



National Capital Consortium
Pediatric Residency Program

NCC Pediatrics Continuity Clinic Curriculum:
PCMH 2: Population Health
Faculty Guide

Goals & Objectives:

Upon completion of this module, the learner should be able to:

- a. Define population health, population management, and population medicine.
- b. Define the components of population health in the Military Health System (MHS).
- c. Utilize Carepoint to conduct population management.

Pre-Meeting Preparation:

Please do the following:

- Sign on to Carepoint to ensure your logon works!
- Read “Populations, Population Health, and the Evolution of Population Management” from the IHI Improvement blog.

Conference Agenda:

- Sign on to Carepoint and work through the practice session
- Discuss questions

Extra Credit:

- IHI Open School – Offers a course in basic population health (TA 101: Introduction to the Triple Aim for Populations, which includes a lesson in “Improving Population Health”). CME and MOC Part 2 credit available; this course counts toward the certificate program in basic quality and safety required for all incoming military interns starting in 2018! FREE just by emailing your request to info@ihi.org.
- Learn more about the development, measurement, and maintenance of HEDIS metrics at the [NCQA website](#).

Populations, Population Health, and the Evolution of Population Management: Making Sense of the Terminology in US Health Care Today

From the IHI Improvement Blog

By Ninon Lewis

(Editor's note: The IHI "Triple Aim" is defined as "simultaneously improving the health of the population, enhancing the experience and outcomes of the patient, and reducing per capita cost of care for the benefit of communities".)

In the years since IHI first began developing the concept of the Triple Aim, what started as an ambitious ideal for system transformation has become a rallying cry at the policy level, a mission and strategy for many health systems, and a burning platform for new collaborations within communities. The idea that the successful health and health care organizations of the future will be those that can simultaneously deliver excellent quality of care, at lower total costs, while improving the health of their population is taking hold. However, as IHI has pilot-tested the Triple Aim with nearly 150 organizations and coalitions around the world, and watched the natural diffusion of the framework within health care, it has become evident that some of the terminology used to talk about this concept needs clarification. *What does IHI mean when we use terms such as "population," "population health," and "population management"?*

Population

When embarking on a journey to achieve the Triple Aim, organizations and coalitions need to choose a relevant population to work with by answering the question, "For whom do we hold ourselves accountable for the Triple Aim?" The population chosen must make sense to the organization or coalition in all three dimensions of the Triple Aim: it must be clear how to deliver excellent care and improve health for the population, at lower total cost. Typically, organizations choose either discrete/defined populations or regional/community populations:

- **Discrete/defined populations** are enterprise-level populations that make business sense. Typically, they are a group of individuals receiving care within a health system, or whose care is financed through a specific health plan or entity. Examples of a discrete population include employees of an organization, members of a health plan, all those within a practice patient panel, or all those enrolled within a particular ACO. The members of a discrete population can be known with some certainty.

- **Regional/community populations** are inclusive population segments, defined geographically. People within a segment of a community population are unified by a common set of needs or issues, such as low-birth weight babies or older adults with complex needs. However, these individuals may receive care from a variety of systems or may be unconnected to care. They may or may not be insured. It is often difficult to enumerate the population with certainty. When addressing regional populations, we recommend selecting segments where better health care can make a significant contribution to achieving Triple Aim results.

Population Health

This term is used interchangeably with the term "health of a population." Here are a few details:

David Kindig, population health researcher, constructive critic of the Triple Aim, and IHI colleague, penned the following definition for population health, which IHI uses in our work:

*Population health is defined as **the health outcomes of a group of individuals, including the distribution of such outcomes within the group.** These groups are often geographic populations such as nations or communities, but can also be other groups such as employees, ethnic groups, disabled persons, prisoners, or any other defined group.*

While Kindig's definition has been debated in both public health and health care circles since its first publication in 2003, its very articulation has sparked constructive discussion about what it means to address all of the broader factors that influence health, placing a specific focus on reducing or eliminating the inequity and disparities among various subpopulations, driven in part by social determinants of health.

The IHI Triple Aim team operationally defines the term "population health" by the measures we use, noted in the A Guide to Measuring the Triple Aim: Population Health, Experience of Care, and Per Capita Cost IHI White Paper, including measures such as life expectancy; mortality rates; health and functional status; disease burden (the incidence and/or prevalence of chronic disease); and behavioral and physiological factors such as smoking, physical activity, diet, blood pressure, BMI, and cholesterol (as measured via a Health Risk Appraisal).

