WORLD DIABETES FOUNDATION

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مستشفى الأوغستا فكتوريا-المُطّلع

The Power of Partnerships: Reflection on the 20 Year-Journey Fighting Diabetes in Palestine

Report | June 2022

- Ministry of Health, State of Palestine (PMoH)
- Juzoor for Health and Development
- United Nations Relief and Works Agency (UNRWA)
- Augusta Victoria Hospital (AVH)
- DanChurchAid (DCA)
- World Diabetes Foundation (WDF)

FORWARD

It is with pleasure and appreciation that I present this booklet on the Palestinian National Diabetes Program (PNDP). The Program's design and implementation reflect a success story contributing towards building the Palestinian health care system and improving health status in a volatile political and economic context.

This booklet covers the outcome of over two decades of individual or collective persistent work among key partners for the benefit of the health sector in Palestine and in particular the health of diabetic Palestinians. Without input from key stakeholders, the instituting of the PNDP would not have materialized. All partners exhibited high commitment to make this a success with the far-reaching positive impact seen now and envisaged to continue in the future. The funding support by the World Diabetes Foundation (WDF), its expertise, and cumulative input in Palestine over the last two decades have been key in conceptualizing and implementing the PNDP. Its consistent and incremental contribution towards diabetes prevention and treatment have positively impacted the Palestinian health care provider's abilities to better serve Palestinian diabetics.

UNRWA's input as a partner and key provider of health services to Palestinians was imperative to ensure standardization across providers and to enable exchange of know-how and experiences. Juzoor's leadership in its outreach activities, overseeing the implementation of the PNDP as well as in the production of this booklet is commendable. Support and cooperation by related staff of the Palestinian Ministry of Health in implementing the PNDP have been crucial for increasing the reach and provision of diabetes services.

Special gratitude to all those involved in the write-up of this booklet, which provides us with valuable information on what impacts partnerships within a country and between local and international organizations. The booklet is written by the PNDP implementers in a coordinated and complementary manner showcasing their input and implementation towards the impact and sustainability of the PNDP. It reflects how cumulative work through phases with stakeholder involvement impacts effectiveness and efficiency towards developing a national diabetes program. It is a valuable addition to literature for those interested in building a consolidated and sustainable response to Non Communicable Diseases (NCD) challenges in Palestine, in the Middle East and North Africa region, or in other humanitarian settings.

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January 2023

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Glossary of Abbreviations & Acronyms

AVH	Augusta Victoria Hospital
CBO	Community-Based Organization
COVID-19	Coronavirus 2019
DCA	DanChurchAid
DCCM	Diabetes Comprehensive Care Model
DM	Diabetes Meliitus
GDM	Gestational Diabetes Mellitus
HbA1c	Glycosylated hemoglobin A1c
HCP	Healthcare Personnel
HIP	Hyperglycemia in Pregnancy
IEC	Information, Education, and Communication
IDF	International Diabetes Federation
MCI	Middle East and North Africa
MENA	Middle East and North Africa
MSNP	Micro-Clinic Social Network Program
NCCD	National Committee on Non-Communicable Diseases
NCD	Non-Communicable Diseases
NGO	Non-Governmental Organization
NCA	Norwegian Church Aid
PNDP	Palestine National Diabetes Program
PHC	Primary Health Care
SDGs	Sustainable Development Goals
T1DM	Type 1 Diabetes
T2DM	Type 2 Diabetes
UNRWA	United Nations Relief and Works Agency
WDF	World Diabetes Foundation
WHO	World Health Organization

Executive Summary

In the past two decades, collaborative efforts between funders, health care providers, civil society, and increasingly the private sector, have grown to tackle diabetes, a critical health issue in Palestine, and one of the leading causes of mortality. The impetus for improved diabetes prevention, management, and care started in 2003 with a collaboration between the World Diabetes Foundation (WDF), DanChurchAid (DCA), the Norwegian Church Aid (NCA), and the Augusta Victoria Hospital (AVH) in East Jerusalem. Successive grants funded by the WDF linked the support provided to the AVH with the Palestinian Ministry of Health and the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA). In total, during the period 2003-2021, 13 grants amounting to over $US4.7 million were approved by the WDF to improve diabetes care, in a context of growing need and an array of obstacles linked to the political, security, and humanitarian situation in the West Bank and Gaza.

The WDF projects from 2003 - 2017 has have been the foundation leading to the PNDP as they have started with specific activities that focused on specific needs in dDiabetes. UNRWA and AVH partnered together to integrate diabetes care into primary health care. Juzoor's role included the development of the community awareness of dDiabetes in UNRWA and PMoH as well as the development of protocols and jJob Aidsaids.

Successful implementation of WDF-funded projects has led to an increase in the accessibility and quality of serves, including those linked to Gestational Diabetes Mellitus (GDM) and diabetes-related complications such as eye and foot care. Strengthened coordination amongst key health stakeholders has enabled diabetes to become a key national health priority in Palestine. Within this context, the Palestinian National Diabetes Program (PNDP) was launched in September 2017 as a collaborative program between the Ministry of Health, UNRWA, the AVH, DCA/NCA, and Juzoor for Health and Social Development. The PNDP aims to improve the access of marginalized communities to quality diabetes prevention and care services by equipping centers; improving the technical capacities of healthcare personnel (HCP); and raising community awareness on lifestyle modification and prevention of diabetes - all in line with the framework of national efforts to contribute to the Sustainable Development Goals (SDGs).

The first phase of the PNDP (2017-2020) brought together key health stakeholders in a single platform. The high visibility of the PNDP encouraged private, public, and civil sector actors, such as the Bank of Palestine, the Arab Bank, the Ramallah and Tubas Municipalities, Lions International, Caritas, other development agencies, local women organizations and the Steno Diabetes Center (CopenhagenDenmark) to join the program's efforts to prevent and treat diabetes and its life-threatening complications. In 2020, a second phase of the PNDP (2020-2023) was launched to build on successful strategies and models set forth in the first phase. The second phase leverages the momentum created in the first phase to make this multi-stakeholder platform sustainable and to amplify results for a future consolidated and sustainable diabetes response in Palestine. It is directly anchored in, and will contribute to the Ministry of Health's Action Plan on Non-Communicable Diseases (NCD) and the National Health Strategy 2017-2022, which prioritizes NCDs screening programs, including diabetes, and improved diagnostic services.

The pooling of efforts, under the PNDP, is promoting an integrated approach to diabetic care through skills development of HCPs, enhanced service infrastructure and service provision in various settings, unification of care policies and guidelines, community awareness and advocacy.

This booklet documents and highlights the PNDP as a unique experience of local and international cooperation in developing, implementing, and monitoring a national diabetes care program closely aligned with broader national health plans. It sheds light on twenty years of WDF experience in Palestine, culminating in the launch of the PNDP, and describes the process of building and sustaining a national program based on holistic approaches to the prevention and treatment of diabetes. To facilitate the replicability of such a program to address diabetes and other NCDs, the booklet provides an analysis of the key factors that have enabled PNDP achievements and enumerates lessons learnt in moving from individual projects to sustainable national programs based on multi- stakeholder partnerships.

1. Introduction

1.1 About the Palestinian National Diabetes Program

Non-communicable diseases (NCDs), including diabetes, have reached epidemic proportions, according to the World Health Organization (WHO), yet their prevalence could be significantly reduced, with millions of lives saved, and untold suffering avoided, through the reduction of risk factors (obesity, sedentary lifestyle, tobacco use and alcohol consumption), early detection, and timely treatments. Reflecting global trends, diabetes is a growing public health challenge in Palestine. Its complications (cardiovascular disease, blindness, kidney failure, and lower-extremity amputations) result in decreased quality of life, higher rates of disability, and increases in the use of health care services.

