by the target audience. These two elements, reach and usefulness, are necessary pre-requisites to the actual use of the publication. According to the case studies and interviews, WHO guidelines are viewed as having the most impact at the policy level.

In terms of the programme case studies, examples were drawn that showed evidence of uptake of publications at the policy level. As an example, WHO plays both a secretariat role and expert role for the Decade of Action for Road Safety and the UN Collaboration on Road Safety. The Global Status Report on Road Safety 2015 listed the accomplishments of the programme as legislative changes in 17 countries. Given the amount of work by the programme, not only in producing policy and legislation oriented publications, but also with in-country support activities, it is likely that the programme and the Global Report had significant contributions to these outcomes. The quantifiable impact has been in reducing injury and mortality from road safety incidents: "*the number of road traffic deaths – 1.25 million in 2013 – has plateaued since 2007 ... despite the global increase in population and motorization and a predicted rise in deaths. This suggests that interventions implemented over the past few years to improve global road safety have saved lives*."[58]

Another case study, the patient safety programme, has also produced a significant body of knowledge comprising at least 95 publications that were reviewed. In that programme, one of the results identified was that 20,000 hospitals and 130 countries at Ministerial level signed up to improve hand hygiene. That is a result that can in all likelihood be attributed to many factors, one of which is WHO publications.

The case of the Ebola Emergency Programme is unique given the emergency context. In this case, the publications were focused on guidance and awareness. In respect to guidance, the case study found that despite some issues with timeliness, the guidelines were widely taken up when published. Interviewees especially mentioned guidelines in respect to infection prevention and control, decommissioning of sites, safe burial and contact tracing. The uptake was not universal, as in some cases, due to time delays or comparable expertise, some organizations had either developed their own guidelines or adopted others that were available. WHO did develop fast-tracking process for guidelines and is continuing to look at its emergency response. This is however a unique example where there was an almost direct link between the guidelines and their implementation in practice.

The document review also confirmed that guidelines are impactful at the Member State level. As an example, a WHO study[59] on antiretroviral (ARV) guidelines found that within 18 months of the publishing of the 2013 consolidated ARV guidelines, 100% of the focus countries adopted at least one major recommendation:
- 60% of focus countries adopted a CD4 count initiation of ≤500;
- 7% of focus countries recommend treating all at any CD4;

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58   WHO, Global Status Report on Road Safety 2015: Summary, page 2.
59   Doherty, M et al (2015). Rapid uptake and adoption of the WHO 2013 Consolidated ARV guidelines recommendations: paving the way to achieving 90/90/90 global target, Presentation at IAS 2015 Vancouver Canada.

- 93% of focus countries adopted the use of TDF + 3TC (or FTC) + EFV as preferred first-line therapy; and
- 60%-90% of focus countries implementing integration approaches.

Another external study of guidelines[60] looked more broadly, assessing the level of uptake depending on the strength of the recommendations in the guideline. This study assessed eight WHO guidelines consisting of 109 strong recommendations and 49 conditional recommendations, and uptake was assessed across 44 national guidelines (1,255 recommendations) from 20 countries. The study found that the uptake of WHO recommendations in national guidelines was 82% for strong recommendations and 61% for conditional recommendations.

The external survey also provided evidence that WHO publications are being used, as per the response below. External survey respondents provided some insights on the use of WHO publications at a general level, without specific references to types of publications. When asked if they have used information from a WHO publication in their work, 75% responded that they had either to a great deal or quite a bit.