Population Management and the Evolution of Population Medicine

The rapid changes of the last five to seven years in policy-level decision making, payment structures, and provider alignment have shifted the focus from care provided and paid for at an individual level, to managing and paying for health care services for a discrete or defined population – an approach known as *population management*. The term population management should be clearly distinguished from population health (which focuses on the broader determinants of health). From what we have seen through our work at IHI, population management as presently practiced is best conceptualized as *population medicine*.

Population medicine, in this case, is the design, delivery, coordination, and payment of high-quality health care services to manage the Triple Aim for a population using the best resources we have available to us within the health care system. **Much of the efforts today such as the Accountable Care Organization (ACO), risk stratification methods, patient registries, Patient Centered Medical Home, and other models of team-based care are all part of a comprehensive approach to population medicine.** This is an excellent evolution for health care and an excellent place for health systems to be in. In many positive ways, Ed Wagner can be looked to as the father of population medicine, as his creation of the Chronic Care Model has helped move the culture in health care from reacting to the acute needs of patients to a proactive reorganization of health care delivery around the needs of populations.

Effective population management will require new partnerships among providers and payers, integrated data support, redesigned IT structures, a focus on non-traditional health care workforce, new care management models, and a shift from fee-for-service delivery to bearing financial risk for the populations served.

When Population Medicine Meets Population Health

As you begin to understand populations, the lines between a population management/medicine focus on health care services and a population health focus on the broader determinants of health become blurry with certain population segments. Consider, for example, the comprehensive care designs that serve the needs of your most complex, high-risk, and costly patients. The identification, understanding, and segmentation of your population; the redesign of services for that population; and the delivery of those services at scale require organizations to understand and address the broader social, environmental, and behavioral determinants of health in order to achieve better outcomes, improve the care experience, and control total cost.

Looking Ahead...

Whether you are working to understand how to deliver and pay for services at scale for a discrete or defined population, collaborating with other systems within an ACO, or extending your reach within the community to collaborate across sectors on a community-wide health issue, the frontier of the next 10 years for both population health and population management/medicine will be developing new collaboration and governance structures, new skills to assess and segment populations, new approaches for going to scale, and, most importantly, new approaches to address the moral imperative of understanding and reducing inequity in both health and health care.

Population Health in the MHS

The IHI “Triple Aim” is defined as “simultaneously improving the health of the population, enhancing the experience and outcomes of the patient, and reducing per capita cost of care for the benefit of communities”. Similarly, the Military Health System’s “Quadruple Aim” -- the ultimate goal for the provision of care for military beneficiaries – represents the MHS leadership’s commitment to delivering value to all they serve (DODI 6025.20, *Medical Management*, April 2013).

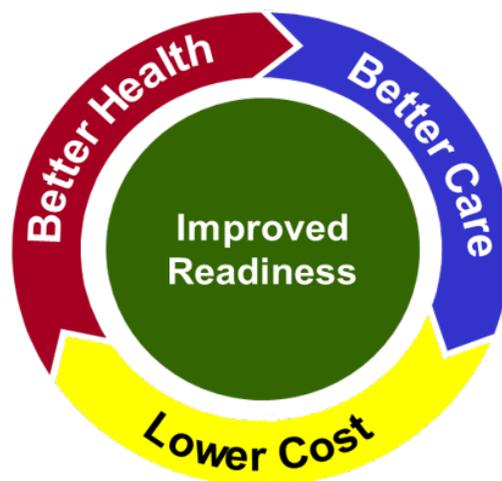
The components of the MHS Quadruple Aim are:

Readiness: Ensuring that the total military force is medically ready to deploy and that the medical force is ready to deliver health care anytime, anywhere in support of the full range of military operations, including humanitarian missions.

Experience of Care (“Better Care”): Providing a care experience that is patient and family centered, compassionate, convenient, equitable, safe and always of the highest quality.

Per Capita Cost (“Lower Cost”): Creating value by focusing on quality, eliminating waste, and reducing unwarranted variation; considering the total cost of care over time, not just the cost of an individual health care activity.

Population Health (“Better Health”): Improving the health of a population by encouraging healthy behaviors and reducing the likelihood of illness through focused prevention and the development of increased resilience.