In September 2017, efforts to improve diabetes care for Palestinians took a major step when key health stakeholders launched the Palestinian National Diabetes Program (PNDP). The establishment of the program was a culmination of nearly two decades of diabetes prevention and care interventions supported by the World Diabetes Foundation (WDF) in the West Bank and Gaza. Successive projects supported by WDF in collaboration with DanChurchAid (DCA), Norwegian Church Aid (NCA), the Augusta Victoria Hospital (AVH), Juzoor for Health and Social Development, the Palestinian Ministry of Health and the United Nations Relief Works Agency for Palestine refugees in the Near East (UNRWA), have focused on building the capacity of the Palestinian health system to deliver structured diabetes care services. With the support of the WDF, health stakeholders have pooled their efforts and resources, under the banner of the PNDP, to target Palestinians with limited access to diabetes services and with a high prevalence or risk of diabetes and related complications. The box below provides a brief overview of the partners, and detailed roles of each organization is elaborated in Section 4.

Palestinian Ministry of Health: Leading and regulating the national health sector

It is committed to working with partners to develop and improve performance of the health sector capable of policy making and provision of quality services by the public, nongovernmental and private health care providers. Its national strategic health priorities are outlined in the Palestinian National Health Strategy 2017-2022.

Juzoor for Health and Social Development : A leading Palestinian health rights-based NGO

Dedicated to improving the health and well-being of Palestinian families and promoting health as a basic human right, it is active in establishing national coalitions and networks aiming at: influencing national health and social policy, building innovative health and social models and strengthening local and regional networks.

UNRWA: Health service provider for Palestinian refugees

Established in 1949, it has delivered health care, education, relief and social services to Palestine refugees in its field of operations (the West Bank, Gaza, Jordan, Lebanon, and Syria) for over 70 years. In 2020, its Health Program delivered comprehensive primary health care (PHC) services through 140 Health Centers in its 5 field of operations. In Palestine, UNRWA provides care to over 2 million refugees. By the end of 2020 a total of 77,163 patients with diabetes were registered at UNRWA health centers in Palestine.

Augusta Victoria Hospital: Specialized center of medical excellence

The AVH is a program of the Lutheran World Federated Department for World Service in Jerusalem. It started in partnership with UNRWA as a major medical facility in Jerusalem after the 1948 war to care for Palestinian refugees. Today, most of the patients served by AVH continue to be in need and seeking life-saving specialized care.

DanChurchAid (DCA): Supporting the world's poorest in their struggle for a dignified life

Established in 1922 in Denmark, DCA's goals are to save lives, build resilient communities, and fight extreme inequality worldwide. In 2020, DanChurchAid helped 4 million people in need and had revenues of DKK 889 million for disaster-recovery and aid work. In Palestine, DCA works in a Joint Country Program with the Norwegian Church Aid (NCA). In 2020, the program reached more than 266,000 beneficiaries (42% male, 58% female).

The World Diabetes Foundation: A leading funder of diabetes prevention and care projects

Focused on low and middle-income countries, its mission is to empower governments, civil society and other non-state actors who strive to deliver on global commitments through national and local action. It creates partnerships and acts as a catalyst to help others do more. From 2002-2021, WDF provided €182 million in funding to 584 partnerships in 119 countries.

With the implementation of the PNDP, diverse supporters have joined the program, including the Bank of Palestine, the Arab Bank, Lions International (Ramallah West Bank), Ramallah and Tubas Municipalities, the Palestinian Ministry of Education, the Steno Diabetes Center (Denmark), and local community-based organizations (CBOs) in particular women's associations in vulnerable communities. For the first time ever, the program has thus brought together the public sector, civil society, and private sector to collaborate on diabetes prevention, treatment, and management, a pressing health challenge in the humanitarian context of Palestine.

1.2 About this booklet

This booklet sheds light on the 20-year journey of international and local partnerships in improving diabetes care in the humanitarian settings of Palestine. It showcases lessons learnt in the establishment of a sustainable national program that may be replicable in other NCD and health related areas in Palestine, the region, and perhaps even globally in humanitarian settings.

Specific objectives for the write up of this booklet include:

- Sharing PNDP's experience, process, achievements, and potential replicability.
- Providing concrete information on diabetes care interventions for policy makers, academics, practitioners, and students in the health field.
- Generating lessons learnt and enriching documentation on moving from individual projects to sustainable national programs based on multi- stakeholder partnerships.
- Presenting an advocacy tool which may be utilized within a broader framework of working on NCDs in humanitarian settings; advocating to position a health issue (in this case diabetes prevention and care) high on the national policy agenda.

The targeted audience for this booklet is the general public (individuals or organizations) who are interested in public health in humanitarian settings, diabetes, or more broadly health and social development, and would like to learn about the Palestinian experience and the proposed model.

2. Diabetes - trends, implications & Challenges

2.1 Diabetes worldwide

Diabetes is a critical challenge to global health. Along with cardio- vascular diseases, cancer, and chronic respiratory disease, diabetes is one of the four main types of non- NCDs. Based on modelling and prediction of NCDs, the global NCD burden is set to increase by 17% in the next decade, mainly due to population aging and risk factors such as the transition from traditional foods to high-fat, high-salt, and high-sugar processed foods; increasingly sedentary lifestyle and lack of physical activity; and alcohol and tobacco use. While premature mortality from other major NCDs is decreasing, early deaths from diabetes increased by 5% between 2000 and 2016, according to the World Health Organization (WHO).

Box 1: Diabetes is a critical challenge to global health.

- 537 million adults worldwide were living with diabetes in 2021; 75% of them live in low- and middle-income countries.
- Nearly 50% of adults worldwide living with type 2 diabetes are undiagnosed or unaware of their status, and at a higher risk of developing harmful complications, including blindness, kidney failure, heart attacks, stroke and lower limb amputation.
- Diabetes caused at least US$ 966 billion dollars in health expenditure - a 316% increase over the last 15 years.
- In the Middle East and North Africa (MENA) region, 1 in 6 adults (73 million) are living with diabetes. This number is expected to reach 95 million by 2030 and 136 million by 2045 unless radical action is taken. 796,000 deaths were caused by diabetes in the region in 2021.
- 1 in 7 live births in the MENA are affected by hyperglycemia in pregnancy (HIP).

Sources: International Diabetes Foundation Diabetes Atlas

The outbreak of the COVID-19 pandemic has exacerbated global challenges related to diabetes prevention, management, and care. People living with diabetes are at increased risk of severe illness from COVID-19; diabetes is one of the most commonly reported comorbid conditions among COVID-19 deaths; and there is to growing evidence that diabetes risk increases after COVID-19 infection; further, 62% of countries have reported disruptions to diabetes services during the pandemic.

2.2 The importance of intervention in diabetes management in Palestine

Facts & Figures: Reflecting global trends in epidemiological transitions, the disease burden of health in Palestine has shifted from communicable diseases to NCDs. Modifiable behaviors such as sedentary life-style and unhealthy diets are contributing to an alarming rise in NCDs, which, in 2018, caused 67.4% of all deaths in Palestine. The Palestinian Ministry of Health's annual health reports indicate that diabetes has increased from the 10th ranking cause of all deaths in 2005 to the 5th ranking cause in 2018 (7.5%) in Palestine, while also contributing to cardiovascular disease, which is the leading cause of death in the country (31.5%).

While estimates vary, it is generally agreed that diabetes prevalence in Palestine is high compared to worldwide prevalence, and is set to increase. The Union of Palestinian Medical Relief Committees reports an adult diabetes prevalence rate of 18%, with the actual figure closer to 30% when taking into account pre-diabetics and the undiagnosed. According to one estimate, diabetes prevalence for Palestinian adults aged 25 and above is forecasted to increase from 20.8% in 2020 to 23.4% in 2030. Like other low to middle-income countries, type 2 diabetes is predominant: of the total diabetic population in Palestine, 4.4% of persons are diagnosed with type 1 diabetes (T1DM), 95.3% with type 2 diabetes (T2DM), 0.2% with hyperglycemia in pregnancy (HIP), and 0.1% with impaired glucose tolerance.