External Survey Question 17f: Use

Question: Have you used the information from this WHO publication in your work?						
5 = A great deal	4 = Quite a bit	3 = Somewhat	2 = Very little	1 = Not at all	Mean	Std. Dev.
37.9%	37.2%	19.3%	4.8%	1 0.7%	4.07	0.91

The survey followed up with a series of other questions that indicated a high degree of use of whatever publication the respondents had used:

External Survey Question 20: Use

Question: Please mark your level of agreement with the following statements	
a. WHO publications are the authoritative source of health information.	82.8% agree/strongly; 13.9% somewhat; 3.3% disagree/strongly disagree
b. I have used a WHO publication to inform decision-making in clinical, public health and/or policy contexts.	85.2% agree/strongly; 12.3% somewhat; 2.4% disagree/strongly disagree
c. I have used a WHO publication to inform advocacy and/or to enhance programmes, training, research.	83.2% agree/strongly; 13.1% somewhat; 3.7% disagree/strongly disagree
d. I have adapted a WHO publication (e.g., modified to another medium, training, translation, etc.).	64.7% agree/strongly; 22.1% somewhat; 13.2 disagree/strongly disagree
e. I have used a WHO publication to improve my own clinical practice or performance.	65.5% agree/strongly; 21.3% somewhat; 13.1% disagree/strongly disagree

External survey respondents were also asked directly about the WHO Bulletin and WER:

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[60] Nasser, S.M.U. et al (2015) Strengthen of recommendations in WHO guidelines using GRADE was associated with uptake in national policy, *Journal of Clinical Epidemiology* http://dx.doi.org/10.1016?j.jclinepi.2014.11.006

Survey question: Please mark your level of agreement with the following statement	
The Weekly Epidemiological Record is used as an authoritative source for decision-making	76.3% agree/strongly; 22% somewhat; 1.7% disagree/strongly disagree
The WHO Bulletin is used as an authoritative source for decision-making	55.8% agree/strongly; 32.4% somewhat; 9.7% disagree/strongly disagree

Nonetheless, it has not been possible to quantify or qualify the impact of publications in isolation of other programme activities and their respective outputs that may be occurring, or the work of other entities. Programme based evaluations would provide the opportunity for a closer assessment of how different outputs, or combination of outputs, contribute to results.

4.3   What publications and type contribute significantly to improved health outcomes at the individual and community level? Which have not?

Findings:
*   The publications cited as having the greatest impact on health outcomes were either guidelines or technical documents.

The publications cited as having the greatest impact on health outcomes were either guidelines or technical documents, including world reports. The normative role is essential but impact on health outcomes also implies a role in implementation and there is a lack of consensus on the role of WHO in the support of implementation. Also, contribution to health outcomes is difficult to attribute in a direct manner to publications.

The external survey could only identify high level outcomes. The top three contributions made by the WHO publications that were identified were:
*   leadership on critical health issues (74.5%);
*   setting policy, norms and standards (73.1%); and
*   increasing stakeholder awareness (70.8%).

4.4   How can WHO foster better use of health information? Other mechanisms?

Findings:
*   Better use of health information would be achieved through better planning and dissemination as well as translating into other languages

There were a range of areas identified through interviews, case studies and survey that would foster better use of the health information produced by WHO. Some of these may appear repetitive, but the usage of a publication will not be optimized if it is not properly targeting the right audience, based on needs and reaching the people it is intended to reach. Therefore the responses align with the findings under reach and usefulness and can be categorized as follows:
*   **Planning**: improve audience targeting (segmentation) and how to reach them, and more active dissemination, matching products, formats, language and deliver to audience;

*   **Dissemination**: more use of social media and mobile apps, improve website in terms of searchability, introduce proper classification of publications, use communications to increase awareness of publications such as notifications/alerts, sign-up distribution lists; and

*   **Translation**: translation into other languages would improve reach and use.

5. What is the extent of implementation of WHO's publications policy and its influence on the impact of WHO publications?

5.1 Summary of findings

There have been significant developments in the WHO publications policy and procedure framework over the ten years of the evaluation period. Some milestone achievements include establishment of the Publishing Policy Coordination Group and the Guidelines Review Committee, and development of the WHO handbook for guidelines development, and most recently the guidelines on open access.

In general there is a fair level of compliance with WHO publication policies, however the level of compliance varies, which is deemed higher (although not fully compliant) at HQ, with variations across the regions.

The quality assurance of WHO publications is also inconsistent across the organization and types of publications. There is no formal monitoring of the impact of publications, although some programmes have made efforts.

One significant gap that has been identified is the need for a publication strategy that defines the role of publications in achieving organizational and programmatic goals, sets priorities, monitors compliance, and is set in a knowledge translation framework.

