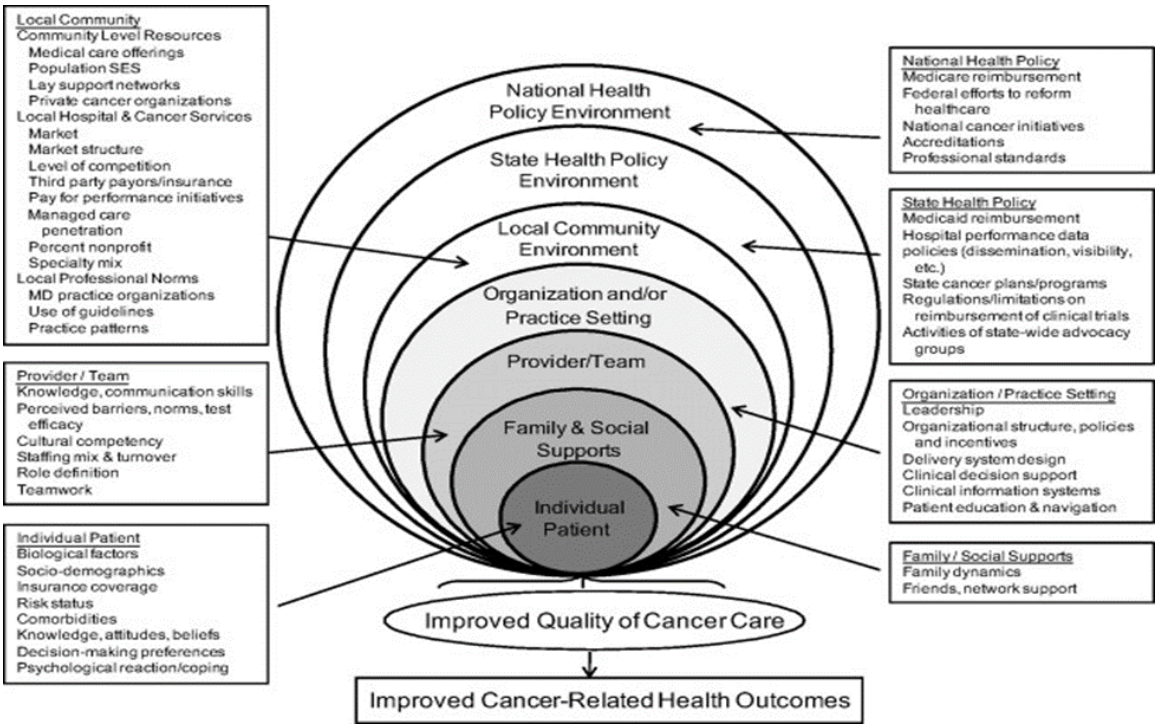
Systems Based Practice

Introduction

So what exactly is it?

Systems Based Practice refers to all the processes in the health care system that operate to provide cost effective care to individual patients and to populations. It includes the appointment system and referral process all the way to the governmental organization of health care. It can even include the way patients and providers engage with the community. It is evolving into a prominent factor in health care delivery, increasingly referred to as Health Systems Science and seen as complementary to Basic Science and Clinical Science.

Consider this graphic from the National Cancer Institute based on the Social-Ecological Model of health promotion:



It identifies multiple layers of influence beyond the individual patient that impact a patient's health. It is important for physicians to understand these different layers and their impact on care delivery. The ACGME (Accreditation Council for Graduate Medical Education) requires that "Students must demonstrate an awareness of and responsiveness to the larger context and systems of health care and the ability to call on system resources to provide care that is of optimal value".

Systems based practice can be easy to overlook as a medical student. It focuses on aspects of the team approach to patient care to which you may have had limited exposure. Furthermore, it addresses systems for patient care (e.g. type of medical coverage, health care resources, home resources, and cultural needs) that can seem peripheral on a busy inpatient service with extremely sick patients. However, they are ultimately critical to successful patient care and to running a medical practice. An ideal health care delivery system optimizes both resources and outcomes. It promotes a basic understanding of the complex operational, regulatory, and fiscal parameters of the various hospital and health care systems (i.e. the connections between patients, providers, payors, and governing bodies). Your operational understanding of SBP will ultimately guide your practice and highlight systemic improvements that can be made to enhance the safety, efficiency, access, cost, and overall patient and provider experience.

All residency programs have a learning requirement for systems based practice (it is an ACGME competency), so you will have a head start.

System Based Practice includes, but is not limited to, the following topics:

1. Safety and quality in health care
2. Physician advocacy
3. Health insurance
4. Health care economics
5. Transitions of care
6. Different health care systems
7. High Value Care
8. Patient centered medical home
9. Chronic Care

This workbook covers each of these topics and offers you the opportunity to learn more about them through independent study.

Instructions

You are required to complete one case-based activity and one project from this workbook. You are also required to complete online courses through the Institute for Healthcare Improvement (IHI) Open School.

1. Please read the Case-Based Activity, associated readings, and subsequent prompts. Respond to the prompts in a one-page write-up and submit on one45.
2. Please review the 9 modules in this workbook. Select one to research further (starter resources included in the modules) and compose a two-page write-up summarizing your findings. Submit on one45. If you prefer, you can do a project of your own choice related to any topic in systems

based practice. Please email the course director, Dr. Sarah Smithson (Sarah_Smithson@med.unc.edu), **prior to completion** for approval.