If not managed and controlled, diabetes can lead to poor quality of life and harmful and life-threatening complications, such as lower limb amputation and blindness. A 2021 study of T2DM patients in the Northern West Bank indicated a 30% prevalence of diabetic retinopathy, the leading cause of impaired vision in adults. Trends underscore the need for well-tested and cost-effective prevention services, including diabetes education, outreach, regular screening for early diagnosis, and high quality of treatment and management of diseases and their complications.

- **Health challenges in humanitarian settings:**

  In the context of Palestine, managing diabetes risks is rendered challenging by the political, security, and humanitarian context. The complexities of delivering and accessing healthcare in humanitarian conflict-affected settings impact the diagnosis, management, and treatment of diabetes.

Country Overview - Palestine

• Population:	5.2 million
• Refugees:	2.4 million
• People in humanitarian need:	2.1 million
• Unemployment:	26%
• Food insecurity:	36.7%
• Poverty in Gaza:	59%

Sources: United Nations, 2021

The overall provision of healthcare is adversely affected by the political insecurity. Palestinians in the West Bank, especially in Israeli-controlled Area C (60% of the West Bank), face a range of movement and access restrictions, which hinder their ability to access health care including accessing specialized services in the main Palestinian referral hospitals in East Jerusalem including AVH.

More than one third of the approximately 300,000 Palestinians that live in small dispersed communities in Area C depend on mobile clinics to access essential health services. Access to timely treatment is rendered difficult in such settings, leading to poor health outcomes, especially given that NCDs, such as diabetes, need to be managed continually to be able to decrease morbidity and mortality risks.

Delivering effective health care, including diabetes diagnosis and management, has been particularly challenging in Gaza. The longstanding air, sea, and land blockade, the frequent outbreak of military assaults, and resultant devastation of infrastructure have negatively affected the ability of health systems to respond to growing health needs of a population facing a protracted humanitarian crisis. The poorly-resourced health care system operates in a continuous state of crisis and emergency and there is limited access to qualified diabetes services. Clinical Practice Guidelines for Diabetes are under-used at the Ministry of Health facilities in Gaza, due to reasons such as shortage of staff, time, supplies, and resources.

Overall, the protracted conflict has led to the fragmentation of health care system in Palestine, with the existence of multiple organizations providing diabetes care, including the Ministry of Health, UNRWA, NGOs and private health practitioners. This multiplicity of providers, especially in the context of geographic fragmentation (East Jerusalem, West Bank, Gaza), makes it difficult to ensure effective policy, multi-stakeholder coordination, and harmonization of standards of care. The unstable context, moreover, has led to a significant contraction of the economy. The precarious economic situation is contributing to high mental stress, unemployment and food insecurity rates, which are all key factors that contribute to the rise of NCDs.

Diabetes risk factors are also heightened by individual-level behaviors, increasingly starting from a younger age. According to a July 2021 study, one in every four adolescents in Palestine is overweight or obese, which is an alarming statistic and calls for immediate attention. This high prevalence can be attributed to sedentary lifestyles, eating behaviors, and dietary intake. Adolescent girls in particular may be more vulnerable to overweight/obesity in communities where physical exercise in outdoor settings is not encouraged and/or where there are no available sports facilities.

Furthermore, the outbreak of the global COVID-19 pandemic has increased risk factors for NCDs in Palestine. Surveys conducted by Juzoor on COVID-19 impacts on diabetes management concluded that lockdowns have had a negative impact on pre-diabetic women, affecting their adherence to medications, care plan (dietary regimen and physical activity), and routine follow up with their physician. In addition, the majority of interviewed women report feeling very stressed, with the drastic financial effects of the lockdown limiting their access to income and healthy food.

In parallel, the COVID-19 pandemic and associated restrictions directly influenced the overall quantity, quality, accessibility, and affordability of health services. The already-overburdened Palestinian healthcare system requires continuous support to address these new challenges, including through the provision of supplies and capacity building, according to the United Nations. Even prior to the pandemic, the significant shortfalls in donor aid contributed to the Palestinian Authority and UNRWA facing a crippling financial crisis. With minimal budget and competing needs, critical health care issues are at risk of being further sidelined. Investment in NCDs in general and diabetes care in particular is especially imperative considering the long-term effects of diabetes if undetected or untreated.

3. Achievements of multi-stakeholder partnerships in addressing diabetes challenges

3.1: 20 years of WDF investment in diabetes services leading to the PNDP

Recognizing the critical need to address diabetes risks in conflict-affected Palestine, the WDF has partnered with multiple stakeholders on diabetes prevention, management, and care. As indicated in the timeline below (Figure 1), over the past two decades, the WDF portfolio in Palestine has gradually expanded, starting with collaboration in 2003 with the DCA and the AVH in setting up a diabetes care clinic. Successive projects supported by WDF in collaboration with the DCA, the AVH, Juzoor the Ministry of Health, and UNRWA have focused on institutionalizing diabetes comprehensive care, and building the capacity within Palestinian health care system to deliver structured diabetes care services, including for Gestational Diabetes Mellitus (GDM) and eye and foot care. In total, over nearly 20 years, the WDF has provided 13 grants amounting to over $US4.7 million with the goal of promoting effective services and planting the seed for longer-term sustainability of diabetic care services through multi-stakeholder partnerships in Palestine.

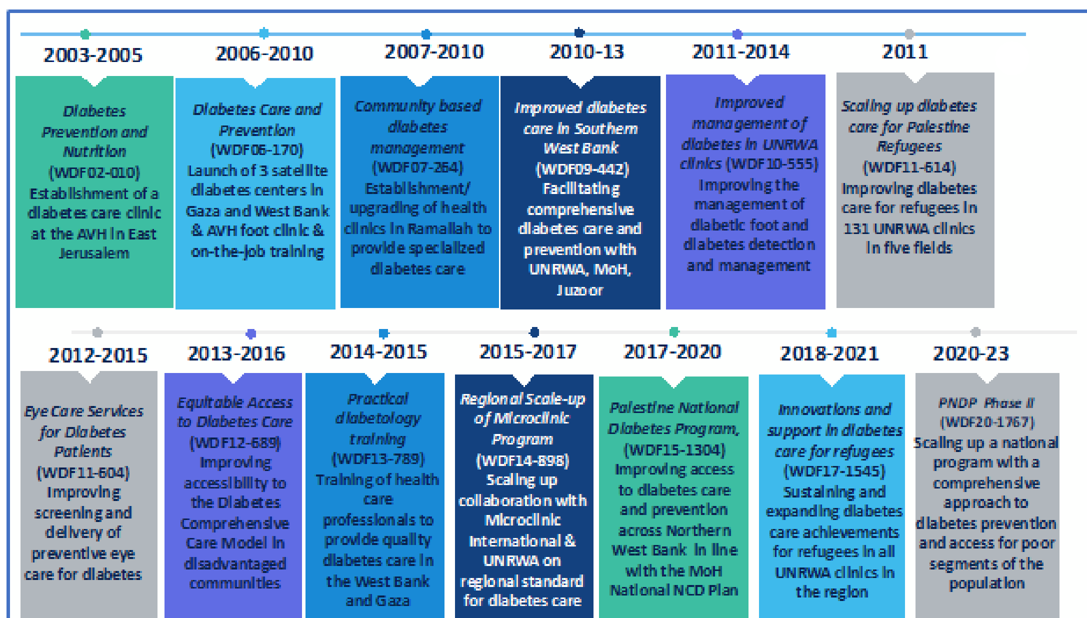

Figure 1: Timeline of WDF funded projects to improve diabetes prevention and care for Palestinians:

- Diabetes prevention and Nutrition (WDF02-0010) - Palestine - 2003-2005: 206,855 $
- Diabetes care and prevention - (WDF06-0170) - Palestine - 2006-2009: 443,105 $
- Community based diabetes management (WDF07-0264) - Palestine - 2007-2010: 499.033 $
- Improved diabetes care in southern west bank (DCA) (WDF09-0442) - Palestine - 2010-2013: 584.533 $
- DM management in UNRWA clinics (WDF10-0555) - Palestine - 2011-2014: 195,102 $
- Diabetic retinopathy screening program (WDF11-0604) - Palestine - 2012-2015: 356,215 $
- Scaling up of diabetes care for Palestinian refugees (WDF11-0614) - Palestine, Jordan, Lebanon, Syrian arab republic - 2011-2014: 419,044 $
- Equitable access to diabetes care (WDF12-0689) - Palestine - 2013-2016: 403,366 $
- Practical diabetology training (WDF13-0789) - Palestine - 2014-2015: 31,053 $
- Middle east scale up of microclinics program (WDF14-0898) - Palestine, Jordan, Lebanon, Syrian arab republic - 2015-2018: 248,550 $
- Palestine national diabetes program phase 1 (WDF15-1304) - Palestine - 2017-2020: 400,000 $
- Innovations and support for Palestine refugees with diabetes (WDF17-1545) - Palestine, Jordan, Lebanon, Syrian arab republic - 2018-2021: 275,632 $
- Palestine national diabetes program Phase 2 (WDF20-1767) - Palestine - 2020-2023: 699,913 $
- Total = 4,762,488 $

2003-2005: Launch of partnership with DCA/AVH to improve diabetes prevention and care

The launch of the partnership with DCA/AHV to improve diabetes prevention was the starting point of WDF engagement in Palestine. The 2003-2005 project ('Diabetes Prevention and Nutrition') focused on the establishment of a diabetes care clinic at the AVH in East Jerusalem. It sought to address the inadequate attention paid to diabetes prevention in Palestine by incorporating nutrition counselling and behavior change into the medical treatment of patients with diabetes and high-risk groups. Given the difficulties of patients in reaching East Jerusalem due to worsening security conditions and movement restrictions, the project also shifted to working closer with, the Ministry of Health and UNRWA and building the capacity of their healthcare personnel (HCP). The project contributed to transforming AVC clinic into a center of excellence, playing a significant role in advocating for more attention to diabetes, and was also the driving force in setting up the Diabetes Association of Palestine, accepted as a member of the International Diabetes Federation.

2006-2016: Expanding partnerships & geographic coverage of diabetes care interventions

During the period 2006-2016, with cumulative endeavors and addition of key partners, a holistic approach to diabetes care and prevention was developed to expand geographical coverage and to develop national guidelines and protocols.

At the completion of the 2003-2005 'Diabetes Prevention and Nutrition' project, a new project ('Diabetes Care and Prevention') was implemented by DCA/AVH, with funding from the WDF. The 2006-2010 project fully engaged the Ministry of Health and UNRWA and covered a wider geographical area through the establishment of three satellite diabetes care clinics (located in Gaza, Bethlehem in Southern West Bank and Ramallah in Northern West Bank). The capacity of the AVH also continued to be strengthened through setting up of a foot clinic.

Photo 1: AVH Mobile clinic screening day in Manger Square in Bethlehem

In parallel, DCA/AVH with Juzoor implemented a community-based diabetes project in the Ramallah Governorate. The 2007-2010 project ('Community-based Diabetes Management') aimed to facilitate the access of Palestinians in rural communities to diabetes care and to improve the capacity of clinics in the most under-served communities to: use standardized national protocol for diabetes screening and management; introduce protocols for GDM and hypertensive disorders of pregnancy; and offer services such as foot care, eye care, dietetic counselling and advanced testing. The project thus strengthened care delivery closer to home, at the community level.

The 2010-2013 project ('Improved Diabetes Care in Southern West Bank') implemented by the DCA, in partnership with the AVH, the Ministry of Health, UNRWA, and Juzoor built on previous WDF-supported projects, by facilitating comprehensive diabetes care and prevention in the Southern region of the West Bank.

The project also consisted of revising diabetes and GDM protocols, training HCP in these protocols, establishing a central referral clinic for the Ministry of Health in Hebron and an UNRWA center of excellence in Dheisheh Refugee Camp, and continuing the development of the AVH Diabetes Care Center in parallel to outreach to patients. The 2014-2015 project ('Practical diabetology training') aimed to make the results of the previous projects more sustainable by training more HCP in diabetes care and prevention and involving more clinics to adopt the Diabetes Comprehensive Care Model (DCCM). The 2013-2016 project ('Equitable Access to Diabetes Care') was also built upon the experienced gained in the previous collaborations between the WDF, DCA, and AVH, in which the DCCM was piloted with great success. Amongst other results, the project established a mobile unit to act as an outreach diabetes clinic, offering services such as eye care/laser treatment, foot care, GDM, nutrition counselling and training of health professionals.

Box 2: Diabetes Comprehensive Care Model

The introduction and ongoing implementation of the Diabetes Comprehensive Care Model (DCCM) replaces the old biomedical approach in which diabetes patients were only seeing their doctors to renew their medication prescriptions. The DCCM is patient-centered, with a multidisciplinary team and a holistic approach to diabetes care focusing on the whole person in a friendly environment, with community support and involvement in diabetes awareness and prevention. The model is an approach that builds on learnings from early WDF projects in the area, which found that patients benefitted from having all diabetes services provided in one place. DCCM clinics offer foot care, eye care, gestational diabetes screening, and nutritional counselling. Standard diabetes lab tests and patient, family and community education are also provided. Through WDF funding, DCCM clinics were established first in East Jerusalem by Augusta Victoria Hospital, and subsequently in Doura by the Ministry of Health, in Bethlehem by UNRWA, and in Gaza by the Union of Health Work Committees.

During this period, a project ('Eye Care Services for Diabetes Patients') with the St John Eye Hospital in Jerusalem was implemented, focused on screening and delivery of preventive eye care amongst people with diabetes. The 2012-2015 project focused on addressing the needs of patients with diabetes with eye problems including within the UNRWA health care system in the West Bank.

2011- 2017: WDF-funded projects to upgrade diabetes care in UNRWA clinics

In parallel to the above-mentioned projects, the WDF has also directly partnered with UNRWA in four projects to upgrade diabetes care in UNRWA clinics, not only in the West Bank and Gaza but also regionally. The national 2011-2014 project ('Improved management of diabetes in UNRWA clinics') focused on upgrading the management of diabetic foot in UNRWA health centers in Gaza (by establishing diabetic foot units in 20 UNRWA health centers) and improving the detection and management of diabetes in the West Bank (by strengthening the capacity of 41 UNRWA health clinics and 5 mobile health units). The project was implemented together with the Ministry of Health and the Palestinian Medical Relief Society.

The regional 2011 project ('Scaling Up of Diabetes Care for Palestinian Refugees') targeted all 131 UNRWA clinics in its fields of operations (West Bank, Gaza, Jordan, Syria, and Lebanon) including through mapping the status and quality of diabetes services offered within the UNRWA system.

Photo 2: Diabetes Screening

The WDF supported UNRWA to implement, together with Microclinic International (MCI), the 2015-2017 regional project ('Middle East Regional Scale-up of Microclinic Program'). The MCI model complements existing UNRWA strategies to combat NCDs and helps to improve the impact by involving patients' social networks to support positive behavior change and spread positive lifestyle behaviors. The project aim was to scale up the micro-clinic social network program (MSNP) for refugees in the Middle East, through increasing of the technical capacity of UNRWA health personnel to deliver diabetes management programs and to assist 115 UNRWA health centers to implement MSNP. In 2018, a new project ('Innovations and support in diabetes care for Palestinian refugees') was implemented to enable UNRWA to sustain, expand and refine outcomes of previously WDF supported projects to further improve preventive and curative measures. The 2018-2021 project targeted all UNRWA health centers in the five fields increasing their capacity to deliver a holistic diabetes program for patients and their families. The main capacity building outcomes of the four projects are summarized:

Table 1: Capacity Building outcomes of WDF-Funded projects with UMRWA 2011-2021

Project	Capacity Building Outcomes
Improved management of diabetes in UNRWA clinics (2011-2014) - Gaza	-22 foot clinics established or strengthened -Capacity built for 4 Trainers of Trainers -340 health care professionals trained in diabetic foot care -Patient education materials produced
Improved management diabetes in UNRWA clinics (2011-2014) - West Bank	-Health education materials developed -218 HCP trained on diabetes treatment -Psychological Resistance Management training tailored to cope with patients with resistance to attitude change and adherence to management protocols facilitated by UNRWA psychosocial counsellors -176 doctors and nurses trained on diabetes management and case study reviews
Scaling up Diabetes care for Palestine Refugees in the Near East (2011)	-30 doctors and 30 nurses trained as trainers -78 doctors and 78 nurses from UNRWA clinics trained
Middle East Regional Scale-up of Microclinic Program (2015-2017)	Nurses from the West Bank and Gaza participated in a three-day training of trainers workshops and then conducted a series of training workshops for 566 nurses
Middle East Regional Scale-up of Microclinic Program (2015-2017)	-Refugees educated and empowered for better self-care and positive disease management outcomes -Advanced trainings for UNRWA health staff conducted

2017- present: Launch of the PNDP - culmination of WDF-funded projects

In September 2017, the WDF supported the launch of the first phase of the PNDP, which represented a culmination of years of WDF investments in the West Bank. This first phase (2017-2020) united longstanding WDF partner organizations (DCA, AVH, Juzoor, UNRWA, and Ministry of Health) in one collective venture, but with the Ministry of Health taking a lead role, and within the framework of the Ministry of Health National NCD Action Plan, the National Health Strategy 2017-2022, and national efforts to promote implementation towards the Sustainable Development Goals (SDGs), in particular SDG 3: 'Ensure healthy lives and promote well-being for all at all ages'. Based on learnings from previous WDF-funded projects in the Southern Region of the West Bank, Phase I aimed to improve access to diabetes care and prevention across the Northern Region, where diabetes services were scarce, and was based on with a gender sensitive approach with particular focus on women and their vulnerability to diabetes and GDM.

The second phase of the PNDP (2020-2023) seeks to sustain, replicate and refine the models hitherto applied, and roll out and expand interventions using a large-scale, comprehensive approach to diabetes prevention and access for poor vulnerable segments of the Palestinian population, targeting the primary care level. Moreover, the program expands its focus on HIP and nutrition, as well as scale up of current eye and foot care.

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2017- present: Launch of the PNDP - culmination of WDF-funded projects

The WDF projects from 2003 - 2017 has been the foundation leading to the PNDP. These projects started with specific activities that focused on specific needs in Diabetes. After identifying the need and importance of Diabetes intervention in the country, UNRWA and AVH partnered together to integrate diabetes care into primary health care. A technical model called "the high impact team" was organized to support UNRWA and the first center of excellence was developed in the UNRWA clinic in Dheisheh. The center included all the diabetes care devices such as the fundus camera, cardiac examination devices and foot care devices. All the patients with unmanaged diabetes and all the complicated cases were referred to this center. There were 10 primary health care centers related to this center of excellence. The success of the UNRWA clinics lead the Palestinian Ministry of Health to adopt the model in the second phase of the project. The success of the PMoH lead to the expansion to other locations in the West Bank. Juzoor's role included the development of the community awareness of Diabetes in UNRWA and PMoH as well as the development of protocols and Job Aids. The main components that were the foundation to this success are: accessibility, the integration of diabetes mellitus in family medicine, low cost, community work as well as screening tools to identify pre-diabetic patients. The standardization in diabetes care is very important on the National level.

3.2: Targets Achieved under Phase 1 of the PNDP (2017-2020)

Drawing from and capitalizing on achievements of successive WDF-projects over the past two decades, the PNDP aimed at strengthening coordination mechanisms between the involved stakeholders, consolidating and institutionalizing diabetes care interventions, provided by the main partners, into a sustainable national program, drawing from best practices and lessons learnt from previous WDF projects.

The first phase of the PNDP had the following main objectives:

- Invest in three model centers located in the Northern and East Jerusalem districts to act as referral centers utilizing the DCCM and implementing GDM protocols and upgrade three strategically located intermediate level clinics.

- Build the capacity of health professionals (doctors, nurses, school and community health workers…) to implement national protocols to strengthen diabetes care and prevention, including lifestyle counselling, nutrition, and psychological support.

- Provide diabetes patients with consistent comprehensive care, management and screening for diabetes-related complications through and in coordination with partners, community health clinics & mobile clinic.

- Raise awareness on preventive measures for diabetes/other NCDs, focusing on early preventative and lifestyle changes with a stronger outreach to pre-diabetic refugee women and to children and adolescents in schools, through stronger integration with the Ministry of Education and UNRWA school-based interventions.

- Strengthen the National Committee on non-Communicable Diseases (NCCD) to be active and operational.

The PNDP has resulted in tangible achievements during the first phase, and generally exceeded its targets (Table1). Achievements include the establishment of the three model centers in which over 23,500 diabetic patients and 400 GDM patients were treated. Similarly, the six intermediate-level clinics that were established are now fully equipped to conduct thorough evaluation and management of diabetes and provide quality services, with strong adherence to existing protocols and HCP capacity development. They operate as referral centers for diabetic patients who are comprehensively managed and screened for complications including eye conditions and diabetic foot. Additionally, the PNDP led to the establishment of AVH mobile clinic, in which over 12,000 individuals were screened for diabetes during 2017-2020.

The registry of the patients goes into a specific supply chain; they start with recording the medical history of the patients, taking all the anthropometric measurements, as well as making all the periodic checks, and recording them in the patient's file. All the observations of the patient's health status or any notes were recorded as well as the treatment that is given to the patient. This process is done manually but they recently started to record all the information on a system.

The building of an NCD registry has been a key element in the PNDP but after further investigation; it was identified that the NCD registries still need further development and support.

Utilizing data is a challenge in Palestine whether from data collection or creation of a data registry. Availability of time and human resources to conduct this are scarce. Scattered efforts are undergone but not comprehensively. The MoH is looking towards building a system (DHIS2) but is very time consuming and requires large amounts of funds. For future steps, it has been evident that there is a need for systematic study to identify the impact of the project, and how this comprehensive approach towards preventing and treatment of diabetes has led to the reduction and onset of Diabetes and further complications is needed.

Other achievements of the first phase include successful training by the AVH mobile clinic of 524 HCP including on-job training and structural trainings at AVH diabetes care center, based on existing national and WHO guidelines on the implementation of protocols to strengthen diabetes prevention and care. All the protocols that were developed within the projects were reviewed by the WHO. WHO was involved in the national committee for NCDs and the technical committee of the project. It has provided overall strategic guidance and technical support.

The training curriculum is available to be used on a national level and by all health providers, thus ensuring wider impact of the PNDP on the health system.

Table 2: The PNDP's main targets and achievements (2017-2020)

Performance indicators	Target	Achieved
Total number of diabetic beneficiaries of 3 model clinics	25,000	23,687
Number of HCP trained in T2DM care	200	524
Number of patients in registry	14,500	16,025
Number of persons screened for T2DM through AVH mobile clinic	10,000	12,659
Number of patients diagnosed with diabetes related foot problems	5,000	3,975
Number of patients diagnosed with diabetic retinopathy	2,000	6,106
Number of women treated for GDM/Diabetes in pregnancy	750	407

In addition to HCP capacity building, the program contained outreach and public education components, consisting of awareness raising and screening in UNRWA camps, rural communities, and schools, and dissemination of information, education, and communication (IEC) materials. Over 30,000 refugees participated in awareness and educational sessions on diabetes, including diabetic patients already registered at the UNRWA project-based clinic. 150 pre-diabetic refugee women received educational sessions on diabetes prevention. The PNDP also included campaigning events conducted in collaboration between the Ministry of Education and Juzoor in 43 governmental schools in the West Bank and Gaza in which over 7,000 students were reached and educated on diabetes prevention and healthy lifestyles. In total, the estimated PNDP outreach to communities was around 1.5 million as of March 2020.

