2019 GKHA REGIONAL SLIDES PRESENTATIONS

SOUTH ASIA

SLIDE 1:

<opening slide>

SLIDE 2:

- Overview of presentation
    - Aim of GKHA
    - Methods (desk research and survey)
    - Key Results
    - Summary and implications

SLIDE 3:

- The impetus for the Atlas project came from the fact that we don't have any consolidated reliable data on the current status of kidney care either globally or regionally. In order to improve kidney care worldwide, we need to document where we are and where we need to go to monitor and motivate change.

- The vision of the Atlas is to achieve optimal and equitable kidney care worldwide. To accomplish this, we need to identify and close gaps related to the capacity or equity of kidney care. Hence, the GKHA serves to collect data using standardized indicators that measure kidney care delivery to provide evidence-based recommendations to relevant stakeholders.

- Overall, the goal of the GKHA is to improve the understanding of inter- and intra-national variability across the globe with respect to capacity for kidney care delivery. Through assessing and documenting capacity for kidney care across all world regions, we can work toward improving the quality and equity of kidney care worldwide.

SLIDE 4:

- To achieve this mission, the strategy of the GKHA is to collect data using standardized indicators that measure kidney care delivery to provide evidence-based recommendations to relevant stakeholders.
- First in 2016, the ISN conducted the first-ever survey to document the baseline capacity of kidney care. This allowed for the establishment of benchmarks overall, within ISN regions, and by World Bank income group. This was an important first step to understand where we are globally, with respect to the capacity and equity of kidney care delivery.
- The survey was repeated again in 2018 and will be every 4 years moving forward to monitor progress so we can work toward improving the areas needing change.
- Today's discussion will focus on the 2018 results, which were published in the 2019 Atlas.

SLIDE 5:

- Two key methods were used to produce the atlas: a desk research component, which involved searching literature and other data sources to calculate estimates; and a key opinion leader survey, whereby three leaders from each country (a nephrology society leader, a leader of a consumer representative organization, and a policymaker) submitted details on national kidney care capacity and practices with a specific focus on kidney disease.
- The online questionnaire was completed in July-September 2018. Stakeholders from 182 countries were invited to participate.
- Approximately 3 stakeholders from each country completed the survey. Any discrepancies within a country were resolved through follow-up meetings with regional and country leaders.

SLIDE 6:

- The survey followed a framework developed by the World Health Organization on health systems evaluation.
- This framework was released in 2010, which was a handbook of indicators and measurement strategies to monitor the building blocks of a health system. The WHO recognized that information is needed to track how health systems respond to increased inputs and improved processes, and the impact they have on improved health indicators. Therefore, a set of core indicators of health system performance was established, along with sustainable measurement strategies, to generate the required data.
- The framework considers health systems in terms of six core components or "building blocks":
  - Service delivery;
  - Health workforce;
  - Health information systems;
  - Access to essential medicines;
  - Financing; and
  - Leadership/governance
- Through addressing each of these domains, the overall goals of the WHO strategy are to improve health (level and equity), health system responsiveness, protect social and financial risk, and improve efficiency.
- The GKHA models this framework to similarly aim to achieve these objectives, specific to kidney care.

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- The 2019 survey received input from 160 of the 182 invited countries, equaling a response rate of 88%.
- This covered nearly 99% of the world's population.
- An additional 36 countries participated in the 2019 survey compared to the 2017 survey.

SLIDE 8:

- The GKHA reports overall global results for each indicator, and as well separates the data by ISN region and income group.
- Therefore, we are able to examine the level of variability across income levels and geographical regions.
- Knowing if there is variation between countries, either within a common ISN region or income group, is helpful when trying to promote equity of care.

SLIDE 9:

- This talk focuses on the region of South Asia.
- There are 8 countries in South Asia, 2 are low income, 5 are lower-middle, and 1 is upper-middle.

SLIDE 10:

- At the time of the survey, there were 1,752,543,447people living in the 8 countries in South Asia. The average country population was 32,329,212.
- The median GDP was 177 billion
- On average, 4% of the GDP was spent on healthcare (i.e., total health expenditure)

SLIDE 11:

- The median CKD prevalence in South Asia is 7.5%.
- Sri Lanka has the highest prevalence with 13.24%. Afghanistan has the lowest with 5.01%.
- Nearly 3% (2.6%) of all deaths in the region are attributed to CKD, the highest in Sri Lanka (3.58%) and Bhutan (3.28%).
- Only 5% (4.95%) of the population has obesity, but nearly 30% (26.95%) have increased blood pressure. 10% smoke.

