Introduction

The JLN COVID-19 Empanelment Learning Exchange was held during November and December 2020 and consisted of three virtual sessions with action and engagement periods between the sessions. Individuals from the following countries joined the learning exchange and provided details on shared challenges and strategies to strengthen and leverage empanelment during the COVID-19 pandemic.

- Ghana: Leonard Abbam Anaman *Ghana Health Service Headquarters*; Isaac C. N. Morrison *Society of Private Medical and Dental Practitioners, Ghana*; Momodou Cham *Christian Health Association of Ghana (CHAG)*
- Iran: Marjan Manouchehri, *Clinical pharmacist, PhD student in cardiometabolic health*
- Kenya: Elizabeth Wala *Global Advisor, Health and Nutrition, Aga Khan Foundation*
- Mongolia: Badarch Jargalsaikhan *Mongolian National University of Medical Sciences*; Bolormaa Norov *Ministry of Health, Mongolia*; Oyungerel Nanzad *Freelance Public Health Consultant*
- Morocco: Hassan Semlali, *Ministry of Health, Morocco*
- Facilitation team: Trudy Bearden, Julia Ah-Rheum An, Anna Kennedy, Kaeng Takahashi, June-Ho Kim, Lisa R Hirschhorn

Representatives from Ghana, Mongolia and Morocco also participated in the JLN Person-Centered Integrated Care (PCIC) collaborative, which resulted in publication of the *Empanelment – A Foundational Component of Primary Health Care* review document as well as an empanelment assessment tool that would have been piloted in 2020 in Ghana and Malaysia if the COVID-19 pandemic had not cancelled those plans. The PCIC countries also co-developed a comprehensive definition of empanelment, which the Learning Exchange used to guide discussions.

*Empanelment* (sometimes referred to as rostering) is a continuous, iterative set of processes that identify and assign populations to facilities, care teams, or providers who have a responsibility to know their assigned population and to proactively deliver coordinated primary health care towards achieving universal health coverage.
The empanelment definition above, collaboratively developed by many countries, is accurate and comprehensive, but we must appreciate our colleague’s succinct description: "Empanelment is grouping patients under providers." ~ Elizabeth Wala

The Learning Exchange participants identified challenges with implementing empanelment regardless of when or where it happens. COVID-19 adds additional challenges but also offers new ways to realize the promise of empanelment to strengthen relationships between clinical teams and those they serve, improve continuity, support population health management, streamline coordination, deliver comprehensive primary care services, assign responsibility for individuals, and shift from reactive to proactive health care service delivery.

The facilitated sharing and discussions illuminated several insights and solutions worthy of sharing with other countries grappling with empanelment and population health during the current pandemic. The nature of the questions tackled by the participants and team were:

- How have you been using empanelment for non-COVID and COVID care in the primary health care setting?
- What is needed to make empanelment a more effective tool to expand access, keep people safe, address gaps in care and distribute the COVID-19 vaccine?
- What are the next steps to strengthen empanelment in your country in 2021?

We explored the potential of empanelment in a possible real-life scenario: You have been tasked by your Minister of Health to distribute 1,000 doses of the COVID-19 vaccine in your community (each person needs two doses). You’ve decided to use empanelment as the system for distribution.

- How can you use the principles of empanelment to distribute the vaccines?
- What resources do you need to make this happen?
- What are your country’s responses to the challenging questions around empanelment?

Following the three sessions, participants and the facilitation team gathered key points that may help other countries seeking to implement or strengthen empanelment during the pandemic. We hope that the insights emerging from the JLN COVID-19 Empanelment Learning Exchange help answer some of those questions!

Lists of Empaneled Individuals

Echoing a primary focus of the PCIC, we discussed the critical importance of accurate patient lists. Ideally those lists capture the entire target population (e.g., within a geographic area) and include additional information about each individual to enable outreach, population health management, quality improvement and more. Empanelment is possible with paper charts, but the task is much easier with an electronic solution to identify the target population, assign individuals to clinicians and care teams and accept responsibility for the health and well-being of individuals. The following are insights from the participants on how to build and maintain accurate lists or databases.

To create lists of patients and to conduct outreach for empanelment, there needs to be trust between health systems and patients. "As long as people know you are helping them, they will trust you." ~ Marjan Manouchehri
Use whatever is available to build comprehensive lists. In Iran, they use available databases and partner with pharmacies. Ideally, they would like a “strong” comprehensive database that is “reliable and concrete” and can be used to identify specific populations (e.g., all individuals with diabetes who are due for services, all individuals of a certain age, etc.)