5.2 What is the level of awareness and knowledge of WHO management and staff of WHO publications policy?
Findings:

- There is some confusion over the term "WHO publications policy"; and
- According to the internal survey slightly more than half of internal survey respondents are well aware and know the publications policy and procedures.

Many interviewees noted confusion over what the term "WHO publications policy" actually meant. For the purposes of the evaluation, the WHO publications policy and accompanying procedures include the following:

- The Publications Policy as tabled at Executive Board; and
- Publication procedures as outlined in the WHO e-Manual Chapter VIII.

The table below outlines the different WHO documents that have been produced related to publications. Please see Annex K for a complete inventory of documents reviewed.

Table 10: Summary of WHO Publications Policy and Procedures

Publications Policy	
Executive Board 122/20, 6 December 2007, WHO publications, Report by the Secretariat	Broad policy statement touching on planning, content development, clearance, production processes, dissemination, archiving, evaluation, WHO identity and copyright and multilingualism
Executive Board 123/7, 14 April 2008, WHO publications policy, guidance on implementation and evaluation, Report by the Secretariat	Outlines strategies to be used in implementing WHO publications policy: mechanisms for approval, categorization of products; cost-effectiveness in production and dissemination, and enhanced support for publishing

Executive Board 129/4, 7 April 2011, WHO publications policy: report on implementation, Report by the Secretariat	Reports on establishment of PPCG in 2008 and progress made under each of the areas above as per EB123/7.
Executive Board, 121/6, 19 April 2007, Multilingualism: plan of action, Report by the Secretariat	Proposed actions on application of multilingualism in line with WHA resolutions and UN JIU recommendations
Procedures – WHO e-Manual Chapter VIII	
Section VIII.1: General	References EB 122/20; various information notes, e-learning courses on open access and using e-Pub
Section VIII.2: Planning and Content Development	WHO handbook for guidelines development, WHO style guide, WHO web style guide, various information notes, EB 121/6, ePub
Section VIII .3: Production	Guidance and checklist on accessible information, e-learning courses on accessible information and using e-Pub, WHO websites: principles and standards, standard printing formats-
Section VIII.4: Marketing and Dissemination	Resolutions WHA12.6; WHA22.8; WHA55.9; Links to e-licensing, WHO repository libraries and JIU report on revenue-generating activities JIU/REP/2002/6
Section VIII.5: Archiving	One information note
Section VIII .6: Copyright	Guidance for staff, information notes, staff rules, standing licence agreements, WHA 63.21WHO Strategy on Health Research; e-learning courses on open-access, respecting copyright and using e-Pub
Section VIII.7: Ethical issues	Guidelines for Declaration of Interest; Declaration of Interest Forms; Declaration of Consent Form
Section VIII.8: Use of logos	WHO Visual Identity guidelines; Forms requesting permission to reproduce WHO copyrighted material

The above table illustrates the understanding of WHO publications policy and procedures. This report also refers to publication strategy. A strategy by most definitions is a high-level plan that outlines the approach and method to achieve certain organizational objectives. Although there is a publication policy and many procedures, there is no overarching WHO publication strategy that integrates a knowledge translation framework (see Section 1.5).

According to the internal survey, slightly more than half of internal survey respondents are well aware and know the publications policy and procedures. It is difficult to determine if that is an appropriate percentage of staff given that not all staff are involved in the publication process. It is fair to assume that there was some self-selection bias in the internal survey, and only those interested in publications would have responded. If that is the case, then only half the people who are interested in the publication process are aware of the publications policy and procedures, which seems low. A review of the WHO intranet determined that the publication policy and procedures themselves are easily accessible, well documented and cross-referenced to supporting documentation and tools. If interested, a staff member can easily find them. **Annex K** presents a table of the publication procedures found in Chapter VIII of the WHO e-Manual on the WHO intranet.

Interviews and the internal survey also found varying level of awareness of the different elements of the publications policy and procedures. For example, according to the internal survey most respondents were familiar with the guidelines on the use of the WHO logo (84%), but much less familiar with the policy on open access (49.5%).