SLIDE 12:

- Data on prevalence and incidence of treated ESKD is often unavailable in South Asia.
- Only 1 country (Bangladesh) has data on the prevalence and incidence of treated ESKD (dialysis or transplantation).
- Information on the prevalence of chronic dialysis is more available, and is provided for 4/8 countries.
- The median prevalence of chronic dialysis (either HD or PD) was 51.25 people on dialysis per million population. Pakistan and India had the highest rates of 53.3 pmp and 49.2 pmp.
- HD was much more common than PD in South Asia. The prevalence of chronic HD in the region was 26.15 pmp compared to only 1.65 pmp for PD. Maldives reported the highest prevalence of PD, which was 14.4 pmp.

SLIDE 13:

- Data on kidney transplantation rates in South Asia were available in 6 of the 8 countries. The median incidence was just over 4 pmp. No data were available on the prevalence of transplantation for any country.
- All 8 countries rely on living donation only.
- The country with the highest transplantation incidence was Pakistan with 14.08 transplantation surgeries per million population.

SLIDE 14:

- Annual costs of kidney replacement therapy were estimated for each country.
- Five countries had data to estimate the annual cost of HD, which was USD 5,202. The costs of PD were available in 4 countries and estimated at USD 8,764 per year. Transplantation costs were also available in 2 countries (Bangladesh and India). It was estimated that the first year of transplantation would cost USD 6,262 and 10,367 per year following.
- The HD/PD cost ratio was estimated for 4 countries and estimated to be exactly 0.7

SLIDE 15:

- Responses were received from 7 of 8 countries in South Asia (87.5%) representing 99% of the region's population.

SLIDE 16:

- Scorecards were created for each country so they could compare results with other countries in the same area as well as between the first survey in 2017 and the follow-up two years later in 2019.
- Green represents availability, red represents not available and grey represents unknown or not applicable if they didn't complete a survey that year.
- Hemodialysis was available in all 7 countries.
- Peritoneal dialysis was available in 6 of the countries, not available in Afghanistan.
- Kidney transplantation was similarly available 6 countries, not available in Bhutan.
- Only 2 countries fund medication for dialysis patients (Bhutan and Nepal). Only one country (Sri Lanka) funds medication for transplantation patients.
- Four countries (Bangladesh, India, Nepal, and Sri Lanka) reported an advocacy group for CKD and 4 for ESKD (Bhutan, India, Nepal, and Sri Lanka).
- Three countries (Bangladesh, Bhutan, and Nepal) have an advocacy group for AKI.

SLIDE 17:

- Few countries in South Asia fund kidney care. Only 2 of the 7 fund non-dialysis CKD care, one exclusively (Bhutan) and one (Sri Lanka) with some fees at the point of care.
- Afghanistan funds non-dialysis CKD care on a solely private and out-of-pocket basis.
- 2 Countries fund care through a mix of public and private and 2 through multiple systems (government, NGOs, and communities).

SLIDE 18:

- Funding for KRT was similarly rarely covered by the government. Only 2 countries fund KRT, one exclusively (Bhutan) and one with some fees at the point of care (Nepal).

- Again, Afghanistan was the only country in the region that funds KRT on a solely private and out-of-pocket basis.
- Sri Lanka uses a mix of public and private sources and 3 countries use multiple systems.

SLIDE 19:

- Five of seven (57%) countries in South Asia reported that nephrologists are primarily responsible for ESKD care. This was slightly lower than reported globally (92%).
- Afghanistan instead reported that primary care physicians are responsible and Bhutan that multidisciplinary teams are responsible.
- India also reported that primary care physicians share the workload and was the second country that reported use of multidisciplinary teams for ESKD care.

SLIDE 20:

- Workforce shortages, highlighted in red, were commonly reported in South Asia.
- All countries reported a shortage of every provider type, except for Bhutan, that reported no shortages for surgeons (PD access), lab technicians, dietitians, radiologists (for u/s), dialysis nurses, and dialysis technicians.

SLIDE 21:

- Worldwide, the median number of nephrologists is 9.95 nephrologists per million population. In South Asia, the density of nephrologists was 1.15 nephrologists per million population, about 8 times less.
- Afghanistan had the lowest density of nephrologists (0.14 pmp) and Nepal had the highest, but only at 1.68 nephrologists pmp.
- Nephrology trainee density was similarly low in the region. The global median density of trainees is 1.4 per million population. In South Asia, the trainee density was 0.3 pmp.
- Bhutan reported 0 trainees. Sri Lanka had the highest with 0.62 pmp.

