

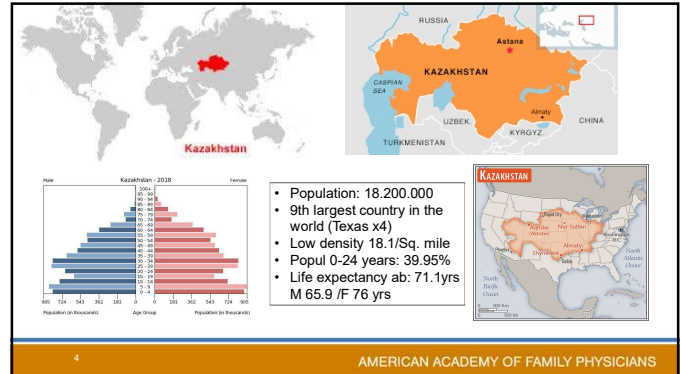


Family Medicine Training in Kazakhstan



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WORKSHOP OUTLINE

•PART I

- Kazakhstan and primary care
- NUSOM and UMC projects
- Family Medicine Clerkship
- Q&A



•PART II

- Family Medicine Residency project development
- Q&A

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Kazakhstan: History

- **1991**: last of the Soviet Republics to peacefully declare independence
- President Nazarbayev continued in his role until his resignation in March 2019
- He constantly made efforts at modernization including establishing **Nazarbayev University** and moving the capital from Almaty (previously Alma Ata) to Astana (now Nur-Sultan)
- Official languages are Kazakh and Russian
- English is gaining in popularity and is widely accepted by the general public
- Since 2018, the Latin alphabet has been gradually replacing the Cyrillic alphabet



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Learning Objectives

At the conclusion of this workshop, participants will be able to:

- Briefly describe the nation of Kazakhstan
- Review the medical and medical education system of Kazakhstan
- Analyze the need for primary care in Kazakhstan and the role of Family Medicine training
- Outline the development of a Family Medicine Curriculum in a new research intensive medical school
- Describe the development of a Family Medicine residency in Kazakhstan, based on ACGME international guidelines

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Kazakhstan: Resources

- It is the dominant country in Central Asia with 60% of the region's GDP
- It has 13% of the GDP of all former Soviet Republics due to oil and gas reserves and minerals
- The annual income of 96.6% of Kazakhstani people does not exceed 10K dollars (inequality in income distribution)

Kashagan oil field in the Caspian Sea



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Kazakhstan: Primary Care & WHO

- The importance of primary care was emphasized in the famous WHO conference in **Alma-Ata in 1978**
- The first pilot clinic including family doctors was established in Alma-Ata in **1989**
- The conference in **Astana 2018** emphasized again the importance of primary care
40th anniversary Alma-Ata declaration
- Although primary care is felt to be of utmost importance, it is difficult to transition from the old Soviet system

1978- Alma Ata Declaration-I.



- Health for All
- Primary Health Care
- Health a Fundamental Human Right
- Equity
- Appropriate Technology
- Inter-sectoral Development
- Community Participation

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NAZARBAYEV UNIVERSITY

- Nazarbayev University (NU) was founded in 2010 as the premier university in the country for innovation, education and research, using English as the language of instruction
- In 2019, there are more than **4600 students** taught by **500 professors** from all over the world (many from the US, 70 nationalities are represented)
- Admission is merit-based. Students are recipients of **government scholarships**
- 7 schools, 20 undergraduate programs, 25 masters programs, 3 PhD programs
- **School of Medicine**, School of Engineering & Digital Sciences, School of Science & Humanities, School of Geosciences and Mining, School of Business, School of Education, School of Public Policy
- Each school has an international **strategic partner**



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Kazakhstan: Primary Care model

- Primary Health Care is still based on large multispecialty polyclinics and acute care facilities in cities, according to the **Semashko model** (USSR)
- It is run by district physicians with no specialty training called "therapists" and some Family Medicine specialists
- Traditionally doctors' salaries are very low, therefore often they have more than one job
- Therapists mainly triage patients to specialists and they are very busy with bureaucratic paper work