Photo 3: Stakeholder event in the presence of the Minister of Health, Juzoor, and Lions Club

Approaching the end of the first phase, a final evaluation was conducted in July-August 2020 to assess the PNDP's performance and impact. The qualitative and quantitative evidence gathered confirms that the new services provided by the program, including through the capacitated model centers and intermediate clinics, have had a positive impact on patients' diabetics care and wellbeing. The total number of people screened through the timeframe of the project is 13790. The total number of registered patients through the time frame of the project is 16025 patients.

The capacity built both in term of equipping centers and introducing DMCC, and working with schools and awareness raising through various community activities have created a strong base to build on and to further influence additional work on diabetes, with cumulative impact with sustainability, quality of care and replication. 10000 students in schools received information about life style modification and diabetes prevention, 554 HCP received training by AVH mobile clinic. 1.5 million received awareness through campaigns since PNDP launch.

486 cases of GDM diagnosed and followed up at the clinics of UNRWA and PMoH. 6678 cases were screened for retinopathy during the time frame of the project in 2020. 4,737 cases were screened for foot care.

Given that improved diabetes prevention and care services is still urgent and much needed in Palestine, the collaborative work in the first phase prompted partners to implement a second phase of the program (2020-2023) to build on previous successful and comprehensive strategies and models and to follow up on the recommendations of the final evaluation.

The focus of the second phase is:

- Continue to strengthen the NCCD to gain further political mandate and capacity.
- Invest in new / sustain established model centers (for the management, control, early detection of diabetes-related retinal and foot complications; screening, diagnosis and management of HIP cases; and better management of T1DM) and intermediate clinics in surrounding areas; through the enhanced implementation of protocols and the provision of equipment, including HbA1c testing, at Ministry of Health and UNRWA facilities.
- Build the capacity of HCP based on national protocols within diabetes care and prevention, including use of HIP protocols, foot and eye care.
- Roll out community awareness and screening campaigns focusing on refugee women and high-risk patients.

This phase also includes more investment in maternal health and nutrition with increased targets compared to first phase.

3.3: Special Focus - Capacity building gains under the PNDP

With diabetes as a major health problem for Palestinians, institutional capacity building has been included in all projects supported by the WDF and implemented by partners in Palestine, in line with the commitment of all partners to continuous upgrading of HCP knowledge and skills to deliver better quality of care. UNRWA, the Ministry of Health, universities, Juzoor, and other NGOs have been providing capacity building on diabetes and making significant strides in addressing diabetes prevention and treatment as integral part in PHC in the last two decades. Capacity development interventions have also paved the way for engaging communities as active participants in their own health and wellbeing.

The PNDP prioritizes institutional capacity building and patient empowerment for self-care, which are considered as essential elements for future sustainability of diabetes care, for scaling up the performance of staff, for achieving the targets of control rates among patients with diabetes and preventing as much as possible the disease complications among diabetics. Phase I trained more than those targeted for the types of training it set to train, and included workshops as a training platform for HCP as well as on-the-job training, for example on foot exam and screening, fundus screening, nutrition assessment, and counselling. These activities continued to take place despite the challenges stemming from the outbreak of COVID-19 outbreak and subsequent lockdowns. Community health workers sought interaction with diabetics in their homes, following COVID-19 safety measures, instead of waiting for patients to come to clinics, where risks of transmission are higher. A number of HCP training courses were delivered online; PNDP partners used digital and telecommunications tools such as Zoom, phone calls and personal messages to communicate with beneficiaries and their families.

The external evaluation of Phase I finds that institutional strengthening of diabetes centers with equipment and upgraded human resources has had a positive impact on service delivery evidenced by the monitoring of indicators through the PNDP. These indicators include but are not limited to: no amputations compared to before the project, less referrals, and increased accessibility to comprehensive diabetic care.

Capacity development interventions tailored to the needs of HCP will continue to be implemented under PNDP Phase II. Based on their respective experience, partners will determine how these capacity needs could best be addressed in a structured manner through further provision of tools, guidelines, training, best practices, knowledge sharing and the provision of case evidence.

Photo 4: HCP training at Juzoor

4. Key elements in the effective implementation of PNDP

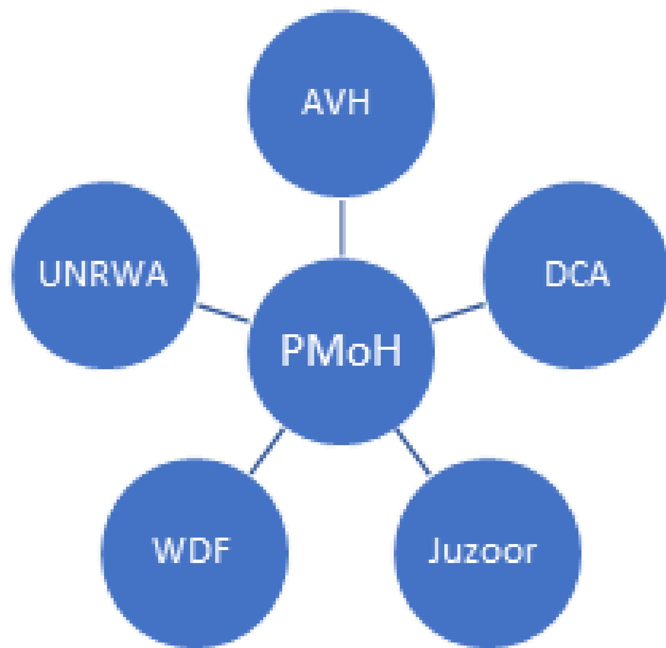
4.1: International contribution & local ownership

Establishing easier access to health services; providing quality services based on the needs of communities; and spreading awareness in order to make appropriate lifestyle choices and health care decisions are steps towards strengthening diabetes prevention and treatment. The collaborations forged in implementing the PNDP between local Palestinian organizations and international organizations have played a vital role towards a holistic approach on diabetes prevention and care at the national level.

The support of the PNDP by a global international organization (WDF) was important to boost the integrated approach to diabetes prevention and care, promote and strengthen local collaboration and entice other stakeholders to join efforts. As funder and founder of the PNDP, and the 'umbrella' under which partners function, the WDF has not only facilitated multi-stakeholder partnerships but helped to encourage innovative strategies for improvements and achieving outcomes. Successive local partnerships with WDF contributed to longer-term local engagement and ownership in promoting diabetes services diagnostics, medical treatment, nutrition counselling, prevention, fundus screening and foot care; in training of HCP on diabetes protocols; in enabling AVH to become a national resource center for diabetes; in establishing and continuously developing model/referral clinics using DCCM, and in reaching out to more patients and providing prevention education to more children, adolescents, and women using community-based approaches.

A direct and significant result of the first phase of the PNDP was bringing together main healthcare stakeholders working at the local/national level in a single platform. Under the PNDP, a networking model has thus been promoted by the partners, sharing the same vision about the importance of diabetes care and prevention, promoting an integrated approach and having clear and complementary roles and responsibilities in addressing diabetes (see Figure 2).

Figure 2: Roles and responsibilities of the PNDP Founding Partners



Ministry of Health
Leads the NCCD and PNDP implementation, provides staff and facilities for the introduction/ implementation of DCCM; receives/supervises equipment secured, cooperates facilitates, monitors, and reports on the replication and progress of DCCM centers, develops protocols, ensures alignment with national development plans.

AVH
Operates mobile clinic and provides diagnostic, medical treatment, nutrition counselling, prevention, fundus screening, and foot care; disseminates DCCM ensuring adherence to best practices, advocates and lobby the government, UNRWA and donors to support right to access and adequate health services. participants in and updates the NCCD on implementation.

Juzoor
Fund holder for phase 2 of the PNDP; leads on community-based approaches to diabetes management including school community health campaigns, provides capacity building support for health service providers, participates in and updates the NCCD on implementation.

UNRWA
Provides health staff & facilities for the introduction/implementation of DCCM; receives/supervises equipment secured, cooperates, facilitates, and reports on the replication and progress of DCCM centers, provides ease of access to UNRWA schools; Participates in and updates the NCCD on implementation.