3. Complete the IHI Open School online courses PS101-105 on Patient Safety and L101: Becoming a Leader in Health Care on the Institute for Health Improvement (IHI) Website http://www.ihi.org/education/IHIOpenSchool/Courses/Pages/default.aspx

   If you are new to IHI Open School, you will need to register. Register as a student to receive free access. **The IHI courses will take approximately 8 hours to complete.** When you have completed the courses and the evaluation, click on the box that says "back to course detail". Create your certificate and send to Reid Johnson (reid_johnson@med.unc.edu) as an attachment to confirm you have completed and passed the courses.

Plan to complete the activity, project, and IHI courses throughout your rotation. Do not leave them until the end. All required work is due one week after the course finishes*. At the end of that week, the forms will disappear from your inbox on One45.

A reminder about grading, starting 2017-2018 school year:

	FAIL	Eligible for PASS	Eligible for HIGH PASS	Eligible for HONORS
Attend Orientation		x	x	x
Complete IHI modules		x	x	x
Submit all assignments on time		x	x	x
Activity meets expectations*		x	x	x
Project meets expectations*		x	x	x
Common Assessment form average score 3-3.49 (70-79.9%)		x		
Common Assessment form average score 3.5-3.99 (80-89.9%)			x	
Common Assessment form average score ≥4 (90-100%)				x

"Meets Expectations" = The student demonstrates a basic understanding of the systems-based practice topic. The discussion is reasonably well-developed and demonstrates the level of quality expected for graduate level work. The written assignment is **free from major grammar, spelling and punctuation mistakes**.

All requirements are due by the Friday after your APS completion date.*

***Activity and Project must Meet Expectations on first review to earn High Pass or Honors**

**Graduating students in the last block of the academic year must complete their modules and project by the Tuesday after their course finishes.*

If any of the links to the readings or websites do not work, please let Dr. Smithson know.

Welcome to the course,

Sarah

REQUIRED

CASE-BASED ADVANCED PRACTICE SELECTIVE ACTIVITY

Adapted from Skochelak SE, Hawkins RE, et al. *Health Systems Science.* St. Louis: Elsevier, 2016.

INTERN DILEMMA

A family medicine intern prepares to discharge from the hospital to home a 71-year-old male patient following a long hospitalization for new-onset congestive heart failure complicated by acute renal failure. The discharge instructions include six new medications, a low-salt diet, support hose, and exercise and follow-up with a primary care physician in 5 days. The intern orders a visiting home nurse to go to the house and provide guidance, help administer and monitor medication adherence, check home safety, and measure blood pressure and weight. Unfortunately, the medications are administered on different schedules (e.g. once a day in the morning, twice a day, three times a day, once in the evening), and two of the medications are "off-formulary" and are unaffordable for the patient. There are no primary care physicians in the patient's area that accept his insurance. The patient lives in a community that is a "food desert" and is unable to get low-salt food; there are no sidewalks, and the visiting home nurses consider his neighborhood too dangerous to service. The patient quickly deteriorates, and after 4 days he decompensates sufficiently that his family calls 911. An ambulance takes him back to the hospital's emergency room, and he is admitted to the Intensive Care Unit for 1 week.

Using the suggested readings below, answer the following questions in a one page write up:

1. How might the discharge be handled, given the barriers to care?
2. How can rehospitalization be avoided?
3. How might the hospital, residents, staff, and attending physicians help reduce the health disparities in the community?
4. How might community-wide interventions reduce the rates of disease prevalence and incidence?

Suggested Readings:

1. Berwick D, et al. The Triple Aim: Care, Health, and Cost. Health Aff. May 2008 vol. 27 no. 3759-769. http://content.healthaffairs.org/content/27/3/759.long
2. Feltner CC. Annals of internal medicine: Transitional care interventions to prevent readmissions for persons with heart failure: a systematic review and meta-analysis. American College of Physicians; 06/2014;160:774. http://vb3lk7eb4t.search.serialssolutions.com.libproxy.lib.unc.edu/?sid=Entrez:PubMed&id=pmid:24862840

3. Berkowitz SA, Fabreau GE. Food insecurity: What is the clinician's role? *CMAJ : Canadian Medical Association Journal*. 2015;187(14):1031-1032. doi:10.1503/cmaj.150644. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4592289/

Module 1 – Safety and Quality Improvement (QI) in Health Care

Goal: Explore systems to improve quality and avoid medical error

"Bad systems, not bad people, lead to the majority of errors and injuries."

Quality and Safety is crucially important to every physician's practice. Most errors are due to system failures rather than incompetent physicians. Good systems in place can protect physicians and patients from the consequences of errors. In 2000, the Institute of Medicine published a document called "To Err is Human" highlighting the number of medical errors that occur annually in the United States. Medical error is the fifth leading cause of death in the U.S. (2009). Since the publication of this document, there has been an emphasis on improving systems to avoid errors. In your practice, you should be able to observe many systems that have been put in place to avoid serious errors, such as a system to follow up on abnormal pap smears or mammograms.

We are continually striving to improve the quality of health care. To do this, we need to review and improve the systems used to provide the care. The PDSA (Plan, Do, Study, Act) cycle is a commonly used QI tool of continuous improvement. Although it may not be referred to as this in your practice, if you look around, you will find PDSA in action. Please read reference #1 for an overview of QI in healthcare.

What underlies quality Improvement?