5.3   What is the level of training and information that is available and has been provided to WHO management and staff on WHO publications policy?

Findings:

- The information on publications policy and procedures is readily available on the WHO intranet but many people rely on colleagues as the main source of information;
- There have been significant levels of training of staff on publication procedures over the years; and
- There is room for improvement in the capturing of training information.

The information on publications policy and procedures is readily available on the WHO intranet but from interviews and case studies it seems that many people rely on colleagues as the main source of information on the publications policy and procedures. Interviews and document review also found that there has been significant levels of training on WHO publication procedures.

There are training courses and offerings on publications policy and procedures that continue to be assessed, revised and developed. There is a relatively high number of training participants each year (averaging over 550 a year over the three years that information was submitted, 60-70% female), but with almost no participation from the management level. Interviews indicated that at the Director level in the organization, time pressures can be intense and may be a contributing factor to low management turnout.

The data captured for the years that were reviewed varies. In some cases the number of participants were broken down by HQ, regional and country offices, gender and by staff grade (general service staff (G), professional staff (P) and management (D)), but in other years it is not captured. For example, the breakdown by staff grade was only captured in the 2013 data that was reviewed. In this case, interns were not counted in the total figures. In 2013 there were a total of 574 persons trained in what were classified as 15 different WHO Press courses. The staff grade was not captured for all trainings, but for the ones it was captured, there were 95 participants from staff grade G, 215 from staff grade P and none from staff grade D.

For 2010 and 2011, there was less detailed information captured. As an example, the following course were provided and the information was presented for two years. There was unclear information about the participants' organization (i.e., HQ, regional or country) and the breakdown by staff grades was not done numerically. There was breakdown by gender but that was not captured for the entire list of courses.

Table 11: Publication-related Training Course in 2010 to 2011 and Total Participants

Name of Course	Number of Participants (HQ, Regions and Country)
A practical approach to copyright	295
Outsourcing work to freelance editors	35
Writing a journal article	89
Basic proof checking	31
Briefing on WHO publishing process	418
Improving text revision skills	125
Writing for the Web	126

Name of Course	Number of Participants (HQ, Regions and Country)
	1119

As the Table 11 indicates, there were relatively high numbers of training participants. The numbers are not a unique count and it is likely that any individual may have participated in more than one training.

There is room for improvement in the capturing of training information. The data capture should be consistent, include the staff grade and gender as has seemed to have started but also be clear about length of course. Calculating person-training-days (i.e., length of course x number of participants) is a qualified measure of the amount of training.

5.4   How does the adoption of WHO's publication strategies influence the reach, perceived usefulness and use of publications?

Findings:
- The evidence is inconclusive;
- Bibliometric analysis determined that later publications were more likely to be cited, even after controlling for how long they had been available, but reasons for this are unknown.

The findings for this evaluation question were inconclusive. There is no evidence of WHO publication strategies. There are general and broad policy statements (i.e., the WHO publications policy) as noted by the Executive Board in reports submitted by the Secretariat (e.g., EB 120/22) and a range of guidelines, information notes and other documents that outline processes and procedures that have been consolidated into Chapter VIII of the WHO e-Manual (see Table 10). The gap identified by interviewees is the need for a publication strategy that defines the role of publications in achieving organizational and programmatic goals, sets priorities, monitors compliance, and be set in a knowledge translation framework.

The influence of the WHO publications policy on the impact of WHO publications is difficult to quantify, and a counterfactual analysis is difficult to undertake given the staggered period over which new policies and procedures were introduced. Through interviews and document review[61], it is certain that milestone achievements (e.g., the establishment of the Publishing Policy Coordination Group and the Guidelines Review Committee, the development of the WHO handbook for guidelines development, guidelines on open access, etc.).

