Mapping the Patient Journey
Towards Actionable Beyond the Pill Solutions for Noncommunicable Diseases
As multidisciplinary health stakeholders work towards the World Health Organization’s (WHO) Sustainable Development Goal of reducing premature mortality from noncommunicable diseases (NCDs) by one-third by 2030, we must ensure that we accurately understand the complexity of the patient journey, integrate and amplify the patient voice.

Pfizer Upjohn Research, Development and Medical developed Mapping the Patient Journey Towards Actionable Beyond the Pill Solutions (MAPS), a multi-stage framework to identify validated data along the patient journey. MAPS is a critical part of Upjohn’s patient-centric approach to managing NCDs with “beyond the pill” solutions that empower, support and enable patients and their healthcare providers. When applied at touchpoints along the patient journey, these solutions can improve awareness to better engage patients to predict and prevent risk factors that lead to negative health consequences.

The MAPS initiative can help contribute to the management of NCDs through multi-sectoral, patient-centric, locally-relevant solutions. There is still much work to be done to convey the importance of the patient voice in NCD care to healthcare providers, healthcare systems and policy makers. Upjohn is proud to play a critical role in this endeavor.

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Scope and usage of this document

Local information and insights are critical when designing solutions that would reduce the burden of NCDs within a community. This white paper describes Mapping the Patient Journey Towards Actionable Beyond the Pill Solutions (MAPS), Pfizer Upjohn’s unique approach to mapping key data along the patient journey. It is intended to be used to understand MAPS and utilize the resource for cross-functional strategic planning of “beyond the pill” solutions for patients, their healthcare providers and the health systems that deliver NCD care.

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Introduction

Noncommunicable diseases (NCDs) are a health crisis responsible for over two-thirds of all deaths worldwide each year. They cause significant morbidity and disability, disproportionately affecting people in low- and middle-income countries (LMICs). NCDs are varied and complex, and require solutions that balance a variety of issues, including the prevention of risk factors and the delivery of quality, cost-effective healthcare.

Medicines, which form a key part of quality healthcare, need to be used optimally to gain desired health outcomes for NCDs. To achieve this, there is a need for a patient-centric approach that shifts the focus from the disease to what is needed along the patient journey, from the prevention of risk factors to the control of established illness. Integrated in this approach are “beyond the pill” solutions that empower, support and enable patients and their healthcare providers. When applied at touchpoints along the patient journey, these solutions can improve awareness to better engage patients to predict and prevent risk factors that lead to negative health consequences. Appropriately timed assessment and intervention can prevent disease progression and control the burden of NCDs. This combination of treatment and “beyond the pill” initiatives, focused on promoting wellness and disease prevention, can lead to better outcomes.

Mapping the Patient Journey Towards Actionable Beyond the Pill Solutions (MAPS) is a multi-staged framework devised by Pfizer Upjohn (“Upjohn” hereafter) Research, Development & Medical to identify validated data along the patient journey. These data form the basis of scientific recommendations used to inform cross-functional strategic planning of “beyond the pill” solutions for patients, their healthcare providers and the health systems that deliver NCD care.

“MAPS is integral to delivering quality, cost-effective healthcare.”
Four out of every five people with an NCD live in a LMIC.\(^5\) The majority (85%) of premature NCD deaths occur in LMICs.\(^1\) In addition, nearly half of all NCD deaths in LMICs occur in individuals under the age of 60.\(^6\) The result of this large NCD burden is the development and perpetuation of poverty in these countries.\(^5\) Poor populations with a high burden of NCDs are those who have the least access to public health services, pay the greatest proportion of their income for healthcare and are the group most often impoverished by the cost of care.\(^6\) The main drivers for NCDs in LMICs are population growth, urbanization and the attendant emergence of modifiable risk factors. As people living in LMICs achieve a better standard of living, with more disposable income to spend on tobacco, alcohol, transport and higher-calorie foods, there is expected to be a rise in the prevalence of NCD risk factors.\(^6-8\)

There are many significant challenges to the provision of effective and efficient healthcare in the LMICs. Health systems in these regions are often fragmented with multiple stakeholders and have not fully adapted to the long-term nature of chronic disease management (in contrast to the acute approach to managing infectious diseases). Inadequately equipped primary care systems in several LMICs do not usually include chronic disease prevention programs such as routine screening. This means that patients are often diagnosed late in the course of the disease (especially for conditions that are initially asymptomatic such as hypertension and dyslipidemia), limiting the number of available treatment options and their effectiveness. The problem is exacerbated by inadequate assessment or inaccurate diagnosis by healthcare professionals (HCPs) with gaps in training and limited availability of diagnostic tools and techniques. Lack of adequate consultation time with overburdened HCPs, the stigma associated with certain conditions, and poor socioeconomic conditions also contribute to poor health behavior and suboptimal adherence to therapy in LMICs.\(^8\)
If resources are unlimited, any national effort could arguably prevent and control NCDs in any country. However, even with unlimited funds, the results of a strategy that is not customized to the prevailing issues are likely to come at a high cost without being efficient or timely. Customized strategies could, for example, emphasize prevention over control (screening for risk rather than optimizing treatment) to address drivers that are specific to that community. This requires proper planning, coordination and cooperation across multiple sectors. A fundamental need is assessment of the prevalent issues leading to the generation of data, which can inform any strategy.