The process of quality improvement is driven by supporting innovation, evaluating quality improvement systems, rapid-cycle learning, and disseminating evidence about what works. **A hallmark is small, rapid change.**

The best way to improve health care quality is to help health professionals evaluate their own performance and their colleagues' performance, quickly learn how interventions fare in the "real world," and see the benefits of innovation firsthand—and then widely share the lessons learned. For this to happen, health professionals must have rapid access to information about what works in their own care and in care around the country.

Module 1: Project options

For any project below, read the following references:

1. Basics of Quality Improvement in Healthcare http://www.mayoclinicproceedings.org/article/S0025-6196(11)61194-4/fulltext
2. PDSA ref https://www.cms.gov/medicare/provider-enrollment-and-certification/qapi/downloads/pdsacycledebedits.pdf

3. Science of Improvement: Testing Changes
   http://www.ihi.org/knowledge/Pages/HowtoImprove/ScienceofImprovementTestingChanges.aspx

OPTIONS:

1. If you are in a surgical rotation or planning to pursue a surgical field, read these two references about surgical "never events":
   a. Challenges in Reducing Surgical "Never Events"
      http://jama.jamanetwork.com/article.aspx?articleid=2449166
   b. Wrong Site Surgery, Retained Surgical Items, and Surgical Fires: A Systematic Review of Surgical Never Events
      http://archsurg.jamanetwork.com/article.aspx?articleid=2301000

   Write about strategies in the OR that you have witnessed that attempt to prevent surgical "never events". Have you been part of a "never event"? Write about your experience.
   Propose strategies or changes that could improve the safety of the OR.
   How would you implement and test these changes in a PDSA format?
   What are potential barriers and how would you address them?
   Who are the stakeholders and how would you engage them?

   OR

2. If you are doing your rotation in the ED you can join in either the monthly NSTEMI meeting, Stroke Team meeting, or the bimonthly multi disciplinary clinical operations group (COG) meeting. These groups track the quality of care in the ED. Contact Ashly Turner (Ashly.Turner@unchealth.unc.edu) for COG, Kaitlin Strauss (Kaitlin.Strauss@unchealth.unc.edu) for STEMI, or Nicole Burnett (Nicole.Burnett@unchealth.unc.edu) for Stroke to find out the next scheduled meeting. Write about the meeting including the problems/gaps in care identified, detail an ongoing PDSA cycle, and discuss possible system changes proposed.
   What are potential barriers and how are they being addressed?
   Who are the stakeholders and how are they being engaged? Is there room for improvement? How so?

   OR

3. If you are interested in pediatrics and/or resident handoffs in hospitalized patients, read this JAMA article:
   "Rates of Medical Errors and Preventable Adverse Events Among Hospitalized Children Following Implementation of a Resident Handoff Bundle" (http://jama.jamanetwork.com/article.aspx?articleid=1787406) and view the accompanying video:
   (http://jama.jamanetwork.com/multimediaPlayer.aspx?mediaid=6208888)

by the study's author. Write about your experience with handoffs in the hospital and how you would apply lessons learned in this study to inpatient services.
How would you implement and test these changes in a PDSA format?
What are potential barriers and how would you address them?
Who are the stakeholders and how would you engage them?

Module 2

Goal: to understand the physician's role as an advocate.

What is physician advocacy?

In today's complicated health care delivery system, physician advocacy is important for patients, the medical profession, the health care system, and society. One emphasis is on helping patients understand their health care options and helping them negotiate an increasingly complex health care system. There is also a growing emphasis on provider health and wellness. Advocating for improvements in the health care system overall also falls under the purview of the physician advocate.

In the bigger picture, patient advocacy is purposeful actions by health professionals to address determinants of health which negatively impact individuals or communities by either informing those who can enact change or by initiating, mobilizing, and organizing activities to make change happen. Herein lies the mandate of the physician advocate: to support behaviors, actions and events that are likely to promote health-related change and to discourage those that impede it. Health advocacy should be a pervasive part of a physician's practice, targeting individual patients, the physician's immediate practice population, institutions, social organizations, and various levels of policy-makers.

Most medical professional organizations, such as the American Academy of Family Physicians (http://www.aafp.org/advocacy.html) and the American College of Surgeons (http://www.facs.org/ahp/index.html) have advocacy resources on their websites. You can find the organizations' statements on various issues such as health reform and read their letters to congressmen and the President. You also have the opportunity to send your own advocacy letters - the toolkit on the AAFP gives good guidelines.

Here are some real life examples of physician advocacy:

Patient advocate: A health care advisor for a policy maker
When Dr. S learned of a bill pending in the U.S. Senate that would adversely affect her patients, she called the office of her U.S. senator and spoke to the legislative aide who worked on health issues. The aide noted her concern and then asked her advice on another health-related matter. Dr. S spent several minutes offering a thoughtful opinion and left her number with the aide, offering to help in the future. Dr. Snow meets quarterly with her U.S. senator and his legislative aide, and she has become a trusted advisor on health-related issues. She uses the opportunity to advocate solutions to the needs she sees in her practice and community.

Parent Education: School Board Advisor
Dr. B recognized an extraordinary rate of obesity among his school-aged patients while practicing in rural Washington. After discussing the issue with several families, he concluded that a contributing factor was the poor food choices found within the local schools. He decided to bring the issue before the local school board, requesting action on the children's behalf. School board members agreed with Dr. B and felt empowered by his medical expertise to take action. They encouraged Dr. B to become a member of the board to follow this project to completion. On the basis of his commitment to these children, he agreed. His advocacy successfully effected changes in nutrition policy in the schools.