In an attempt to find evidence of change over time, a multivariate analysis was conducted wherein a series of multiple linear regression models were constructed, with citation rate as the outcome, to identify the likely adjusted contributions of each factor toward impact and reach[62]. The sole significant factor associated with increased impact was with respect to peer-reviewed citation rate per year, and that factor was the year of publication. Specifically, later publications were more likely

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[61]   Various minutes from the meetings of the PPCG
[62]   The variables were year of publication, subject of document, product type, number of pages, number of languages published and if it was a flagship publication or not.

to be cited, even after controlling for how long they had been available. It was not possible to determine why or draw any conclusions from this finding.

5.5   Are there any gaps or weaknesses in the WHO's publications policy?

Findings:
- There has been progress made in putting in place a WHO publications policy and procedures since the decentralization of the publication function in 2000;
- There is lack of consistent compliance with WHO publications policy and procedures. This occurs across the organization but Regional Offices were identified as having particular difficulties;
- There are no enforcement tools to ensure compliance;
- Publication processes that are perceived as complicated or time-consuming and duplicated systems undermines the compliance with procedures as short-cuts and workarounds are often sought;
- There is no overarching publication strategy.

In summary, there are two gaps in the WHO publication function: compliance with procedures across the organization, and a lack of an overarching publication strategy that would integrate a knowledge translation framework.

Since the decentralization of the publication function in 2000, there has been an ongoing need to put in place new processes and systems. There has been significant progress made in terms of outlining an organizational publications policy, establishing overarching processes, such as the GRC, and promoting systems development, such as ePub. At the same time, however, these developments have not always been well received by staff. The ePub system was found to be universally unpopular with staff. The most prevalent comment was the duplication of electronic and hard copy approvals, which not the intent of e-Pub system. The publication procedures are viewed as comprehensive and complete by most interviewees, yet also viewed by some interviewees and survey respondents as complicated and bureaucratic.

Interviews indicate that progress has been made in regards to compliance, which is commendable given that there are limited or no tools for enforcement. However, interviewees indicated that compliance with the publications policy and procedures varies across the organization. Comments from interviews and the internal survey highlighted a bureaucratic procedure framework, an electronic platform that is undermined by parallel paper processes and lack of enforcement. These factors lead to incentives for short-cuts and circumvention of the system. This in turn can result in a range of other problems, such as variations in quality and delays.

There was no evidence of an overall publication strategy that sets goals, objectives and priorities, including monitoring the uptake of publications. Such a strategy should cascade throughout the organization, and take into account not only corporate goals but also specific programme goals and objectives in order to contextualize the role of publications. According to many interviewees, publications are often an end in themselves as opposed to a means to achieve a result. A more strategic approach to publications would help in moving the organizational culture to one of knowledge translation, where publications are an output used to achieve an objective.

This point has been recognized by the PPCG. In the minutes of their meetings[63] they have discussed the need for a publication strategy that should include: a situation analysis; clear goals and objectives for information production and dissemination, including relevance to WHO's strategic priorities as agreed with Member States, and the Sustainable Development Goals; appropriate consultation with and buy-in from across the Organization at all levels; emphasis on professionalism to ensure quality and alignment with industry and scientific, technical and medical publishers' standards, including appropriate and consistent use of technology for production and dissemination; appropriate oversight of content at all stages of development; appropriate allocation of resources, based on clear categorization and relevance to strategic directions; streamlined and consistent processes that ensure compliance with policy; and relationships with partners and donors, including leverage of existing experience and practice in information production.

5.6 How effective are the quality control mechanisms and monitoring systems in assessing use and relevance of publication production and impact (reach, usefulness and use)?

Findings:

- Quality is intertwined with compliance with policies and procedures, and that varies across the organization;
- Quality assurance depends on individuals working in the programmes, or there are existing centralized structures at some Regional Offices that can exercise some degree of quality assurance;
- In regards to monitoring, there is a lack of corporate monitoring information, even of the most basic variety;
- The present information management infrastructure at WHO is not currently able to capture the data necessary for monitoring an electronic publishing function.

Taking compliance with policies and procedures as a proxy indicator for quality, in general there is a fair level of compliance with WHO publications policy and the procedures set out in Chapter VIII of the e-Manual, despite varying degrees of awareness on the part of staff. This is not necessarily contradictory. As previously reported, many individuals rely on colleagues when publishing. While their own knowledge and awareness may be limited, there are others who can provide advice and guidance, thereby achieving higher levels of compliance than may be expected. There are variations in the level of compliance across the organization.