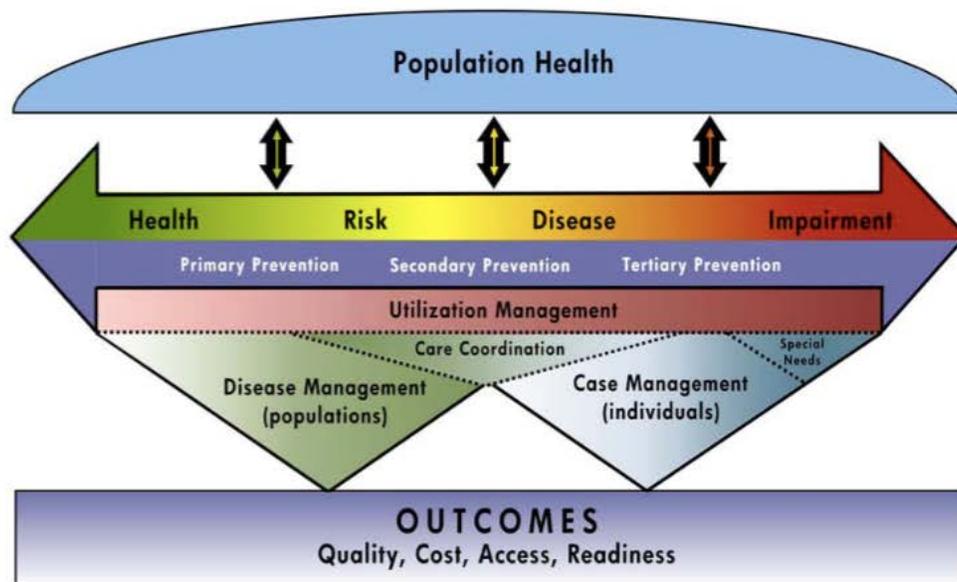


Fig. 4 Population Health and Medical Management Model

Source: 2001 DoD Population Health Improvement Plan and Guide; Fig. 4 – MHS Population Health Model (2001), Tricare 2009 Medical Management Guide Version 3.0

As a component of the Quadruple Aim, Population Health in the MHS is variably composed of:

- Disease management – managing the chronic conditions of high-risk and/or high-utilization groups of patients.
- Case management - a collaborative process that assesses, plans, implements, coordinates, monitors, and evaluates the options and services required to meet the patient’s health and human service needs.
- Utilization management - the evaluation of the medical necessity, appropriateness, and efficiency of the use of health care services, procedures, and facilities.
- Referral management – a way for health care team members to orchestrate and track patient referrals throughout the care continuum.

The Joint Commission PCMH requirements depend heavily on population health -- particularly on disease management activities. TJC PCMH population health requirements include:

- Collecting disease management outcome data.
- Providing disease and chronic case management to its patients.
- Providing population-based care.
- Using the EHR to support disease management, create reports including disease-specific registries, and support performance improvement.

“Population Health” in the PCMH model of healthcare delivery is often equated to HEDIS. The *Healthcare Effectiveness Data and Information Set* is a tool used by more than 90 percent of America's health plans to measure performance on important dimensions of care and service. Created and promulgated by the National Center for Quality Assurance (NCQA – the body

currently certifying our medical home!), HEDIS consists of 81 measures across 5 domains of care. Because so many plans collect HEDIS data, and because the measures are so specifically defined, HEDIS makes it possible to compare the performance of health plans on an "apples-to-apples" basis.

The four HEDIS metrics we follow carefully in our primary care medical home are:

- Children with Pharyngitis – measures whether the provider ordered a strep test prior to initiation of antibiotics for pharyngitis
- Children with URI – measures the rate of antibiotic prescribing for children diagnosed with the common cold
- Well Child – measures the compliance with well child visits from birth to 15 months
- Chlamydia – measures the percentage of sexually active women age 16-24 with annual screening for Chlamydia

Over the past two years, the first three HEDIS metrics have improved and all have been in the “green” range for the majority of 2017 – meaning we perform better than 90% of other pediatric clinics. The last metric, however, has stagnated well below the 75th percentile; only ~ 30-40% of our empaneled eligible population have been screened for Chlamydia (50% screened equates to 75th percentile; 58% screened equates to 90th percentile).

For the Chlamydia HEDIS metric:

Definition: Percentage of active duty women continuously enrolled in Tricare Prime ages 16-24, who are sexually active and have had chlamydia screening in the past 12 months.

Denominator: Sexually active woman age 16-24 continuously enrolled in Tricare Prime for at least 11 of the 12 months ending in the measurement month.

Numerator: denominator women with evidence of chlamydia testing in the last 12 months.