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Nazarbayev University School Of Medicine



- Founded in 2015
- Strategic partner: University of Pittsburgh School of Medicine
- MD- Nursing- MPH- MMM
- In progress: PhD, Masters in Pharmacology&Toxicology, Sports Medicine
- 5 Residency programs approved
- 50 faculty (50% ratio internationally/locally trained)
- recruiting in still in progress
- MD: each cohort ~30 students

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Kazakhstan: Reforms in Healthcare

- The National Program of Health Reform (2005-2010) aimed to create an effective primary health care system including family medicine
- In 2019, a 2-year residency program in family medicine was created by the Ministry of Health



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UNIVERSITY MEDICAL CENTER - UMC

- The University Medical Center is comprised of 3 specialty hospitals:
 - **National Research Center for Maternal and Child Health**
 - **Republican Diagnostic Center**
 - **Republican Children's Rehabilitation Center**
- **the Primary Care Polyclinic University Health Center (UHC)**
- NUSOM has a number of collaborating hospitals and clinics that offer bedside teaching experiences (i.e. Polyclinic 9)
- UPMC is a strategic partner for UMC to support transformation toward international standards and integration with NUSOM **teaching and research**

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Family Medicine Clerkship MDY3

- NUSOM's Family Medicine Clerkship in MD Y3 has been a good exercise to explore Family Medicine in Kazakhstan and from which to consider a feasibility plan
- So far two classes have attended the 4-week rotation in Family Medicine
- Students have been exposed to different settings and styles:
 - In the UHC with hands-on practice and precepting style mentoring
 - In Polyclinic 9 with the work-intensive daily routine and multispecialty clinic
- Assessment is based on: observed clinical competence, professional conduct, reflective writing on the role of Family Physicians in Kazakhstan, multiple choice exam and OSCE cases

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Family Medicine Clerkship: What was hard

- Establishing clinical sites: since there were challenges with all of the options, we used a combination of sites to maximize the benefits of both:
 - The broad skill set and precepting style of NUSOM English speaking preceptors in the University Health Center Polyclinic
 - The busy practice and multi-language skills of the Polyclinic 9 physicians
- FM Cases were just not available in Kazakhstan

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Family Medicine Clerkship: the Challenge

- To translate an established robust 4 week Family Medicine Clerkship curriculum from the University of Pittsburgh, where Family Medicine is well established—to NUSOM in Kazakhstan, where Family Medicine is largely non-existent.
- For core clinical experiences, need to provide:
 - Faculty mentors with appropriately broad clinical skill sets
 - Patient population with appropriately broad expectations and clinical needs
 - Space for precepting
 - Medical record with multi-language capabilities to accommodate: Russian, Kazakh and English speaking patients, Russian, English and sometimes Kazakh-speaking medical students and primarily English speaking preceptors.

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END OF PART I Q&A



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Family Medicine Clerkship: What Translated Easily

- Used STFM National Core Clerkship Curriculum as starting point
- Classroom didactics
- OSCE exams
- Home Visit and written reflection—while this can be a challenging experience to arrange for Pittsburgh students, home visits are quite common in Kazakhstan, and this was easy to arrange

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Part II- Residency Development

- The Nazarbayev University Missions Statement: To be a model for higher education reform and modern research in Kazakhstan and contribute to the establishment of Nur-Sultan city as an international innovation and knowledge hub
- The proposal for a residency program in family medicine was approved this year by resolution of the Academic Council of the Autonomous Organization of Education "Nazarbayev University" to meet the operational plan and university mission

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Proposal

•University Goals addressed by the new residencies:

- Academic excellence
- Research excellence
- Reform educational leadership throughout Kazakhstan
- Create a new model for healthcare services
- Innovation and translating research into production



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Initial Operational Plan

•Included the ACGME-I Institutional, Common and Program requirements for Family Medicine:

- Duration of program at 36 months- 3 YEARS
- Participating sites and Institutional and other specialty commitment
- Personnel and Resources including program director, faculty, administration, the FMP site and inpatient resources