In regards to quality assurance, the GRC has made significant improvements in guideline development since its establishment in 2007 including the development and revision (2nd edition) of the WHO handbook for guideline development. There is evidence of training being offered on guideline relevant topics such as GRADE, systematic reviews and conflict of interest. There was no data reviewed by this evaluation in regards to the guideline specific training[64].

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[63] 25th meeting of the PPCG, November 2015. Although outside of the evaluation period, the content of this meeting was deemed relevant given it direct relation to the conclusions and recommendations of this report.

[64] This is perhaps due to the GRC organizing the guideline training, whereas the WHO Press does the organization of publication training.

Outside of guidelines, there are no other clear quality assurance mechanisms for publications beyond the necessary clearances, which also vary depending on publication. The PPCG has no authority to effectively monitor and enforce publication policies. Quality assurance therefore depends on individuals working in the programmes, or in some cases there are existing centralized structures at Regional Offices that can exercise some quality assurance. We have noted earlier however that the volume of publications makes it difficult to ensure quality across the board (see Section 3.3).

In regards to monitoring, the lack of monitoring information has been identified in each stage of this evaluation – under reach, use and usefulness. There is a lack of corporate monitoring information, even of the most basic variety, such as web analytics. There are some examples where monitoring activities have started for some partnership programmes and regional offices, but it is relatively new and not harmonized nor consistent across the organization. As previously noted, there are some programmes also monitoring uptake and implementation of publications (e.g., uptake and implementation of recommendations from guidelines in HIV and immunization, etc.).

There is a lack of a requirement to monitor publications, as well as an agreed approach and systems to do it. Robust monitoring requires data, and presently IRIS has serious shortcomings as an institutional repository that will hinder any information management and monitoring efforts in the future. The IRIS shortcomings were revealed while collecting data for the bibliometric analysis and include incorrect data entry including ISBN numbers[65], non-Roman alphabet characters are not legible, and multiple entries of same document to name a few. These shortfalls may indicate gaps in WHO's ability to publish electronically.

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[65]   It may be the case that the excel data exporting function in IRIS does not correctly export the data. The data that was received required considerable effort to clean.

6.   Conclusions

WHO produces a number of high quality, high impact publications. There is no doubt that WHO is a credible organization and that health professionals throughout the world look to it for science-based guidance and advice. However, opportunities for improvement do exist. WHO must strive to maximize the reach and impact it can have with the significant investment it is making in publications.

There were overarching comments received throughout the evaluation that WHO publishes too much and needs to prioritize its publications. That may be true, but the number of programmes in WHO is likely to grow and with it the need to publish. The global public health landscape is growing, not shrinking. What is clear however, is that resources will remain scarce and in order to maximize impact, resource allocation decisions will need to be more effectively made.

The following conclusions are presented by reach, use, usefulness and publications policy. In regards to **reach**, it was clear from the evaluation that there are mixed results in terms of the extent WHO publications reach their intended targeted audiences. There is a lack of basic monitoring information regarding the dissemination of WHO publications. There is evidence of out-dated and incomplete distribution lists when they do exist, and when quantitative information on reach does exist, it is limited in both time and scope. After consideration of all lines of evidence and findings, the general conclusion is that WHO publication are not fully reaching their intended audience, and during planning, all segments of the audience are not fully identified. Other important conclusions in regards to reach are:

- **Dissemination**: There is room for improvement in information dissemination. Before publications are initiated, there needs to be a more upfront planning on the purpose of the product, target audience(s), matching of formats and delivery methods to target audience(s), language and translation considerations and monitoring of the reach;

- **Targeting**: WHO generally targets national programme managers in Ministries of Health with technical information. The subsequent need for that knowledge to be adapted for the needs of other levels (e.g., policy makers, front-line practitioners, etc.) is less consistently addressed. This is reflective of the ongoing dynamic between WHO's "traditional" role as a technical, science-based, normative international organization, and the extensive needs of its members, including support at the implementation and operational levels. The result is that WHO products are often described as "too long, too technical" and need to be tailored to different audiences, for example, summaries of technical documents that are written in a more accessible, user-friendly format with a less technical language so they are more concise and clear.