WDF
Provides the platform, investment, and support, facilitates multi-stakeholder, partnerships; encourages innovative strategies.

DCA
Acted as the fund holder for successive WDF-funded projects and phase 1 of the PNDP providing leadership in program management; mobilizes additional resources to the PNDP program, including from the NCA; participates in an updates the NCCD on implementation.

The PNDP has combined expertise, resources, and partnerships to promote diabetes care including prevention and treatment by enhancing the provision and quality diabetic services to meet the rights and health needs of patients. The collective multi-sectoral input by partners and ownership in the PNDP have contributed to the achievement of the above-mentioned program targets and has paved the way for its sustainability in various ways highlighted below.

In terms of key PNDP partners, the starting point of the WDF engagement in Palestine, as described earlier, was the DCA/AVH collaboration in the establishment of a diabetes care clinic which has now evolved into an internationally recognized center of excellence. The AVH mobile clinic has played an important role in easing the burden on health care centers and patients' in need of care and living in marginalized areas with no financial capacity or means of transport, particularly under mobility restrictions due to the occupation and under COVID-19 conditions. The AVH has also been active in advocacy on diabetes, including on protocol development, and in technical capacity development of HCP.

The Ministry of Health has been empowered to effectively lead and institutionalize the PNDP. Its leading role has been essential for promoting the standardization of care and for placing work on diabetes care at the national level, within the framework of the Palestinian National NCD Action Plan and the National Health Strategy 2017-2022. The WDF projects focused the attention of stakeholders including the WHO as they are part of the national committee to work comprehensively in one system. PMoH already has a NCD unit and NCD strategy that was upgraded by the WDF project specially in the field of screening and managing Diabetes complications. However, the NCD registry is still in progress as the MoH is still developing the DHIS2 system (health information system for NCDs reporting) with the required indicators for NCDs, the registry will be available by the end of 2022. Juzoor helped in shaping the strategy to address the pre-diabetic people and join efforts in the country with the support of WDF. It has also conducted several meetings to facilitate the establishment of a NCD unit in PMoH.

The inclusion of UNRWA in the PNDP has been of paramount importance as it is the main health service provider for refugees and has been focusing on addressing diabetes and providing care in PHC settings through a structured approach supported by technical instructions and WHO guidelines. This approach comprises three levels of intervention: primary prevention: to prevent occurrence of disease by controlling modifiable common risk factors; secondary prevention: to reinforce early detection and appropriate intervention as feasible, aiming at reversing, halting, or at least slowing the progress of the condition; tertiary prevention: to reduce adverse outcomes of the disease by active surveillance and timely intervention aimed at preventing complications, their progression and premature death/disability. UNRWA's efforts in this regard before and whilst implementing the PNDP can serve as a model and inspiration to set up similar initiatives. Transferring knowledge and learning is thus a key contribution of UNRWA to the PNDP.

Given its technical expertise and widespread field presence, the inclusion of Juzoor in PNDP has been important for HCP technical capacity development, and for enabling linkages to targeted communities for awareness raising and prevention. As part of the PNDP, Juzoor has been implementing a lifestyle-focused intervention amongst diabetic and pre-diabetic refugee women over 35 years who are obese or overweight. It has also been working within the Ministry of Education and the UNRWA school systems, focusing on overweight and obese children as a primary intervention to delay the onset of diabetes and other NCDs in the future. Juzoor's policy expertise and advice with both the Ministry of Health and UNRWA were also driving force towards further commitment to the PNDP and bringing policy-makers and local stakeholders together.

Local and international collaboration has been essential to ensure the establishment and sustainability of PNDP in various ways. These include: the transfer of knowledge and expertise between partners with further skills development of HCP; the development of unified strategies and policies in diabetes care; and mobilization of resources to strengthen current/new program components and to facilitate the procurement of required resources towards the delivery of quality services in diabetes care in Palestine. Coherent and transparent communication channels between partners; active participation of all partners in planning, implementation, and monitoring; and building strong partnerships with external stakeholders were founded to be key ingredients for successful local engagement and sustainable partnerships.

4.2: Widening multi-sectoral engagement & partnerships

The high visibility of the PNDP and the credibility and reputation of the PNDP partners in the field of diabetes have encouraged the private sector (such as the Bank of Palestine and Arab Bank), the public sector (the Ministry of Education), local government institutions (Ramallah and Tubas Municipality and local village councils), different types of non-profits (Caritas, Portland Trust, Lions International Club) specialized centers (Steno Diabetes Center Denmark) and grassroots organizations (local women's associations) to join this collaborative effort. The diversity of stakeholders which have joined the PNDP - due to their strong belief that addressing NCDs and diabetes is an important and shared social responsibility - is a clear indication of impact. Each of these partners moreover have added value in the effort to address the rise in diabetes and NCDs in Palestine.

The Ministry of Education has started to implement educational sessions to raise awareness about diabetes/NCD prevention and lifestyle changes targeting obese or overweight school children and adolescents as 10,000 students in schools received information about lifestyle modification and diabetes prevention as well as 250 overweight and obese schoolchildren are followed by nutritionists in three areas in WB. In addition, it has begun to work with UNRWA on more school-based interventions to tackle diabetes, in the hope of educating school students on diabetes risk factors to help to prevent the onset of disease in adulthood.

Municipalities were brought into the implementation process for their critical proximity to service delivery; their commitment to PNDP activities; and for their important role in enhancing access to information and communication on the PNDP and its activities. Local municipalities and village councils have also started to put in place diabetes prevention measures.

For example, the Ramallah Municipality has worked with Juzoor to put in place better infrastructure that promotes physical exercise such as tracks for running and walking to help reduce the burden of NCDs. The Tubas Municipality has also constructed a track to promote physical activity. Local towns, villages, and camps that were engaged in WDF-funded projects were also inspired to start promoting healthier lifestyles including exercise and diet, as a way to prevent the onset or the progression of diabetes.

Photo 5: Slogan of the Diabetes Campaign: "Your life is sweeter without sugar. 1 in 4 people are prone to develop diabetes"

The Portland Trust partnered with Juzoor on an awareness raising program targeting pre-diabetic refugee women living in camps. Steno Diabetes Center, which is a hospital, research and teaching center dedicated to treating and managing diabetes, has been training AVH staff and has shown interest in engaging in future initiatives, based on the success of trainings and their positive effect on the overall program indicators.

The Bank of Palestine and Lions Club have contributed their resources for diabetes public education and outreach initiatives conducted with Juzoor. These included supporting month-long campaign events in solidarity with World Diabetes Day, putting up billboards in various sites informed about diabetes, offering free screening for all staff, and conducting risk assessments on diabetes for all clients. Lions Club hosted a local fundraising event to raise funds for the PNDP and was able to support the expansion of the program by providing awareness to 1.5 million through campaigns (over 30000 are refugees and provided additional machines, equipment and supplies. Screening people through campaigns and events resulted in diagnosis over 400 new cases not diagnosed before.

4. Key elements in the effective implementation of PNDP

4.3: Making Diabetes a National Priority

In parallel to improving the capacity of the Ministry of Health, UNRWA, AVH, and other health stakeholders to deliver effective diabetes services and empowering patients in their self-care, the PNDP has focused on making diabetes a political priority, advocating for diabetes prevention and treatment and strengthening cooperation and coordination toward quality and comprehensive diabetes care.

Box 3: Policy & Advocacy Gains of the PNDP

The PNDP emphasis on policy and advocacy is based on its 'health systems strengthening approach', e.g. a well-functioning health system needs trained and motivated health workers, well-maintained infrastructure, and a reliable supply of medicines and technologies, backed by adequate funding, strong health plans and evidence-based policies (WHO, 2022). Collaborative national work on the PNDP has promoted the following:

- Adopting international approaches and trends related to diabetes prevention and treatment at a national level.
- Identifying national indicators of success.
- Strengthening health providers' expertise in monitoring and evaluation (M&E) and integrating quantitative and qualitative indicators into regular reporting.
- Making available written protocols on DCCM and instituting DCCM referral protocol
- Instituting and further exploring means for increasing Ministry of Health and UNRWA capacities to treat cases thus decreasing patient flow to the private health sector.
- Further networking and integration with Ministry of Education for more schools-based interventions regarding lifestyle modification and prevention of childhood diabetes.

