

# The evaluation process for vector control products

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INFORMATION NOTE

The WHO process for the evaluation of vector control products has been revised to better meet the needs of countries endemic for, or at risk of, vector-borne diseases. The revised process came into effect on 1 January 2017 and is designed to accelerate product evaluation to support the continued scale up of core malaria vector control interventions, to strengthen vector control for neglected tropical diseases, and to address key challenges, such as emerging vector resistance to insecticides.

The key objectives of the revised process are to:

1. Enable access to safe, effective and high-quality vector control products;
2. Enhance evidence-based guidance to promote best use and management of vector control tools, technologies and approaches;
3. Promote product quality throughout the product's life cycle.

Under the revised process, the evaluation pathway to be followed is determined by whether or not a product is part of a class with an existing WHO policy recommendation. A policy recommendation is a position statement or recommendation issued by WHO, the most recent of which takes precedence over any previously issued recommendation.

Products covered by a policy recommendation will follow the *Prequalification Pathway*, while all others will follow the *New Intervention Pathway* to validate whether the product has public health value. In the latter case, WHO will issue a policy recommendation once the product's public health value has been validated. Both pathways involve the assessment of supporting data and inspections, and are designed to ultimately result in the prequalification of a product. This prequalification is communicated through the product's 'listing'.

The purpose of this information note is to describe the revised evaluation process following the transition from the WHO Pesticide Evaluation Scheme (WHOPES) to the WHO Prequalification Team (PQT), including a description of the role of the Vector Control Advisory Group (VCAG) as part of this process. It outlines the two pathways and their associated components, and is meant to guide interactions between product developers/manufacturers and WHO.

## THE EVALUATION PROCESS

Under the revised WHO process, the evaluation of vector control products (Fig. 1) commences when a product developer/manufacturer submits a pre-submission package for a vector control product via the single entry portal managed by PQT (pqvectorcontrol@who.int). The pre-submission package must include a draft product label that specifies the intended product claim(s).

A Pre-Submission Coordination Committee (PCC) consisting of staff from PQT, the Global Malaria Programme (GMP) and the Department of Control of Neglected Tropical Diseases (NTD) will review the pre-submission package to determine whether: a) the product has potential for use in disease control programmes; and b) the product falls within an established product class (Fig. 2). For further information on product classes and associated policy recommendations for malaria vector control products please refer to the GMP information note (1); policy recommendations for neglected tropical diseases will be made available on the VEM-NTD website at [www.who.int/neglected\\_diseases/vector\\_ecology/en/](http://www.who.int/neglected_diseases/vector_ecology/en/).

Based on this review, the PCC will decide whether the product is eligible for WHO evaluation and, if so, which of the two evaluation pathways should be followed. The PCC will provide feedback through PQT to the “applicant” (a product developer/manufacturer who has submitted a pre-submission package to WHO), describing the applicable process and rationale for the determination. For each pathway, a point of contact will be identified in the respective WHO Department to guide the applicant through the process. The applicant should then submit a full application to PQT or to the WHO secretariat of VCAG, as directed.

FIG. 1:

**Overview of the WHO process for the evaluation of vector control products**



FIG. 2: Overview of vector control intervention types and product classes for vector control products, including a) the applicability of WHO policy recommendations and b) related assessment pathways under the revised WHO evaluation process. Note that some products have a specific product claim that distinguishes them from other products of the same class.