- **Language**: Language is a barrier to reach, although the extent to which it is a barrier is difficult to determine. It would appear that for technical publications language is less of a barrier, but language is more of a barrier for publications that are aimed at policy-makers or operational/front-line workers. That may be because many technical professionals are comfortable in the English language, whereas front-line workers are more likely to require local languages. It should be noted that even the six official UN languages cover only half of the world's population, so while it is a good objective to have, it still falls very short of universal coverage.

Regarding **usefulness**, in general, WHO publications are perceived as being very useful. WHO is, however, facing an increasingly complex global health agenda which implies more needs, more stakeholders and more actors, without necessarily more resources. The frequent comments regarding WHO publications being either too long or too technical is an indication that there are important audiences whose needs are not being addressed by technical documents alone, and that derivative products for other target audiences should be planned upfront and produced. There are examples of planning occurring, but it does not appear to be a systematic, programmatic approach and is not necessarily part of the upfront publication planning process. The articulation of how publications are intended to support the achievement of organizational and programme objectives has to be more explicit.

Regarding **use**, there is evidence that some WHO publications are used by countries as authoritative sources for decision making and policy making. That is especially true of guidance documents, and authoritative publications such as WER. In general, there is room for improvement to maximize the return on investment of publications. Better publication planning around target audiences and dissemination, more active dissemination and communication, and translation were some of the common themes that were identified as a means to improve the use and maximize the impact of WHO publications.

Regarding WHO **publications policy,** there have been significant developments in the WHO publications policy and procedure framework over the ten years of the evaluation period. Some milestone achievements include establishment of the Publishing Policy Coordination Group (PPCG), the Guidelines Review Committee (GRC), and the WHO handbook for guidelines development, and most recently the guidelines on open access. One gap identified by interviewees is the need for a publication strategy that defines the role of publications in achieving organizational and programmatic goals, sets priorities, monitors compliance, and be set in a knowledge translation framework. Also, quality assurance has been found to be inconsistent.

7.   Recommendations

The broader context in which the recommendations are placed is that resources are scarce and in order to maximize impact, resource allocation decisions will need to be made so that priority products can be adequately translated and derivative products produced as needed to meet different target audiences within a programmatic area. Those decisions should be based on a rigorous planning process conducted with the context of a publication strategy that integrates a knowledge translation framework and takes into account organizational goals and priorities as well as specific programmatic objectives.

The following table presents each recommendation along with recommended specific actions.

Strategic Recommendation 1	Specific Actions
WHO should develop a **publication strategy** within a broader knowledge translation framework that provides the model for programmes to properly and rigorously plan, develop, disseminate and monitor their publications.	i. Establish an organizational **publications strategy within one year**. The strategy should incorporate a knowledge translation framework and encompass all types of programme publications, including external publications, and support publication priority setting and lay the framework for rolling out strategies at regional offices, clusters and departments. The strategy should be led by the highest levels of the organization. ii. Promote broader knowledge translation framework to all WHO staff through training, awareness raising and communications. iii. WHO programmes should determine their **role in providing publications in support of policy making and programme implementation**. This would help to achieve clarity on how best to impact health outcomes by including guidance, on policy and implementation matters. iv. Clarify the WHO publications policy, as established by EB 122/20, 123/and EB 129/4, by providing and promoting a coherent policy document and renewed guidance on its implementation and evaluation for the next five years. v. Promote **WHO procedures for publications**, as articulated in Chapter 8 of the WHO e-Manual, to ensure consistent, high quality WHO publications across organization.