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Proposal

- The goal is to develop residency programs that meet the requirements of the ACGME International
- The first residents were expected to come from the first class from NU School of Medicine (NUSOM) and to begin in the fall of 2019
- 4 programs began development in 2017: Internal Medicine, Pediatrics, OB/GYN and Surgery
- NU requested a family medicine residency to be added in 2018

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Initial Operational Plan

•ACGME-I Requirements:

- Resident eligibility
- Evaluation of residents and faculty
- Didactic curriculum
- Clinical experience
 - Progressive responsibility
 - In the FMP site
 - Specialty rotations
 - Scholarly activities
 - Duty hours and fatigue.



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Proposal

•Family Medicine Program Goals:

- Train excellent family physicians who will care for the Kazakhstani community, especially the underserved
- Provide training in family dynamics and behavioral medicine to raise awareness of the importance of the family unit
- Provide outpatient training according to evidence-based medicine and international standards



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Initial Operational Plan

•ACGME-I Competency requirements

- Curriculum and evaluation is based on the 6 competencies:
 - Patient care, Medical knowledge, Practice-based learning and improvement, Interpersonal and communication skills, Professionalism and System-based practice.
- Competencies graded on a continuum called the Milestones

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Visits to Kazakhstan and to the U. S.

- Agendas:
 - Focus on learning each other's systems of residency education including the organization, delivery and evaluation in family medicine,
 - Assess current environment and resources at NU/UMC for family medicine training,
 - Develop a working operational plan
 - Understand the important role of the coordinator in U.S. residencies
 - Understand the interaction of administrative, clinical and educational components of a residency

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Visit to Pittsburgh, November 2018

- Program Director and 2 faculty
- Visits to all 3 family medicine sites with UPMC and meetings with program directors
- Participating in medical decision making and case based-teaching sessions
- Morning report and inpatient teaching
- Integration of behavioral health and MAT clinic
- Integration of pharmacy



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Visit to Kazakhstan, October 2018

- One ex-program director and one administrator
- Visited the University Health Center (UHC) and the Polyclinic #9
 - Both suitable as FMP sites
- Visited the Republican Diagnostic Center and the Oncology and Transplantation Center (specialty rotation sites)
- Visited the mental health hospital
- Toured the medical school and met with a small group of students

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Visit to Pittsburgh, November 2018

- Meet with residency coordinators
- Discuss Balint group and support group
- University Family Medicine Grand Rounds and discussion of the role of the University
- Meet with the Director of GME at UPMC and discussion of ACGME requirements
- Participate in a core didactic session and evidence-based medicine discussion



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Visit to Kazakhstan, October 2018

- Participated in faculty development seminar with other faculty
 - What are we doing here?
 - Day in the life of the teaching faculty and residents
 - Educational strategies in various settings
 - Basic principles of clinical teaching
- Extensive discussions with the program director and faculty

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Visit to Pittsburgh, November 2018

- Witness the office "huddle" and office precepting
- Discussions with faculty and coordinators
- Office precepting at a different site
- 2 visits to rural sites were scheduled to see teaching in those settings but one was cancelled due to weather. A CCC meeting was scheduled but also cancelled.



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Goals Established

- Learning outcomes are based on the ACGME Milestones
- A didactic schedule, rotation schedule and evaluation plan are established to meet ACGME-I requirements
- Plan is to admit 4 residents in the first year (2019) with eventually admitting 12 residents per year by year 5 (2023)
- Full time state scholarships will be provided, in line with international standards

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Timetable

- First 9 months:
 - Residency program approval from the NU academic Council and quality assurance department
 - Hire a residency coordinator
 - Develop rules and regulations to meet ACGME requirements
 - Finalize best site the FMP
 - Develop schedules for residents and call schedules that adhere to duty hour requirements
 - Training of center staff
 - Identify and train faculty