Hospital physician: Leader in injury prevention
Dr. R was sickened by the number of emergency department visits of children suffering injuries related to falls from high-rise windows. She sought a small grant to place window guards on apartment building windows in the surrounding neighborhood. When she demonstrated the dramatic decrease in injuries, the city council passed a law requiring protective guards on all high-rise windows. This initial effort led to a national change in laws promoting injury prevention from falls.

Patient advocate: Liaison to media and health reporter
Incensed by the injustice he saw in his daily care of patients without health insurance, Dr. M felt that change would come only if the public, too, could see what he saw. One particular patient's story seemed to perfectly illustrate some of the problems faced by the uninsured. With the patient's permission, he contacted a reporter who covered the story. Dr. M began gathering illustrative stories and pitching them to media outlets which then covered many of the stories. He also wrote and published frequent opinion pieces, editorials, and letters to the editor on health matters. In the process, he developed relationships with the local media and advocacy communities. He began coordinating his efforts with local health care advocates to link media coverage with their policy-change and organizing efforts. He also became an advisor on health matters to a number of local reporters

<u>Readings:</u>

1. Physician-citizens-Public roles and Professional Obligations. JAMA.2004;291(1):94-98. http://jama.ama-assn.org/content/291/1/94.full
2. Change From the Inside Out: Health Care Leaders Taking the Helm http://jama.jamanetwork.com/article.aspx?articleid=2210910

Module 2: Advocacy Projects

1. Go to your future professional website and read about the advocacy issues in which they are currently involved. Choose one of these and write a short description including your view on the issue. Then call your legislators (https://www.usa.gov/elected-officials) about the issue that is important to you. Review this site (http://www.ncsapa.org/contacting-your-legislators/) for guidelines – adapt to your topic. Write about your experience. How did you prepare? What talking points did you use? Was it easy or hard? How would you explain the process to others?

OR

2. What topic are you passionate about? Go to your future professional website to learn more about hot topics in your field or choose a topic about which you are already well informed that warrants advocacy. Go to http://ctb.ku.edu/en/table-of-contents/advocacy/direct-action/letters-to-elected-officials/main to learn more about writing concise, persuasive letters. Then, compose a Letter to an Elected Official or a Letter to the Editor (http://ctb.ku.edu/en/table-of-contents/advocacy/direct-action/letters-to-editor/main). Submit to a local publication such as the following:
    a. The News&Observer http://www.newsobserver.com/opinion/letters-to-the-editor/submit-letter/
    b. The Daily Tarheel http://www.dailytarheel.com/page/submit-letter-to-the-editor
    c. The Herald Sun https://www.heraldsun.com/site/forms/online_services/letter_editor/

    Include the name of the publication to which you submitted at the bottom of your Letter.

Module 3

Goal: to understand different health care plans

Health Care Plans

Many of the larger insurance companies; for example, BlueCross BlueShield, offer all the different types of health insurance which are:

A. Indemnity insurance
B. Managed Care of which there are 3 types:
    i. Health Maintenance Organizations (HMOs)
    ii. Preferred Provider
    iii. Point of Service
C. High Deductible health plan

A. Indemnity/"Fee for Service"

This type of coverage offers more flexibility in choosing doctors and hospitals. Usually, the patient can choose any doctor and can change doctors at any time. They do not need a referral to see a specialist. Indemnity insurance pays only part of the medical bills and the patient is responsible for the rest. The out of pocket costs are likely to be higher for certain services than with some managed care plans. There is often a deductible which may range from $100 to $300 per year per covered person or $500 or more per year for a family.

With an indemnity plan there is often more paperwork for the patient to do. Some doctors will submit the claim for the patient and once the doctor receives payment from the insurance company, he or she will bill the patient for the difference. With other doctors, the patient will have to pay the entire bill and file a claim with the insurance company to be reimbursed. Indemnity insurance pays a portion of the bill—usually 80 percent— after the deductible has been met, although this may vary and the patient pays the remaining 20%. Indemnity policies typically have an out-of-pocket maximum. This means that once the expenses reach a certain amount in a given calendar year, the fee for covered benefits typically will be paid in full by the insurance plan. There also may be lifetime limits on benefits paid under the policy. Most experts recommend a policy with a lifetime limit of at least $1 million. Anything less may not be sufficient. Some companies, such as BlueCross BlueShield, have stopped offering indemnity plans.

B. Managed Care

More than half of all Americans who have health insurance are enrolled in a managed care plan. Managed care plans usually cover a wide range of health services. With these plans, costs to the patient are lower when

patients use the doctors and other providers who participate in the plan (network providers).

In most cases, the patient will not have to fill out any insurance forms or submit any claims to the insurance company when they use in-network providers. Usually, they pay a copay (typically $10 to $20 for an office visit) each time they go to the doctor or hospital or fill a prescription. The copay may vary depending on whether they see a primary care doctor or a specialist and whether they receive a generic or brand name prescription drug. Most managed care plans have a list of drugs that they cover, called a formulary. The copay for prescription drugs will probably depend on whether they are getting a generic drug, a brand name formulary drug, or a brand name drug not on the plan's formulary. For example, the copay might be $10 for a generic drug, $25 for a formulary drug, and $40 for a brand name non-formulary drug. Some managed care plans have a mailorder pharmacy option so the patient can send their prescription for routine maintenance drugs to the mail order pharmacy. In most cases, they will receive a 3-month supply of medication by return mail. They may still pay a copay, but the cost may be lower than it would be at a local retail pharmacy.