Having key service providers and supporters of diabetic care under the banner of PNDP has positioned diabetes prevention and care high on the national agenda.

The multi-stakeholder umbrella under the Ministry of Health leadership has played a central role in developing, implementing and monitoring a program closely aligned with broader national health plans and strategies. Directly linking PNDP activities to the Palestinian Health Strategy, the NCD Action Plan, and the NCCD has been important to promote the PNDP at the national level and to create broader support with potential impact on the lives of thousands of diabetics in Palestine. In addition, the fact that PNDP implementers could meet with the Minister of Health or her deputy to secure support was essential to generate buy-in to the overall process and for follow-up activities as well as to secure further commitment towards the PNDP.

Widening the partnerships built between longstanding WDF partners (DCA, AVH, UNRWA, Juzoor, Ministry of Health) to include the Ministry of Education - with its role as policy and decision maker - has also enabled the PNDP to have a multi-sectoral approach, thus ensuring alignment with education sector plans as well as health sector plans. Working with a wide range of stakeholders including the private sector, the media, municipalities, local women's associations, NGOs, the media (print, radio and TV), academics, and development aid agencies among others, the PNDP has engaged and mobilized general public on diabetes prevention.

5. Sustainable Outlook in the Future

Sustainability is about maintaining and enhancing a program or program services for the long term. It includes elements such as establishing partnerships with other agencies and programs, identifying sufficient funding sources, and having the program perceived as a valuable community resource. To enhance long-term sustainability at the national level, the PNDP partners promoted a multi-stakeholder network organizational model and incorporated the following best practice elements of sustainable networks, as highlighted in the final evaluation report.

Table 3: The PNDPs best practice elements of sustainable networks

Element	Description
Common identity	Shared vision of importance and work towards diabetes care and awareness raising, sense of ownership by members of the PNDP and a clearly defined intended change in diabetic care pursued.
Joint Action	Recognition that there is added value in making change together rather than individually, strategies and activities were in line with PNDP objectives pursued, and responsibilities were balanced amongst the PNDP members.
Flexible, democratic structures and processes	Non-hierarchal relational structure where all PNDP partners collaborated with transparent communication and reporting.
Internal Relations	Shared ownership (members driving the PNDP as a whole rather than just contributing to some activities); shared participation in decision-making, planning, implementation and reporting among members. The oversight by the Ministry of Health has been a key overarching catalyst.
External Relations	The PNDP partners are key health care providers and credible entities respected by beneficiaries and stakeholders and maintain work relations with stakeholders.
Resources	There have been significant in-kind contributions by the PNDP members: use of facilities, availability of staff for training amongst others etc.
Relevance	The PNDP fills a clear niche in the health care development context. It has provided partners with a shared purpose with progress on meeting the PNDP objectives.
Sustainability of results	The PNDP approach has prepared partners and communities to incorporate and sustain interventions over the long term.

The PNDP has generated tangible benefits and positive impact on the lives of diabetic Palestinians through the individual and collective work of platform members. It has demonstrated strong potential for policy, financial, and institutional sustainability. The relevance of PNDP to the mission and strategic objectives of partners is a key factor that will facilitate its long-term sustainability. The program has been relevant to the Ministry of Health's NCD priorities, and responds to its action plan with expanded focus targeting marginalized segments of the population. Similarly, it was aligned with UNRWA's approach towards prevention and treatment of diabetes and has met the awareness needs of the community and related work by municipalities, NGOs, and CBOs in the targeted locations. This inclusive design promotes complementarities amongst program components for effectiveness, efficiency and impact, and also ultimately for sustainability.

The core partners (AVH, DCA, UNRWA, Juzoor, Ministry of Health, and Ministry of Education) have expressed their commitment to sustaining and expanding diabetes/NCDs interventions, given the strength of coordination and impact of joint programming. In terms of financial sustainability, the core funder of the PNDP - the WDF - has developed the potential of partners for receiving smaller grants for specific diabetes related activities. As such, financial sustainability, although most difficult to address in volatile environments as in Palestine, does not pose a significant challenge especially as in-kind support by members can be leveraged.

The institutionalization of the PNDP, successful implementation and sustainability including leadership and management, multiple stakeholder involvement, patient representation, and dedicating adequate resources for implementation have positively impacted the PNDP and its outcomes. There is a strongly voiced commitment towards the PNDP among all partners with ongoing political leadership and commitment at the national level. This cumulative national work feeds into strengthening sustainable impact in terms of outreach, coverage and harmonization of services across service providers.

6. Lessons Learned

There are various lessons learned from the PNDP which may enrich the approach and experience of health stakeholders in developing and running national diabetes or other NCD programs on a national or smaller scale and in various realms.

- ✓ **The PNDP design included four highly relevant pillars for addressing diabetes and national health systems strengthening:** accessibility of services (through improved availability of model and intermediate clinics and mobile clinics), quality of services (through upgraded clinical infrastructure and trained health care staff in comprehensive diabetic care), community awareness raising (through prevention activities, including campaigns, on lifestyle modifications at various community level settings), and improved integration and policy coordination (NCCD, sharing of information, protocols and guidelines). In essence, these four pillars were implemented using integrated holistic approaches in order to build effective systems to address diabetes or NCDs.

- ✓ **Accumulative and incremental work that builds on previous successes will pay off.** The PNDP was launched following funding support by WDF to diabetes care over nearly two decades. Successive funding cycles with longstanding partners were needed to pilot replicable interventions and models (especially the DCCM). For instance, successful WDF-funded projects in the Southern region of the West Bank were replicated to the Northern region, enabling wider coverage and reach. These cycles were also important for creating the grounds for related policy advocacy and policy formulation. Commitment of donor to long term partnership is crucial for institutionalization of achievements to enhance likelihood for sustainability. A related lesson is thus that **long-term core funding positively impacts policy and program sustainability.**

- ✓ **Local management of international funds by a national organization must be encouraged.** Local/national organizations are able to manage program funds channeled through international organizations based on their fund management record. If capacity is available within the national organization, then such fund management should be encouraged and pursued instead of channeling funds through a third party. On the one hand, this arrangement results in overhead savings, which could then be allocated to implementation of program activities. On the other hand, experience in fund management strengthens national organizations' financial management capacities and ability to shoulder additional funds. A process of incrementally increasing national organizations' fund management responsibilities is favored to ensure accountability and effectiveness.

- **National programs require commitment from highest levels.** The ownership of the Ministry of Health is a driving force especially in countries were the Ministry has multiple roles including policy formulation and service provision as is the case in Palestine. A healthy work relationship between the Ministry of Health and stakeholders towards a national program is imperative for success. This requires early and active engagement of stakeholders in the process, capitalizing on their strength with clear mandates and roles towards a program.

- **Stakeholder engagement towards institutionalization is essential.** National level policy making and program implementation involve multiple stakeholders with varied interests and priorities. Dialogue among stakeholders facilitates consensus building through collective identification of challenges, shared goals and interests, and creation of solution pathways. This can shape joint planning and implementation for long-term efficiency.

- **Systematic and timely awareness raising on a program and celebration of its success in reaching milestones entice others to join.** Throughout the implementation of the PNDP, civil society, public, and private sectors have joined in to support and contribute to scaling up of program activities with increased coverage. The joining of forces by different types of stakeholders resulted in a combined effort that surpassed any change that could be affected by either of the sectors on their own. To entice others to join and support meant ensuring the visibility of the PNDP, the credibility of the partners, and successes in improving the well-being of the society. It is a process of confidence building that requires years of effort and quality work showcasing the impact of interventions.

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