Malaria vector control products assessed through revised evaluation process								
Intervention types	Insecticide-treated nets	Indoor residual spray products	Mosquito larvicides	Products providing personal protection	Space spray products	Aircraft disinsection products	Molluscicides	Rodenticide
Class	Pyrethroid-only nets including LLINs: <ul style="list-style-type: none"> <li>Covered by existing policy</li> <li>Eligible for PQT assessment</li> </ul>	OP, organochlorine, carbamate or pyrethroid formulations: <ul style="list-style-type: none"> <li>Covered by existing policy</li> <li>Eligible for PQT assessment</li> </ul>	OP, benzoylurea, spi-nosyn, juvenile hormone mimic, or containing Bti alone or with BspH: <ul style="list-style-type: none"> <li>Covered by existing policy</li> <li>Eligible for PQT assessment</li> </ul>	Topical repellents for personal protection: Icaradin, DEET, IR3535 <ul style="list-style-type: none"> <li>Covered by existing policy</li> <li>Eligible for PQT assessment</li> </ul>	Indoor space spray pyrethroid formulations, outdoor space spray with OP and pyrethroid formulations: <ul style="list-style-type: none"> <li>Covered by existing policy</li> <li>Eligible for PQT assessment</li> </ul>	Pyrethroid-based AIs and products (e.g. d-phenothrin, IR trans-phenothrin and permethrin): <ul style="list-style-type: none"> <li>Covered by existing policy</li> <li>Eligible for PQT assessment</li> </ul>	Recommended single, fast-acting compound (niclosamide). New similar products: <ul style="list-style-type: none"> <li>Covered by existing policy</li> <li>Eligible for PQT assessment</li> </ul>	Anticoagulants and fast acting products applied with or just after insecticides (for flea control) in outbreaks: <ul style="list-style-type: none"> <li>Covered by existing policy</li> <li>Eligible for PQT assessment</li> </ul>
	Pyrethroid plus synergist (PBO) nets: <ul style="list-style-type: none"> <li>Covered by existing policy limiting deployment to pilot exploratory implementation</li> <li>To be reviewed by ERG in June 2017</li> </ul>	Fast-acting insecticide formulations: <ul style="list-style-type: none"> <li>Covered by existing policy</li> <li>Eligible for PQT assessment if comparative entomological effectiveness compared to the approved product classes can be demonstrated</li> </ul>	Larvicide not meeting above classification: <ul style="list-style-type: none"> <li>Not covered by existing policy</li> <li>To be assessed by VCAG</li> </ul>	Products designed for personal protection not meeting above classification: <ul style="list-style-type: none"> <li>Not covered by existing policy</li> <li>To be assessed by VCAG</li> </ul>	Space spray products not meeting above classification: <ul style="list-style-type: none"> <li>Not covered by existing policy</li> <li>To be assessed by VCAG</li> </ul>	Aircraft disinsection products not meeting above classification: <ul style="list-style-type: none"> <li>Not covered by existing policy</li> <li>To be assessed by VCAG</li> </ul>	Aircraft disinsection products not meeting above classification: <ul style="list-style-type: none"> <li>Not covered by existing policy</li> <li>To be assessed by VCAG</li> </ul>	New molluscicide products not meeting above classification: <ul style="list-style-type: none"> <li>Not covered by existing policy</li> <li>To be assessed by VCAG</li> </ul>
	Non-pyrethroid insecticide nets: <ul style="list-style-type: none"> <li>Not covered by existing policy</li> <li>To be assessed by VCAG</li> </ul>	Slow-acting insecticide formulations: <ul style="list-style-type: none"> <li>Not covered by existing policy</li> <li>To be assessed by VCAG</li> </ul>	Formulations containing an IGR or sterilizing agent/s: <ul style="list-style-type: none"> <li>Not covered by existing policy</li> <li>To be assessed by VCAG</li> </ul>		Formulations containing an IGR or sterilizing agent/s: <ul style="list-style-type: none"> <li>Not covered by existing policy</li> <li>To be assessed by VCAG</li> </ul>		Formulations containing an IGR or sterilizing agent/s: <ul style="list-style-type: none"> <li>Not covered by existing policy</li> <li>To be assessed by VCAG</li> </ul>	

**Abbreviations**

- ERG: Evidence Review Group
- IGR: Insect Growth Regulator
- OP: Organophosphate
- PQT: Prequalification Team
- VCAG: Vector Control Advisory Group

## Prequalification Pathway

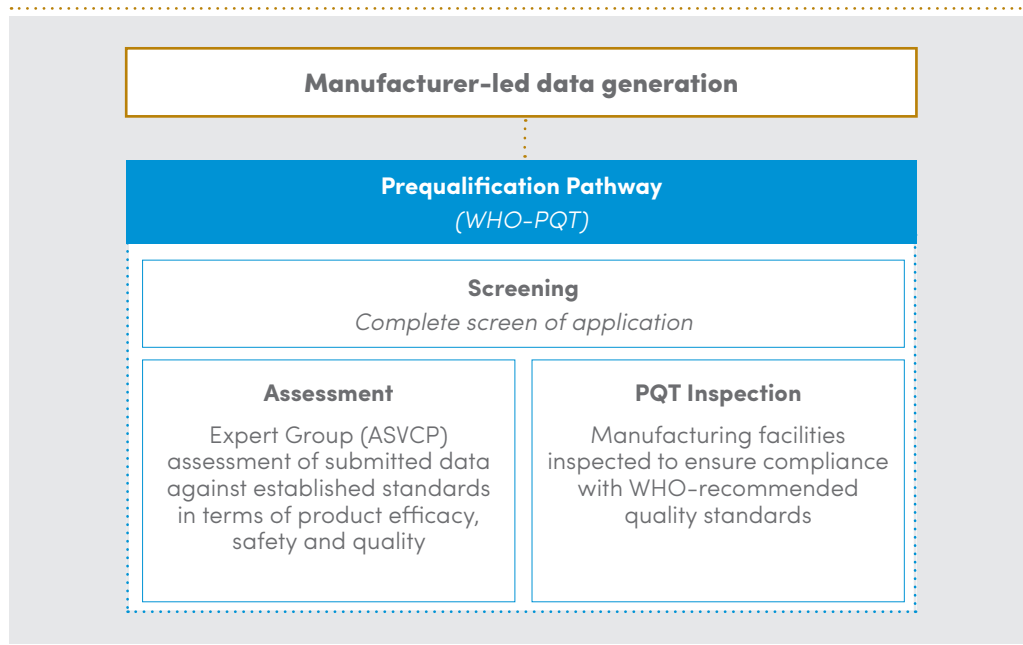
Products categorized by the PCC as belonging to a class for which a WHO policy recommendation has been issued will enter the *Prequalification Pathway* (Fig. 3). The *Prequalification Pathway* is managed by PQT under the WHO Department of Essential Medicines and Health Products (EMP).