In 2014, the World Health Organization (WHO) Regional Office for Europe developed a program consisting of conceptual work, country assessments and policy papers on health system strengthening (HSS) that could rapidly improve NCD outcomes. The objectives of the country assessments are to deliver policy recommendations for HSS; to understand health system challenges and approaches to overcome them; and, to build capacity for HSS activities. These assessments also examine innovations and good practices to be used for learning across borders, and end with policy recommendations specific to the local context. The results of the country assessments will feed into national processes for defining country-level action plans on HSS and NCDs. The concepts outlined by this WHO program in Europe present useful building blocks to define an approach for LMICs.

The focus on the local context also presents an opportunity to meet a key clinical need. Clinical practice has often been guided by recommendations based on data from Europe or North America. These data may have included ethnicities based on ancestry as surrogates. However, the guidance is not fully relevant to local needs. It would not be appropriate for regions as a whole or individual countries to follow traditional guidelines published in Europe or North America. Locally-relevant data such as ethnicity (including physiological and cultural differences); dietary practices; access to and availability of quality health services and medicines; and, NCD outcome data can be used to contextualize guidelines to the local setting.

The limitation of the WHO program is its focus on HSS and a weaker emphasis on the patient. Some people may not even be aware that they have an NCD or that they are at risk, especially when there is no obvious symptom, such as for hypertension and dyslipidemia. People living with NCDs (PLWNCDs) are often multimorbid and may therefore interact with a variety of healthcare workers for their care; non-medical staff may be involved. The patient thus becomes the constant among variables in the health system. This highlights the importance of placing the patient at the center when defining an approach to NCD care and of elaborating a patient journey for a given NCD.
Need for a Patient-Centric Approach

Patients in LMICs are becoming increasingly engaged with their healthcare decisions, with enhanced access to healthcare information and the requirement to pay significant out-of-pocket costs for healthcare. A patient-centric approach involves and enables participation of the patient in their own care. Also referred to as person-centric or people-centric, this integrated approach combines the expertise of HCPs with feedback from patients and their families. The WHO has developed a framework on people-centered health that shifts the focus from diseases to the needs of people at the center of the health systems. This framework, introduced at the 2016 World Health Assembly, permits health systems to respond better to a range of challenges to health and wellness, from unhealthy lifestyles and ageing populations, to disease outbreaks and other healthcare crises. The WHO notes that such a framework can result in improved access to care, improved outcomes, better health literacy and self-care, increased satisfaction with care, improved job satisfaction for health workers, and reduced costs.

This patient-centric approach is being progressively recognized as a way to make decisions for the patient that are evidence-based and responsive to the patient’s preferences, needs and values that will result in the best outcomes.

In striving for a more patient-centric approach, it is important for health systems to make decisions based on data-driven insights. Providing reliable local data on the patient journey has benefits for not only patients, but also HCPs and health service managers. While patient journeys for NCDs, including awareness, screening, diagnosis, treatment, adherence and control or remission, are documented in developed countries, they remain less well-understood in LMICs. Another important challenge to research in the LMICs is the lack of data for evaluation, particularly high-quality data. Therefore, a key step in the direction of patient-centricity is to create a framework to gather, assess and validate data anchored in the patient journey.
Introducing MAPS

The Mapping the Patient Journey Towards Actionable Beyond the Pill Solutions (MAPS) initiative has been designed by Upjohn as part of our global commitment to help reduce premature mortality from NCDs by one-third, towards the attainment of Sustainable Development Goals. MAPS recognizes that a patient-centric approach is required to generate rational scientific recommendations to our cross-functional strategic planning process. This will ultimately deliver actionable “beyond the pill” solutions tailored to the needs of patients. It is useful to consider the patient journey to understand these needs.