SLIDE 22:

- Respondents were asked to report the number of centres that provide chronic hemodialysis in their country. All countries in South Asia reported that chronic HD services were available.
- Globally, the median density was 4.5 centers per million population. In South Asia, the density was 1.39 pmp.
- The lowest density was reported in Afghanistan (0.29 pmp) and the highest in Bhutan (3.91 pmp)

SLIDE 23:

- Respondents were also asked to report the number of centres that provide chronic peritoneal dialysis in their country.
- In South Asia, 6 countries reported that chronic PD was available.
- The global median density of PD centers per million population was 1.3 centers pmp. In South Asia, the median PD centre density was 0.15 pmp.
- Pakistan had the lowest density (0.01 pmp) and Bhutan had the highest (1.30 pmp).
- Afghanistan does not offer chronic PD services.

SLIDE 24:

- Respondents were also asked to report the number of centres that provide kidney transplantation in their country. In South Asia, 6 countries offer transplantation services.
- Globally, among the countries with kidney transplantation services, the average is 0.4 centers pmp. In South Asia, the median density was 0.1 pmp.
- Countries with the lowest density were Bangladesh (0.04 pmp) and Sri Lanka (0.51 pmp).

SLIDE 25:

- Of the 6 countries in South Asia that offer kidney transplantation, 3 rely on live donation only (Afghanistan, Bangladesh, Nepal) and the remaining 3 use a combination of live and deceased donation.
- 4 of the 6 countries have no waitlist for kidney transplantation. This is much higher than what was reported globally (67% vs. 19%).

SLIDE 26:

- While all 7 countries in South Asia reported that chronic HD was available, only 3 (42%) have a center-based service that involves treatment 3x week for 3-4 hours. This is much less than the global average, which reported that 77% of countries offer adequate frequency for HD services.
- Four of the 6 countries (67%) in the region with PD services available reported an ability to do adequate exchanges 3-4x day (or equivalent cycles on automated PD). On the contrary to HD, the quality of PD reported (in terms of frequency) was slightly higher than the global average of only 58% of countries that offer adequate PD exchange.

SLIDE 27:

- Home hemodialysis was not generally available in any countries in South Asia, as opposed to 13% of countries worldwide. Generally available means that home hemodialysis training is offered in at least 50% of dialysis centres.
- 5 of the 7 countries in South Asia stated that home hemodialysis is never available.

SLIDE 28:

- Conservative kidney management is a treatment option for ESKD, which does not include dialysis or transplantation.
- There are 2 types of conservative kidney management: choice-restricted or medically advised. Choice-restricted means that patients opt for CKM due to limitations in resources, whereas medically advised, or chosen, is a deliberate choice of CKM as it is likely the better treatment option for an individual rather than KRT.
- All 7 countries in South Asia offer CKM. Most (5/7; 71%) as choice-restricted CKM, as opposed to chosen or medically advised.
- There was a higher use of choice-restricted CKM in South Asia compared to the global average.

SLIDE 29:

- Few countries in South Asia have a registry for any level of kidney disease.
- No countries in the region have a registry for non-dialysis CKD or AKI.
- Only 2 countries (Afghanistan and Sri Lanka) have a registry for dialysis and one (Bangladesh) has a registry for transplantation.
- The presence of registries in South Asia is much lower than what was reported globally (2% CKD, 66% dialysis, 57% transplant, and 8% AKI).

SLIDE 30:

In summary, the 2019 GKHA highlights several important findings for South Asia.

KRT is highly availability, but limited access and quality

- HD was available in all 7 countries in South Asia. Peritoneal dialysis and kidney transplantation were available in 6.
- While all countries offer chronic HD, access to care and quality of treatment was limited. Center-based service that involves treatment 3x week for 3-4 hours was generally available in 4 countries (57%) in the region. This was similar to what was reported globally (58% have HD centres offering treatment 3x week for 3-4 hours).
- Home hemodialysis is generally not available in any country within South Asia.
- Of the 6 countries in South Asia that offer PD, only 3 reported an ability to do adequate exchanges 3-4x day.
- Six countries in South Asia offer transplantation services. Of these, only 2 have an official wait list.