The applicant will need to provide PQT with a full product dossier consisting of safety, efficacy and quality requirements as elaborated in the PQT-VC procedure currently under development. Once submitted, the application will be screened for completeness. If the application is deemed complete, two parallel activities will commence: 1) assessment of the application by experts at the Assessment Session for Vector Control Products (ASVCP); and 2) inspection of the manufacturing facilities to ensure compliance with WHO-recommended quality standards.

PQT's decision on whether to prequalify the product will be made based on the review of the submitted application and the outcome of the inspection procedure. Once the product is prequalified, the applicant will be informed and the product will be listed on the WHO PQT-VC website (<http://www.who.int/pq-vector-control/en/>).

PQT-VC will be responsible for the maintenance of the product throughout its life cycle. This includes product change management (formulation and labelling), post marketing surveillance, product testing, and periodic monitoring of manufacturing sites.

FIG. 3:  
**Key steps of the Prequalification Pathway**



## New Intervention Pathway

Products that do not fall within an established class will enter the *New Intervention Pathway* (Fig. 4). The *New Intervention Pathway* is jointly managed by GMP and NTD; it also requires the close involvement of PQT, and relies on assessments and advice from the VCAG on new vector control tools ([http://www.who.int/neglected\\_diseases/vector\\_ecology/VCAG/en/](http://www.who.int/neglected_diseases/vector_ecology/VCAG/en/)).

FIG. 4:  
**Key steps of the New Intervention Pathway**



The product concept will be reviewed to determine the data required to: a) validate its public health value; b) substantiate the new product class and associated claim(s); and c) support the formulation of a WHO policy recommendation. The applicant will be advised on the data requirements and test procedures to be used, including guidance on appropriate trial design(s). WHO will also guide the applicant to undertake hazard/ risk assessments where applicable and to develop product specifications.

Based on this guidance, the applicant will need to develop study protocols and SOPs for the entomological and epidemiological evaluation of the product, identify testing sites and undertake the studies. Regular interaction with the WHO secretariat of VCAG during protocol development and study implementation is encouraged in order to ensure that product data meet the required standards. This will ensure that VCAG can promptly assess the data when they become available. The efficacy, safety and quality standards for the new product class will be established as part of the process. Once all of the requested entomological and epidemiological data have been reviewed, VCAG will provide a recommendation to WHO on the public health value of the product class. In parallel, the PQT-VC inspection process will be initiated, timed so that its completion coincides with the publication of the WHO policy recommendation.

VCAG's final evaluation of the data will also include the development of a target product profile (TPP). WHO will develop evaluation standards for the product class, including guidelines and performance criteria, to facilitate the evaluation of other products within this class once they become available.

If VCAG provides a positive recommendation on a product's public health value to the relevant policy advisory committee – STAG for neglected tropical diseases and MPAC for malaria – and it is endorsed by either, WHO will issue a policy recommendation and operational guidance. The product will then be deemed "first in class" for a new product class or product claim. Development of a WHO policy recommendation and operational guidance for use of the new product will draw on the normative functions performed by NTD or GMP; these will be developed in parallel so as to ensure both types of guidance are made available at the same time. Once a policy recommendation has been issued, a decision to prequalify the product will be made based on the assessment and inspection.

Information and data generated for VCAG's assessment will be reviewed with PQT throughout the process, and, once complete, the contents of the full application will be transferred to PQT for the management of post-prequalification activities. Entomological data generated as part of the evaluation process are consistent across both pathways, thereby avoiding the duplication of reviews or additional data requirements.

## CONVERSION OF WHOPES RECOMMENDATIONS TO PQT LISTING

To facilitate the migration of products to the revised evaluation system, products with

预览已结束，完整报告链接和二维码如下：

[https://www.yunbaogao.cn/report/index/report?reportId=5\\_26319](https://www.yunbaogao.cn/report/index/report?reportId=5_26319)