Managed care plans have lower out-of-pocket expenses for patients, as long as they see doctors who are part of the plan (in-network providers).

There are three main types of managed care plans:

- Health maintenance organizations (HMOs).
- Preferred provider organizations (PPOs).
- Point-of-service plans (POS).

All three types of managed care plans have contracts with doctors, hospitals, and other providers. They have agreed on certain fees with these providers. As long as the patient receives their care from a plan provider, they will be responsible only for any cost-sharing or co-payments that the plan requires.

Health Maintenance Organizations

HMOs have long been known for a focus on prevention and wellness. Traditionally, HMOs required that the patient receive most of their care from one primary care physician who is aware of the total health picture. The patient must receive all of their medical care from network providers, except in emergencies. HMOs usually have flat copayments rather than deductibles and co-insurance, and no lifetime limits on coverage.

When a patient enrolls in an HMO, they need to select a primary care physician who will be responsible for coordinating all of their care. Primary care physicians may be family physicians, internists, pediatricians,

obstetricians-gynecologists, or general practitioners. When the patient is ill, the primary care doctor will see them first, unless it is an emergency. If a referral is needed this will be done by the PCP and usually the HMO will not pay for a specialist without this referral. In most cases, the patient must see a specialist who participates in the HMO. Sometimes, in special circumstances, HMO patients may be referred to providers outside the HMO network and still receive coverage: e.g. if you are on vacation and sustain a fractured bone.

If the patient needs to be admitted to the hospital and it is not an emergency, they may have to obtain precertification although often the hospital will take care of this. Non-emergency hospital care may not be covered without this precertification. In case of an emergency admission, the patient, a family member, or the hospital will need to contact the insurance company within a certain timeframe (usually within 48 hours of admission) to obtain written confirmation of coverage for the hospital stay.

Preferred Provider Organizations and Point-of-Service Plans

PPOs and POS plans combine features from both fee-for-service and HMOs. PPOs and POS plans offer more flexibility than HMOs in choosing physicians and other providers. POS plans have primary care physicians who coordinate patient care, but in most cases, PPOs do not. Premiums tend to be somewhat higher in PPOs and POS plans than in traditional HMOs.

Generally, the greater the emphasis on in-network care, the lower the premiums and the more comprehensive the benefits will be. Consumers and employers make tradeoffs, deciding which is more important: a greater choice of providers or a lower premium.

If the patient chooses to go out of network for their care, they may have to meet a deductible before the plan begins to pay benefits. Also, they may have to pay the bill and submit paperwork to the plan for reimbursement of covered expenses.

In a PPO, the patient does not need a referral to see a specialist or get other types of care. When they go out of the plan's network for care, PPOs and POS plans work like fee-for-service plans and charge coinsurance.

C. High Deductible Health Plans

High deductible health plans have a lower premium and a higher deductible than traditional plans. They are best for patients without any chronic medical conditions. They are usually paired with a health savings account, which is a pre-tax fund that enrollees can use to spend on health care costs.

Module 3: Health Care Plans Project Options

Readings

The agency for healthcare quality and research has a good website outlining the different types of insurance.
http://archive.ahrq.gov/consumer/insuranceqa/insuranceqa.pdf

Healthcare.gov also has helpful, basic information
http://www.hhs.gov/healthcare/

1. Go to http://www.ehealthinsurance.com/north-carolina-health-insurance and compare two different insurance plans, specifying the different types of plans (HMO, POS, etc) and why the costs might vary. Look at the plan details. Specifically, address if maternity services are covered and explore the details of prescription coverage. Summarize two different health insurance options and the pros and cons of each.

OR

2. Write about the levels of care in the health care exchanges. Discuss the options available in North Carolina, the different plans, the role of the brokers and how people sign up for a plan. How have the options changed over time and why? Summarize the pros and cons of the exchanges. Use https://www.healthinsurance.org/north_carolina-state-health-insuranceexchange/, the Kaiser Family Foundation website (http://kff.org/healthreform/state-profile/state-exchange-profiles-north-carolina/) and https://www.healthcare.gov/get-answers/ to inform your project.

Module 4: Health care costs

Goal: to understand the effect of health care costs on health and to explore possible methods of cost constraint.

Health care costs in the US are increasing every year. According to the Centers for Medicare and Medicaid Services, the total US health spending in 2015 was $3.2 trillion or $9,990 per person. This was an increase of 5.8% over the previous year. Health care spending accounted for 17.8% of Gross Domestic Product (GDP). The Kaiser Family Foundation 2016 Employer Health Benefits Survey revealed that annual premiums for family health care coverage reached $17,545 in 2015. This was a 4% increase from the prior year. On average, workers paid $4,955 toward the cost of their health insurance.

Experts agree that the U.S. health care system is riddled with inefficiencies, excessive administrative expenses, inflated prices, poor management, inappropriate care, waste and fraud. These problems significantly increase the cost of medical care and health insurance for employers and workers and affect the security of families. The Affordable Care Act (Obamacare) introduced the concept of Accountable Care Organizations to decrease cost and increase quality.

Accountable Care Organizations

An ACO is a network of doctors and hospitals that shares responsibility for providing care to patients. In almost every region of the country, hospitals and physicians are forming (or talking about forming) ACOs and entering into other arrangements designed to integrate care, manage chronic conditions, and enable evidence-based practices. These networks of doctors and hospitals coordinate patient care and earn bonuses if they save Medicare money and meet quality targets. The Obama administration hoped ACOs would spring up around the country, initially treating Medicare patients but eventually other people as well. The goal is to impose efficiency on a health system that now fosters disjointed and excessive medical care, driving up costs.