- Go door-to-door to register patients manually
- In Ghana, they are implementing National ID Cards for all citizens and non-citizens, which will potentially make creating an accurate database and community lists much easier
- In Morocco, they are setting up a national registry for all citizens with a unique identifier, which will potentially facilitate the creation of lists.
- In Mongolia, the primary health care facilities (family, soum and village health centers) have panel lists of citizens in their catchment areas, which are updated every year to remove people who have moved or to deregister those who are migrants. These lists are then forwarded to the provincial level and finally to the central location.
- In Ghana and Kenya, Community Health Workers/Officers maintain their own database of households in the community (often with the aid of the regular mandatory register they keep) of empaneled individuals, enhanced and aided by their robust knowledge of the Community and who is vulnerable by households.
- Tracking those who seek care or receive regular services due to chronic conditions is another common strategy to build lists of individuals for empanelment.
- Consider country-specific and unique challenges with identifying and registering the homeless population, people without addresses, and others.

Empanelment and Population Health during the Pandemic
Now more than ever, deploying empanelment to optimize our response to COVID-19 is an effective part of all the participating counties’ strategies; empanelment is also an effective strategy to maintain continuity of care.

Empanelment in Maintaining continuity of Care
- Conduct proactive outreach to identify and address gaps preventive and chronic in care, especially for individuals who are not seeking health care services due to COVID-19 fears
- Contact individuals that are unseen or unknown to the facility, clinician or care team who may be delaying services due to fear
- Identify individuals who need follow-up for continuity and to strengthen primary care as first contact

Empanelment in the COVID-19 response

“Community Health Nurses (also known as Community Health Officers) deliver community-based services to their panel through proactive outreach services by visiting individual's homes.”
- Momodou Cham
● Identify and track individuals at high-risk of COVID-19 infection or at high risk of death from COVID-19 to tailor health care services, which may include more frequent check-ins or closer follow-up
● Coordinate care for individuals experiencing long-term effects of COVID-19
● Coordinate vaccine distribution and ensure all individuals receive both doses
● Identify initial and subsequent target populations for vaccine administration
● Track adverse reactions to the vaccine
● Evaluate post-vaccine effectiveness

Challenges to Empanelment During the COVID-19 Pandemic
Empanelment has been evolving during the COVID-19 pandemic in many countries. Several unique challenges were identified by the Learning Exchange related to implementing and improving empanelment during the pandemic.

● There is a shortage of providers and health specialists due to task-shifting to provide health care services to individuals with COVID-19.
● Individuals do not want to visit clinics or hospitals due to fear of increased risk of contracting COVID-19.
● Due to the disruption in services, there are threats to the continuity and quality of primary health care, which are usually strengthened by effective empanelment.

COVID-19 Vaccine Distribution and Administration
The discussions about empanelment and vaccine distribution were the most pressing as we begin to see the early distribution and administration of the vaccine in our countries.

● A strong supply chain is important; strong empanelment can increase the effectiveness and efficiency of the supply chain through identifying priority populations and tracking individuals for follow-up, for second doses, post vaccination side effects, and effectiveness in preventing COVID-19.
  o Example: Ghana uses drones to deliver vaccines and medications to very remote areas, relying on their census and empanelment systems to know how many vaccines to deliver. Such a system could be utilized for the COVID-19 vaccine when issues related to cold chain must be addressed.
● Empanelment can be used to identify high-risk or other prioritized populations and assign people to the nearest health facilities that are administering vaccines.
● While these countries had some elements of empanelment, additional work will be needed as they plan for the COVID-19 vaccine.
  o In Mongolia, COVID-19 immunization will primarily target health workers and people over 60 years of age. Registration of medical staff will be carried out by health care facilities and hospitals; registration of people over 60 will be carried out by primary health care facilities and nursing homes.
  o In Morocco, health care workers and adults 60 years and older will be vaccinated first. Health care workers are easily tracked. To identify older people, the health care record booklets will be used.
  o Iran will prioritize high-risk workers and patients. One method for identifying high-risk patients can be to utilize pharmacy lists that track patients with chronic diseases.

Morocco has maintained primary care through a staff of guard system in the primary health care facilities.
Empanelment can also provide support in addition to population identification.
  
  - Vaccine hesitancy: **Empanelment strengthens relationships and continuity, which may be helpful when individuals are distrustful of the vaccine** or are otherwise vaccine hesitant.
  - Monitoring and evaluation of vaccines: **Empanelment will help determine if vaccine administration goals have been met**, especially if the lists of individuals can be used to generate metrics (e.g., percent with one dose, percent with two doses, trends for cases/deaths, etc.)
  - **Tracking the COVID-19 status of the target population**, with feedback to a central database, is ideal when possible.

Participants noted the importance of sharing success stories about empanelment and its use in vaccine distribution and coverage. As we move to re-open society -- from the individual to the country level -- empanelment will be important to continue to expand equitable vaccine distribution and accelerate learning.

**Strategies to Strengthen Empanelment for 2021 and Beyond**

The countries identified several strategies needed in planning to strengthen empanelment and the evidence base to support broader implementation.

- Make a commitment to empaneling all people
- Set a vision of what empanelment should be and how it will support primary care
- Allocate the necessary funds to demonstrate the investment in empanelment
- Create short- and long-term goals for empanelment
- Keep in mind that “Politicians don’t know the patient journey.” (Marjan Manouchehri) and may need help learning that journey with the goal of promoting high-quality primary health care, which can be better accomplished through empanelment