Strategic Recommendation 2	Specific Actions
WHO Programmes should clearly identify **information needs and the target audiences** for their publications.	i. Formalize a **needs assessment process**, to be undertaken at the programme level, which ensures alignment of WHO publication approaches with target audience needs. ii. Promote an intra-WHO discussion aiming to establish **criteria to identify target audiences** for WHO publications. Consider defining a common approach to documenting the needs assessment and targeting process, within knowledge

Strategic Recommendation 2	Specific Actions
	translation framework.
	iii. Systematically identify and prioritize target audiences and needs, and plan to address those needs by **tailoring publications** (e.g., more use of derivative products, producing shorter, less technical versions of lengthy technical documents to increase usefulness, produce in multiple languages, etc.) to target groups (such as policy makers and front-line practitioners, especially those in developing countries) to ensure relevance and usefulness and thereby maximizing the results from investment.

Strategic Recommendation 3	Specific Actions
WHO should develop a more proactive dissemination strategy.	i. Create an **active dissemination strategy** to promote the "pull" dissemination of publications, as well as the "push" or active dissemination for different types of documents. This would include dissemination planning, delivery channels, targeting and matching formats, language and delivery to targets. In countries/regions with unreliable or restricted internet access, consider appropriate dissemination approaches, which should include hard copy distribution.
	ii. Revise dissemination mechanisms (e.g., country office involvement, publications promotion, etc.) to **promote and support policy making and programme implementation.**
	iii. Keep an accurate, valid **community of publication users** (e.g., mailing lists, etc.).
	iv. Enhance WHO **foundational information management tools** to a standard befitting a knowledge-based organization by reviewing the functionality of:
	• **The Institutional Repository for Information Sharing (IRIS)** to ensure it is accurate and up-to-date, and therefore more useful. Potential approaches include: reviewing functionality, procedures and quality assurance of IRIS; developing clear definitions, inclusion and exclusion criteria, procedures, quality assurance mechanisms and review processes for IRIS; and promoting awareness of IRIS capability.
	• **Current WHO website** to increase searchability and website usability (e.g., ease of use of website, the placement of important information in appropriate areas). Potential approaches include: providing links between more popular publications (i.e., guidelines and flagship products) and other less-viewed documents and adding mechanisms to enhance website searchability

(e.g., effective WHO search engines, improved online publications directory and metadata, etc.).

Strategic Recommendation 4	Specific Actions
WHO should better integrate quality assurance throughout the entire publication process, from initial planning to finalization.	i. **Review quality assurance compliance systems** and determine gaps in quality assurance function across programme areas and major offices. Identify common procedures and systems for monitoring. Reconsider role of Publishing Policy Coordination Group (PPCG), and/or clarify commitment and accountability of senior and executive management to quality assurance, at both HQ and Regional Offices.
	ii. Encourage leadership and senior management to commit to **enforce compliance** with publication policies.
	iii. Introduce/maintain **publication policies training** for relevant employees in HQ and ROs. Encourage attendance from Director Level (management) staff. Assess link between training and compliance.
	iv. Review publications systems and procedures to identify **barriers and constraints to compliance**. Increase flexibility of e-Pub to suit varying needs of areas, while maintaining quality assurance and publications standards. Eliminate system duplications (i.e., use of paper-based and electronic systems at the same time).
	v. To support quality assurance throughout the entire publication process, assess the need and function for publication process quality assurance authorities and **resource those positions** as required.

Strategic Recommendation 5	Specific Actions
WHO should develop and implement an M&E framework to provide **monitoring information** on the reach, uptake and impact of WHO publications.	i. Establish a **monitoring system** to track dissemination, uptake and reach of WHO publications. Create a monitoring approach to track readership, possibly using web analytics. Consider end-of-publication surveys on webpages to track use and usefulness
	ii. Integrate the assessment of the impact of WHO publications as a cross-cutting component into future WHO **programme evaluations.**

Strategic Recommendation 6	Specific Actions
Programme publication strategies should include **translation plans** that are	i. Define translation needs and plan **translation strategies** in advance of publication production, irrespective of apparent resource constraints at that stage. Resource requirements

based on programme information needs assessments	should be contemplated by programmes as part of their programme strategies and as part of their information needs assessment

ii. **Promote translation in local languages**, including through partnering with local NGOs, academic institutions, government agencies, etc.