The health law called for ACOs to be launched in January 2012, with each capable of treating at least 5,000 Medicare patients. As envisioned, these networks of doctors and hospitals might work for the same organization or separately, sharing information about patients and financial responsibility for their care.

Module 4: Health Care Costs Project Options

1. "The Impact of Health Care Reform." Health Care Reform was passed under the Patient Protection and Affordable Care Act (ACA). The ACA has vocal supporters and critics. Compare and contrast at least 3 pros and 3 cons of the ACA. Use at least 3 references.

   OR

2. Read the following references and write about 5 ways to decrease health care costs. Use additional references.
   a. http://www.nejm.org/doi/full/10.1056/NEJMsb1205901
   b. The Era of Delivery System Reform Begins. http://jama.jamanetwork.com/article.aspx?articleid=1555141

Suggested Readings:

1. Obama B. United States Health Care Reform Progress to Date and Next Steps. *Jama*. 2016;316(5):525-532. doi:10.1001/jama.2016.9797. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5069435/
2. Butler SM. The Future of the Affordable Care ActReassessment and Revision. *JAMA.* 2016;316(5):495-497. doi:10.1001/jama.2016.9881 http://jamanetwork.com/journals/jama/fullarticle/2533698
3. Butler SM. Repeal and Replace Obamacare: What Could It Mean?. *JAMA.* 2017;317(3):244-245. doi:10.1001/jama.2016.19918 http://jamanetwork.com/journals/jama/fullarticle/2598251

Module 5: Transitions of Care

Goal: To understand the importance of good transitions of care.

A substantial proportion of hospital admissions are re-admissions. Readmission rates within 30 days are as high as 25% for Medicare beneficiaries. Sometimes these are avoidable and have occurred due to poor discharge planning, for example altered medications. Studies have found that quality and patient safety are compromised during this vulnerable period because of high rates of medication errors, incomplete or inaccurate information transfer and lack of follow up. Patients along with their caregivers are the common thread across different care venues and studies in which patients and caregivers are encouraged to take a more active role in their care have shown lower rates of rehospitalization. Ref 5 describes a recent project at UNC that has significantly decreased readmission rates.

The Affordable Care Act includes a clause that penalizes hospitals with higher than average readmission rates. This focuses our attention on measures we need to take to decrease these rates.

Many patients without a personal medical home and therefore no one coordinating and overseeing their care, end up in the ER inappropriately, which is often an expensive place to get medical care, to say nothing of the wait non urgent patients may have.

Module 5: Transitions Project

Write about Medicare's readmission penalties. Look at the this link: https://data.medicare.gov/Hospital-Compare/Hospital-ReadmissionReduction/9n3s-kdb3
Compare UNC's readmission rate for 3 conditions with another hospital. Then read reference 2 http://www3.interscience.wiley.com/cgibin/fulltext/116330624/HTMLSTART.
Sit down with one of your patients who has just been discharged from the hospital. Ask them to describe their hospital experience, their understanding of their diagnosis and the treatments received, the follow up plan, how they will cope at home, what resources they will use, etc. Discuss what factors were and were not covered in table 1 in ref 2. Assess their risk of readmission with the 8 P risk assessment tool in ref 4. Finally write about the factors that prevent hospital readmission using at least one other reference.

<u>Reading</u>

1. Care Transitions for hospitalized patients. Med Clin North AM. 2008 Mar;92(2): 315-24. https://www.clinicalkey.com/#!/ContentPlayerCtrl/doPlayContent/1-s2.0S002571250700171X/

2. Promoting effective transitions of care at hospital discharge: a review of key issues for hospitalists. Kripalani S, Jackson A, Schnipper A, Coleman E. Journ Hosp Med 2007; 2(5);314-323. http://www3.interscience.wiley.com/cgibin/fulltext/116330624/HTMLSTART
3. Transitions of Care PDF https://www.med.unc.edu/apselect/files/transitions-ofcare/at_download/file
4. 8 P readmission assessment tool. http://www.hospitalmedicine.org/ResourceRoomRedesign/RR_CareTransitions/html_CC/06Boost/03_Assessment.cfm
5. Decreasing readmissions at UNC http://link.springer.com/article/10.1007/s11606-014-2819-8

Module 6: Health Care Systems around the world

Goal: to learn about health care systems in other countries.

Health Care Systems Across the World

The type of health care you receive and your life expectancy depends on where you happen to be born. If you live in Japan your life expectancy is 83.4 yrs, in the US 78.7 yrs and in Mozambique 49.8 yrs. There are many different types of health care systems, most include a mix of government provided health care and private health care in varying proportions. How much health care individuals receive depends on the available resources, government provided health care and the patient's ability to pay. The WHO published their world health report in 2008 and stated their top goal to be *Universal coverage reforms* that ensure that health systems contribute to health equity, social justice and the end of exclusion, primarily by moving towards universal access and social health protection. The report summarizes five short comings of health care systems around the world.

1. Inverse care: people with the most means and often the lowest needs consume most health care.
2. Impoverishing care: in systems where payment is out of pocket, payment for catastrophic events causes over 100 million people annually to fall into poverty because they have to pay for their health care.
3. Fragmented care: excess specialization and narrow focus of some disease control programs. Health services for poor and marginalized groups are often highly fragmented and severely under-resourced, while development aid often adds to the fragmentation.
4. Unsafe care. Poor system design that is unable to ensure safety.
5. Misdirected care: resource allocation clusters around curative services at great costs neglecting the ability of primary prevention and health promotion to prevent up to 70% of the disease burden.