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Goals established

- Admission criteria are set in collaboration with the other new residencies: Surgery, Pediatrics, OB/GYN and Internal Medicine
- Impart the necessary skills to implement preventive care and education about wellness and support health advocacy and patient education
- Provide training in mental health, women's health, palliative care and communicable disease to foster community health

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Timetable

- First 9 months:
 - Develop the curriculum for the health center
 - Inpatient rotations with dedicated syllabi and evaluation tools year one:
 - Internal Medicine
 - Pediatric and newborn, + outpatient pediatric
 - OB and GYN rotations
 - Surgery
 - ICU
 - Emergency medicine
 - Psychiatry
 - Population health and community medicine

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Training Sites

- Nazarbayev University Health Center (UHC) is designated as a primary FMP teaching site as well as an additional polyclinic outpatient department
- Affiliations are established with:
 - the National Research Center for Mother and Child Health and the National Children's Rehabilitation Center for Pediatric and OB training and City Hospital #2, Cardiac Center and Presidential Hospital for the FM inpatient service

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Timetable

- First 9 months:
 - Develop didactic schedule
 - Committee membership (PEC, CCC)
 - Develop procedure list
 - Develop system (electronic) to record patient numbers, procedures, duty hours
 - Develop relationships with specialists who understand the importance of training family medicine residents
 - Develop applicant admission requirements



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Applicant admission requirements

- MD or equivalent from a university recognized in Kazakhstan according to the World Directory of Medical Schools
- Required level of English proficiency and standardized language tests reports, i.e. TOEFL or IELTS=>7
- 2 confidential letters of recommendation
- Personal statement
- IFOM basic science exam test report or USMLE step1

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Timetable

- Year 3:
 - Continue regular faculty and health center meetings
 - Continue quarterly CCC meetings and resident meetings with program director
 - Continue faculty development
 - Development of any other rotations and electives not yet finalized

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Timetable

- Year 2:
 - Schedule regular faculty meetings and monthly health center meetings
 - Faculty evaluation sessions and faculty development
 - Continue development of specialist relationships, curriculum development and evaluation tools
 - CCC meeting after 3 months
 - Develop program evaluation tool with PEC meeting in spring
 - Assessment of interns in spring to decide on promotion to PGY 2 (OSCE possible)
 - Guidance for new 2nd year residents to take on a more supervisory role
 - Interview for interns for second class and select class

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Strengths

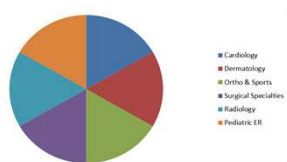
- Currently the Program Director and 2 faculty members are on-site
- Each clinical site will have a minimum of 2 full time preceptors/instructors
- Library and computer resources are adequate through the university
- Quality Control and review will be assured through university oversight as well as regular surveys and focus groups including residents, faculty and employers
- Plus external accreditation agency

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Timetable

- Year 2:
 - Continue curriculum development and evaluation tools:



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Difficulties & weaknesses

- Funding issues → **solved**
- Misunderstanding of the role of the family doctor both by physicians and patients → **cultural change in progress**
- Differences between the family doctor and the "therapist"
- Training sites and clinical faculty → **international standards to be improved**
- Adequate teaching and administrative staff → **planned**
- Inadequate time to meet all requirements → **program start delayed by 1 year**

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Current Situation

- On-line registration to open in May 2020
- During 2019-2020 all the above difficulties will be properly addressed and adequate supporting personnel will be added
- The program will start in September 2020

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REFERENCES

- Gerry, C. J., & Sheiman, I. (2018). Too many and too few: The paradoxical case of physicians in the Russian Federation. *The International journal of health planning and management*, 33(1), e391-e402.
- Sheiman, I., Shishkin, S., & Shevsky, V. (2018). The evolving Semashko model of primary health care: the case of the Russian Federation. *Risk management and healthcare policy*, 11, 209.
- <https://www.who.int/countries/kaz/en/>
- <https://www.who.int/pmnch/media/news/2018/astana-declaration/en/>
- <https://www.cia.gov/library/publications/the-world-factbook/geos/kz.html>

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