Conservative kidney management is available, often choice-restricted

- While all countries in South Asia reported that CKM is available, most of these countries stated that CKM is choice-restricted, meaning that patients are not choosing to receive CKM because it is better for them but because they cannot receive KRT due to limitations in resources.

Government funding for kidney care is low

- Only 2/7 countries in South Asia fund medication for dialysis patients and one country funds medication for kidney transplant patients.
- This is lower than what was reported worldwide. Globally, 62% of countries exclusively fund medications for dialysis patients and 75% fund transplantation medications.
- Similarly, only 2 fund non-dialysis CKD care and 2 fund KRT.

Few registries across all levels of kidney disease

- Only 3 countries reported a registry of any kind.
- Afghanistan and Sri Lanka have registries for dialysis and Bangladesh has a registry for transplantation.
- No registries were reported for non-dialysis CKD or AKI.
- This is much lower than the global average: nearly 70% of countries have registries for dialysis and 57% for transplantation.

Many workforce limitations across all provider types

- The nephrologist density of South Asia (1.15 pmp) was 8 times smaller than the overall (9.10 pmp).
- Nephrology trainee density was similarly low in the region. Worldwide, there are 1.4 trainees per million population. In South Asia, the median density was 0.3 pmp. One country (Bhutan) reported 0 trainees.
- Workforce shortages were commonly reported in South Asia.
- All countries reported a shortage of every provider type, except for Bhutan, that reported no shortages for surgeons (PD access), lab technicians, dietitians, radiologists (for u/s), dialysis nurses, and dialysis technicians.

Little advocacy for kidney disease in South Asia

- Advocacy groups were minimal for AKI, CKD, and ESKD.
- Four countries reported advocacy groups for CKD and ESKD, and 3 for AKI.

- Increasing the awareness of kidney disease in the public domain, as well as with other nonprofits devoted to global health, may help promote prioritization of kidney disease.
- Highlighting the gaps of care, with respect to quality and equity, coupled with the burden and consequences of untreated ESKD may help improve advocacy, particularly in areas such as Africa with limited resources.

SLIDE 31:

There are important implications to consider. Based on these survey findings, key recommendations to drive future activities for optimizing kidney care globally are proposed:

Increase health care financing for ESKD prevention and management

- While resource limitations are an obvious barrier, focusing on preventing ESKD through appropriate hypertension and diabetes management may be more cost-effective overall. Government funding to cover medication costs may allow more patients to treat earlier stage CKD, thereby preventing the need for more costly ESKD treatment and the obvious burden this has on patients' wellbeing.

Address workforce shortages through multidisciplinary teams and telemedicine

- Shortages of nephrologists, surgeons, dialysis nurses, and other key allied health professionals were noted across most countries. Similarly simply producing more nephrologists may not be feasible or appropriate, and sharing the workload across multiple providers will not only promote the use of multidisciplinary teams but further, allow for more and better care delivery across more patients. Telemedicine may help particularly in addressing gaps in care among rural patients, and enhancing capacity through training programs such as ISN Fellowship, visiting ambassador programs, etc.

Incorporate the collection and reporting of quality indicators in ESKD care

- Measuring and reporting on key quality indicators is an important driver in healthcare improvement. Ensuring facilities are supported with information systems that allow for the systematic measurement and reporting of indicators is a first key step to increasing the rate of monitoring among countries. Further, understanding if or how the collection and reporting of indicators are being used to improve care is needed.

Expand health information systems to prevent and manage ESKD

- Similarly, good quality HIS are vital for kidney disease management within a country. A lack of data on disease prevalence, incidence, resource use, and quality of care limits government and provider ability to monitor and evaluate the care provided as well as predicts appropriate resource allocation so that sufficient facilities, medicines, and healthcare professionals are trained and available.

Promote ESKD prevention and treatment by implementing policies, strategies, and advocacy, and mitigating barriers

- Lastly, policies and strategies are important for consistent approaches within a country for optimal care delivery, as well as for accountability, leadership, and knowledge exchange. Advocacy may help promote the increase of government prioritization and further, public awareness of how to prevent and manage kidney disease. Without acknowledging and mitigating barriers, it would be a challenge to achieve of successes out of these recommendations. Competing priorities and needs (for example, clean water supply and basic sanitation, maternal and child health, malnutrition, etc.) represent formidable barriers that can limit implementation of the recommended strategies in the region.

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- Each Atlas report is available for free download at the ISN webpage.
- To download a copy, please visit the ISN webpage.