The article below gives you an idea of seven different health care systems and how it effects adults' perception and experience of health care.

Module 6: Health Care Systems Project

Read reference 1. Research health care coverage in a different country and compare it with that in the US. Write about how the two systems are financed. Discuss the pros and cons of the systems you researched. Compare the health indicators of your chosen country with those in the US: http://www.who.int/gho/publications/world_health_statistics/2015/en/

There is a lot of data here - choose parameters you think are particularly interesting.

Readings

1. Different Health Care Systems http://www.itup.org/Reports/Fresh%20Thinking/Health_Care_Systems_Around_World.pdf
2. Health care reforms in America: perspectives, comparisons and realities. Glassock RJ. (an overview from 2010 with valuable basics) http://vb3lk7eb4t.search.serialssolutions.com.libproxy.lib.unc.edu/?sid=Entrez:PubMed&id=pmid:20484146
3. National Health Expenditures 2015 Highlights (updated statistics) https://www.cms.gov/research-statistics-data-and-systems/statistics-trends-and-reports/nationalhealthexpenddata/downloads/highlights.pdf

Module 7

Goal: to learn about Value Based Care or High Value Care

Teaching value-based care, or High Value Care HVC, has recently been emphasized throughout medical education by a variety of prominent organizations. This is due in part to the large amount of wasted or inefficient health care delivery in the United States that totals nearly $1 trillion of the $3+ trillion total national healthcare expenses.

Medical waste is attributed to a number of factors including inappropriate or excessive testing, inefficiency of care delivery, medical fraud, missed preventative opportunities, inflated process of medical products and treatments, and excessive administrative costs involved with healthcare delivery.

This waste is potentially remediable, by improving systems, the process of healthcare delivery, and instituting change at the educational and training level. To date, however, teaching HVC within medical school curricula has not been universally emphasized or prioritized.

A variety of convergent efforts exist to promote the practice of and education around High Value Care. These efforts have led to the creation of a series high impact programs and products in an effort to better educate learner's across the medical education continuum as well as patients and administrators. Some of these efforts include:

- The American Board of Internal Medicine Foundation's (ABIM) Choosing Wisely Campaign. http://www.choosingwisely.org
- The American College of Physician's High Value Care Curriculum https://www.acponline.org/clinical-information/high-value-care/medical-educators-resources/curriculum-for-educators-and-residents
- The Alliance of Academic Internal Medicine High Value Care Resources. http://www.im.org/p/cm/ld/fid=1205
- The ACP / AAIM / Med-U High Value Care Medical Student Curriculum. http://www.med-u.org/population-health/high-value-care-hvc
- CostsofCare.org. http://costsofcare.org
- The High Value Practice Academic Alliance. http://hvpaa.org
- The Lown Institute. https://lowninstitute.org
- The Do No Harm Project http://www.ucdenver.edu/academics/colleges/medicalschool/departments/medicine/GIM/education/DoNoHarmProject/Pages/Welcome.aspx

Module 7: HVC Project Options

1. Please visit http://www.med-u.org/population-health/high-value-care-hvc and explore the High Value Care cases.
   The Med-U HVC student case curriculum was designed in conjunction with the endorsement of the American College of Physicians and the Alliance for Internal Medicine, two early champions of the HVC educational movement. These 12 case represent a variety of core medical and evidence based topics and cover multiple specialties in their scope. They are intended to meet specific educational objectives related to the provision of High Value care in simulated real-care settings.
   Collectively the cases relate to three core concepts:

   1. The relationship between value and the operating characteristics of common tests in common medical conditions (Cases A, B, J)
   2. The relationship between value and differing payment models (Cases D, F, L)
   3. The relationship between value and several common medical conditions including wellness promotion and prevention (Cases C, E, G, H, I, K)

   Please pick three cases to work through base on each core concept. After you have complete each case please write a 1-2 paragraph synopsis of the case, which High Value Concepts were taught or reinforced, which general medical concepts were taught or reinforced, and what you may or may not start doing or stop doing as a result of your experience. Feel free to reference any Choosing Wisely references or other evidence-based clinical decision aides in your discussion.

OR

Visit and explore the Do No Harm Project website (http://www.ucdenver.edu/academics/colleges/medicalschool/departments/medicine/GIM/education/DoNoHarmProject/Pages/Welcome.aspx). The goal of the Do No Harm Project is to use reflective expression though clinical vignettes written by students or residents to help uncover / discover the harms that may result from medical overuse and to drive a needed culture change in the practice of medicine. This exercise has been so well received that many of these vignettes have been published in peer-reviewed journal such as JAMA Internal Medicine and Journal of Pediatric Hospital Medicine.

Using the samples on the website, and that supplied in the APS orientation as a guide, write a vignette in the same vein as those from the Do No Harm Project. For those interested in this activity, faculty would be

happy to work with you to submit for publication. Contact Dr. Wardop at richard_wardrop@med.unc.edu for more information.