Upjohn has articulated the patient journey as a simple, linear five-stage process so that health systems and healthcare providers have the tools and knowledge required to intervene along different stages of NCD management (Figure 1). This process includes opportunities to help manage and educate on the risk of NCDs before the disease establishes itself. Later, healthcare providers need to screen, diagnose and treat presenting and established NCDs in an evidence-based manner, and help keep patients adherent to their prescribed treatment. This also includes the delivery of specific education and providing the support needed by patients to make decisions and participate in their own care.

MAPS utilizes a three-staged approach to develop its framework:

1. Data mining using a semi-systematic review combined with dynamic evidence-mapping.
2. The mined data is validated by local experts.
3. Periodic review and refresh to incorporate time-trends in data.

The MAPS framework will combine epidemiological data with real-world insights to inform practical recommendations for targeting the most effective touchpoints along the journey of patients with NCDs in LMICs (Figure 2). The aim is to provide a locally-relevant, scientific and evidence-based “bottom-up” approach for driving decisions on NCD action plans by: (1) Developing research priorities based on evidence gaps; (2) Monitoring progress of initiatives based on patient journey evidence maps; (3) Evaluating local progress and trends of NCDs to guide policy making; and, (4) Prioritizing interventions in resource-limited settings.
Across selected LMICs (in Africa and the Middle East, South East Asia, and Latin America regions), there will be four initial NCDs of focus for MAPS. These are hypertension, dyslipidemia, depression and pain (Figure 3). Cardiovascular disease (CVD) is important because it accounts for 44% of all NCD deaths, and hypertension and dyslipidemia are two key modifiable risk factors for CVD.

In the context of the current coronavirus pandemic, those with CVD are at risk of severe illness or death from COVID-19. Mental health has come into focus during the coronavirus pandemic in the context of enforced isolation, fear of infection and stress associated with the economic impact of income loss. It is also important to note that prioritization of resources to manage and the need for physical distancing has meant that healthcare services for the prevention and treatment of NCDs have been significantly disrupted, which could contribute to a future epidemic of NCDs, especially in less robust healthcare settings such as those in LMICs.

Figure 3. Initial focus for MAPS

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Awareness - Hypertension, Dyslipidemia
Screening - Pain - Chronic, Neuropathic
Diagnosis - Depression
Treatment - Adherence
Current and Future Applications

Cross-country and regional synergies based on common themes identified through MAPS will be used to drive discussions and collaborative strategies needed to accelerate the momentum on controlling NCDs in LMICs. By utilizing common touchpoints for the patient, health system interactions, such as awareness, screening, diagnosis, treatment, adherence and control or remission, the patient journey will provide a common language that crosses borders between disease areas and between countries. Therefore, the applicability of MAPS will not be limited by a specific disease state or geographic location. In addition, MAPS will permit the quantitative benchmarking of different aspects of the patient journey. This may reveal suboptimal outcomes, which could be improved by targeting disease-specific priorities. The approach may have utility for future projects beyond NCDs or LMICs.

Although initially focused on dyslipidemia, hypertension, major depressive disorder and pain (chronic and neuropathic), the MAPS initiative will provide a framework for evaluation of other NCDs as well (e.g., diabetes and cancer), both in LMICs and in high-income countries. Data obtained using the MAPS process can be utilized to create a visual dashboard of data along the patient journey at the touchpoints of prevalence, awareness, screening, diagnosis, treatment, adherence and control. This will show where the gaps are, informing interventions to target disease-specific priorities and address these gaps.

Local evidence is a vital component of the MAPS process. This allows identification of region- or country-specific issues. Using local evidence also means that any solution that is developed is directly applicable to patients and the healthcare systems that will use them. Regular monitoring then provides data on progress, with the opportunity to modify interventions and initiatives as required. Ultimately, local policies based on locally-informed modifications of international guidelines should contribute to the optimization of patient care and effective multi-sectoral, cross-functional healthcare delivery.

A recent analysis suggests that achieving the Sustainable Development Goal target of a one-third reduction in premature mortality from NCDs might be feasible in high- and upper-middle-income countries, but remains a challenge in LMICs. A lack of baseline data in these countries impedes meaningful measurement of progress. The MAPS initiative is designed to address this deficit and improve NCD management in LMICs, which in turn should contribute to achievement of the Sustainable Development Goals.
Conclusion

Mobilizing a comprehensive response to reduce premature NCD-related deaths is complex. It needs a health system-wide approach; there must be multi-sectoral involvement; and, above all, it is imperative that it be patient-centric. Moreover, it must be data driven. As noted by the WHO, solutions for preventing and managing NCDs must be highly cost-effective, and the key to success is comprehensive and integrated action at a local country level. This is especially the case in LMICs.

By facilitating local data collection to inform multi-sectoral, patient-centric, locally relevant solutions, the MAPS project should contribute to advances in the management of NCDs in LMICs.
References


