

# Supplementary Material

## Parkinson's Disease in the Middle East, North Africa, and South Asia: Consensus from the International Parkinson and Movement Disorder Society Task Force for the Middle East

**Supplementary Table 1.** Feedback on the top priorities that should be considered in the PD and other movement disorders care in the region.

<b>Areas for development</b>	<b>Acknowledge What are the current challenges?</b>	<b>Develop What needs to be done?</b>	<b>Implement How could this be achieved/by whom?</b>	<b>Communicate and engage Whom should this be communicated to?</b>
<b>The need for more PD and movement disorders specialists</b>	<p>Difficulty and inaccurate diagnosis of critical cases.</p> <p>Most countries do not have systems that facilitate sub-specialty practices/care.</p> <p>A limited number of specialists in PD and movement disorders' field, not only physicians but there is almost no nurses, PT, OT &amp; ST who are specialized in PD and movement disorders.</p>	<p>Create an opportunity to develop PD and movement disorders specialists.</p> <p>Promote awareness amongst trainees about PD and movement disorders.</p>	<p>Provide fellowship training on PD and movement disorder for interested neurologists.</p> <p>Raise matched funding programs: home institution/government and MDS/other societies jointly fund programs.</p> <p>Offer structured courses with a specialized certificate in the field of PD and movement disorders.</p> <p>Establish centers of excellence in the region that open up highly qualified training opportunities, thus providing staff who really can provide specialist healthcare to PD and movement disorders patients.</p>	<p>Regional PD and movement disorders societies.</p> <p>Regional neurology associations.</p> <p>Ministry of health.</p> <p>Academic centers.</p> <p>MDS and its members of the region.</p>
<b>Multidisciplinary care</b>	<p>Almost non-existent multidisciplinary care for patients with PD and movement disorders.</p> <p>Lack of awareness on the benefits of multidisciplinary care.</p>	<p>Increase awareness and education within different services in the hospital.</p> <p>Encourage/ motivate health care centers to focus on a multidisciplinary approach when caring for PD and movement disorders patients to reach optimal care.</p> <p>Collaborate with local and international PD and movement disorders related to specialty teams-rehab.</p>	<p>Communication with local health care center leaders &amp; specialists.</p> <p>Communication with local organizations related to the field.</p> <p>Conduct lectures and seminars within the institute on the importance of multidisciplinary care.</p> <p>Neurology and movement disorders societies to liaise with the regulators and hospital management to recruit and train PD and movement disorders specialists including nurses and rehab members.</p>	<p>Neurology consultants.</p> <p>PD and movement disorders specialists.</p> <p>Regional neurology associations.</p> <p>Regional rehab associations.</p> <p>Local health care center leaders &amp; specialists.</p> <p>Ministry of health.</p>

<b>Availability of more options of drugs</b>	<p>Shortage of the basic drugs for PD (i.e. L-dopa).  Drugs are not available in every health institution or clinic that deals with PD.  Lack of the availability of newer FDA-approved drugs.  The growing threat of substandard and falsified medical products.  Insurance: Not many patients are covered by insurance to ensure excess to the drugs needed.</p>	<p>Raising awareness about the disease and its disabilities.  Raising awareness about reporting and addressing substandard and falsified medications.  Stressing the importance of the drugs in relieving the symptoms.</p>	<p>Communicating with local medical committees and ministry of health.  Supplying each center that manages PD with sufficient amounts.  Providing more information about the different available treatment options and discussing them with patients.  Establishing the infrastructure to report and address falsified and substandard medical products.</p>	<p>The government.  The health authorities.  Non-governmental agencies and international and regional centers.</p>
<b>Availability of advanced therapies</b>	<p>Lack of advanced therapy options in most of the countries of the region (like DBS, Levodopa carbidopa intestinal gel, Apomorphine infusion pump).  Few skilled neurologists and neurosurgeons in this area in the region.</p>	<p>To develop trained professionals in advanced therapies.  Promote the benefits of advanced treatments for patients with advanced PD and other movement disorders.</p>	<p>Provided educational resources such as frequent workshops and hands-on experience.  Establish movement disorders centers in the region.</p>	<p>Regional PD and movement disorders societies.  Regional neurology societies.  MDS.  Universities.</p>
<b>Need for accurate epidemiologic data</b>	<p>There is no actual/accurate data or any source of information/database about PD /Movement disorder diseases/ specialists in the Middle East which can be used for media, research or awareness. Without this data; it will be difficult to mobilize health care resources from governments without such data.</p>	<p>Create a database about the epidemiology of PD and other movement disorders in each country of the region.  Create a database about specialist PD and movement disorders in each country of the region.  Create a database about the researches in the field of movement disorder that has been done in the region.  Strengthening International collaboration for clinical, therapeutic and genetic studies.</p>	<p>Create registries in each country in the region to pool data to estimate the prevalence of PD and major movement disorders in the region.  Encouraging all neurologists &amp; movement disorders specialists to participate.  Incorporating epidemiological studies in the research plans of health institutions.  Promoting &amp; supporting epidemiological studies and publications.</p>	<p>Health authorities.  University centers and health institutions.  Movement disorders specialists.  PD and movement disorders in society.</p>
<b>Improve patients care and level of awareness</b>	<p>Lack of awareness about PD and movement disorders among the general population and even health care professionals.</p>	<p>For health professionals: providing the essential information on how to suspect PD and movement disorders and to refer patients to specialized centers.  For patients and caregivers: providing all information about the disease, treatment options, how to live well and improve their quality of life in the various regional languages through</p>	<p>Translating different educational materials into all regional languages.  Designing posters, leaflets, and videos to provide information.  Organizing sessions &amp; seminars to talk with patients and caregivers.  Using the media to talk to the public.  Creating websites &amp; Facebook pages in all regional languages with all the above materials to be available.</p>	

		<p>visits to the clinic (first time and follow up), seminars and lectures, posters and leaflets, simple educational videos.</p> <p>For the public: reaching them through media and social media providing information about the disease, how &amp; when to suspect, where to seek advice.</p>		
<b>The need for more educational opportunities</b>	<p>General neurologists in the region have limited access to advances in the field of PD and movement disorders.</p>	<p>Increase teaching opportunities for the general neurologists, residents and medical students.</p>	<p>Encourage neurologists and residents to enroll as members of the MDS to access MDS teaching resources through the MDS website.</p> <p>MDS/other societies to fund such programs with possibly matched funding.</p> <p>A partnership between academic centers in each MENASA country and academic centers in the USA/Europe.</p> <p>At a more local level, work with residencies/fellowships to try to educate neurologists-in-training.</p>	<p>Academic centers.</p> <p>Government /ministry of health officials.</p> <p>MDS/other societies.</p>
<b>Health care resources and infrastructure</b>	<p>Most countries do not have systems that facilitate sub-specialty practices/care.</p> <p>A limited number of centers of excellence in the region.</p>	<p>Develop regional centers of excellence which represent a great opportunity to provide evidence-based clinical care.</p>	<p>Generate country-specific needs assessments and health policy recommendations.</p> <p>Raising funds to establish these needs.</p> <p>Encourage exchange programs and networking between medical centers.</p>	<p>Government /ministry of health officials.</p> <p>Academic centers.</p>