Readings

1. Cynthia D. Smith, MD, and Wendy S. Levinson. A Commitment to High-Value Care Education From the Internal Medicine Community. Ann Intern Med. 2015;162:639-640. doi:10.7326/M14-2610.
2. Anand Lakhani, Elliot Lass, William K. Silverstein, Karen B. Born, PhD, Wendy Levinson, MD, and Brian M. Wong, MD, FRCP. Choosing Wisely for Medical Education: Six Things Medical Students and Trainees Should Question. Academic Medicine: October 2016. (91) 10: p 1374–1378. doi: 10.1097/ACM.0000000000001325
3. Korenstein D1, Kale M, Levinson W. Teaching value in academic environments: shifting the ivory tower. JAMA. 2013 Oct 23;310(16):1671-2. doi: 10.1001/jama.2013.280380.

Module 8: Patient Centered Medical Home

Goal: To understand the history and components of a Patient Centered Medical Home

The concept of the patient centered medical home (PCMH) which was first developed by the Academy of Pediatrics has now been endorsed by the American College of Physicians and the American Academy of Family Physicians. The PCMH is a health care setting that facilitates partnerships between individual patients, and their personal physicians, and when appropriate, the patient's family. Care is facilitated by registries, information technology, health information exchange and other means to assure that patients may choose to receive the care when and where they need and want in a culturally and linguistically appropriate manner. Practices are going to have to demonstrate they meet criteria that relate to open access for appointments, out of hours appointments, EMRs etc in order to refer to themselves as a PCMH. The processes involved in a PCMH come under the umbrella of systems based practice. Many practices are now trying to receive recognition from NCQA as a PCMH because they receive financial incentives based on the level of recognition received. These incentives can amount to many thousands of dollars and are paid by a combination of Medicaid, Medicare and private insurance. Some specialists who provide primary care to their complex patients may also benefit financially by gaining recognition as a PCMH. For example pulmonologists who care for CF patients. (Reference 3)

Readings

1. The Medical Home: an idea whose time has come again. Leigh Ann Backer. FAMILY PRACTICE MANAGEMENT. http://www.aafp.org/fpm/2007/0900/p38.html
2. The Patient Centered Medical Home. http://www.ncqa.org/Portals/0/PCMH%20brochure-web.pdf
3. Specialists/subspecialists and the patient centered medical home. Kirschner N, Barr M. Chest 2010;137:200-204 http://journal.publications.chestnet.org/article.aspx?articleid=1086197
4. A Difference in Difference Analysis of Changes in Quality, Utilization and Cost Following the Colorado Multi-Payer PCMH Pilot https://link.springer.com/article/10.1007%2Fs11606-015-3521-1

Module 8: PCMH Project

Write a description of the features in your practice that meet the must pass standards for a medical home (see above reference no 2 for the standards) and areas where changes need to be made to meet the standards for a medical home. If your current practice is not primary care write about a prior rotation that may qualify as a PCMH. If it does not qualify, discuss which elements are consistent with a PCMH designation but why it will not qualify.

Module 9: Chronic Care

Goal: Describe the Chronic Care model in the context of your clinical experience.

Almost 50% of the American population live with a chronic disease and 50% of these people have multiple chronic diseases. Our health care system is full of deficiencies that hinder the care of these patients.
Those deficiencies include:

1. Rushed practitioners not following established practice guidelines
2. Lack of care coordination
3. Lack of active follow-up to ensure the best outcomes
4. Patients inadequately trained to manage their illnesses

Overcoming these deficiencies will require nothing less than a transformation of health care, from a system that is essentially reactive - responding mainly when a person is sick to one that is proactive and focused on keeping a person healthy.

The Chronic Care Model summarizes the basic elements for improving care in health systems at the community, organization, practice and patient levels. It contains 6 elements: health system, delivery system design, decision support, clinical information systems, self-management and community. Listed below are these elements with some of the associated goals.

1. **Health system:**
   Create a culture, organization and mechanisms that promote safe, high quality care.
   - Visibly support improvement at all levels of the organization, beginning with the senior leader.
   - Encourage open and systematic handling of errors and quality problems to improve care.
   - Provide incentives based on quality of care.
   - Facilitate care coordination within and across organizations.

2. **Delivery system design:**
   Assure the delivery of effective, efficient clinical care and self-management support.
   - Define roles and distribute tasks among team members.
   - Use planned interactions to support evidence-based care.
   - Provide clinical case management services for complex patients.
   - Ensure regular follow-up by the care team.
   - Give care that patients understand and that fits with their cultural background.

3. **Decision support:**
   Promote clinical care that is consistent with scientific evidence and patient preferences.
   - Embed evidence-based guidelines into daily clinical practice.
   - Share evidence-based guidelines and information with patients to encourage their participation.
   - Integrate specialist expertise and primary care.

4. **Clinical Information** systems:
   Organize patient and population data to facilitate efficient and effective care.
   - Provide timely reminders for providers and patients.
   - Facilitate individual patient care planning.
   - Share information with patients and providers to coordinate care.
   - Monitor performance of practice team and care system.

5. **Self-management support:**
   Empower and prepare patients to manage their health and health care.
   - Emphasize the patient's central role in managing their health.
   - Use effective self-management support strategies that include assessment, goal-setting, action planning, problem-solving and follow-up.

6. **Community:**
   Mobilize community resources to meet needs of patients.

Simply reading a list of goals can make it hard to visualize these elements in practice. Look at the video of this kind of care in action: http://www.improvingchroniccare.org/index.php?p=Planned_Care&s=30 Click at the bottom of the page in the text where it says “right here.”

Module 9: Chronic Care Project

Write about a patient with a chronic disease and how his/her care fits into the 6 elements of the chronic care model. Develop your thoughts thoroughly and refer to references about the chronic care model.