NOT RELEASABLE OUTSIDE OF DoD						
MeasureName	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	95th Percentile
Chlamydia Screening in Women (Lower Age Stratification)	29.82	33.1	39.05	47.98	59.16	65.48
Chlamydia Screening in Women (Upper Age Stratification)	40.17	44.04	50.84	57.61	65.68	69.65
Chlamydia Screening in Women - Total	34.89	38.49	45.08	53.9	62.51	67.52

Chlamydia Screening - 16-20 - HEDIS

DMIS: 0067 - WALTER REED NATL MIL MED CNTR
 Provider Group: PED MED HOME BLUE BE

Blue

All HEDIS Enrollees



Data Date	Completed	Total	Score
Apr 2017	9	36	25.00%
May 2017	9	33	27.27%
Jun 2017	8	31	25.81%
Jul 2017	6	18	33.33%
Aug 2017	7	25	28.00%
Sep 2017	8	26	30.77%

2017 Benchmarks: 90th - 58.2%, 75th - 49.7

Chlamydia Screening - 16-20 - HEDIS

DMIS: 0067 - WALTER REED NATL MIL MED CNTR
 Provider Group: PED MED HOME GREEN BE

Green

All HEDIS Enrollees



Data Date	Completed	Total	Score
Apr 2017	12	33	36.36%
May 2017	12	35	34.29%
Jun 2017	13	36	36.11%
Jul 2017	8	32	25.00%
Aug 2017	12	35	34.29%
Sep 2017	10	30	33.33%

2017 Benchmarks: 90th - 58.2%, 75th - 49.7

Chlamydia Screening - 16-20 - HEDIS

DMIS: 0067 - WALTER REED NATL MIL MED CNTR

Provider Group: PED MED HOME RED BE

Red

All HEDIS Enrollees



Data Date	Completed	Total	Score
Apr 2017	3	12	25.00%
May 2017	3	11	27.27%
Jun 2017	6	14	42.86%
Jul 2017	4	11	36.36%
Aug 2017	3	9	33.33%
Sep 2017	4	10	40.00%

2017 Benchmarks: 90th - 58.2%, 75th - 49.7

So how does the MHS define a patient as “sexually active”? A patient will appear in the denominator of the metric as a “sexually active 16-24 yo female” if lab, encounter, or claims data suggests sexual activity. For example, a prior diagnosis of a sexually transmitted infection or pregnancy automatically places the patient in the denominator.

Prescription birth control also places the patient in the numerator for this HEDIS metric. BUT WAIT – you’re thinking to yourself: I prescribe birth control for *plenty* of reasons *aside* from contraception! Many of these co-existing diagnoses will *exclude* the patient from the metric. For example, the diagnosis of menorrhagia or the presence of a prescription for isotretinoin will exclude a patient automatically.

The metric is not perfect – there are non-sexually-active patients that “count against us” for various reasons. But remember that the goal here is NOT perfection, but rather compliance with screening only 50-70% of suspected sexually-active females. We should **not** screen patients just for the sake of the metric!

Unlike the other HEDIS metrics, the Chlamydia metric is extra challenging because there is no registry (or list) of patients to tell us who is delinquent for testing. Because of adolescent confidentiality rules, only active duty females appear on the automated registry. And since we have no active duty enrollees in our empanelment ... the registry is not useful for us.

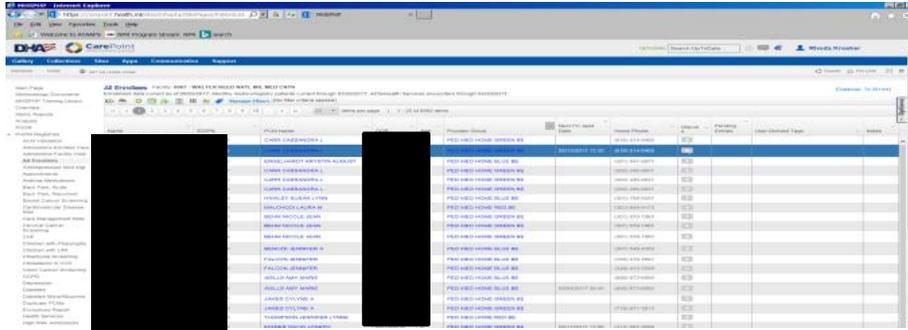
How do we attack this metric and improve the quality of care we provide to our adolescent and young adult population?

Carepoint practice session

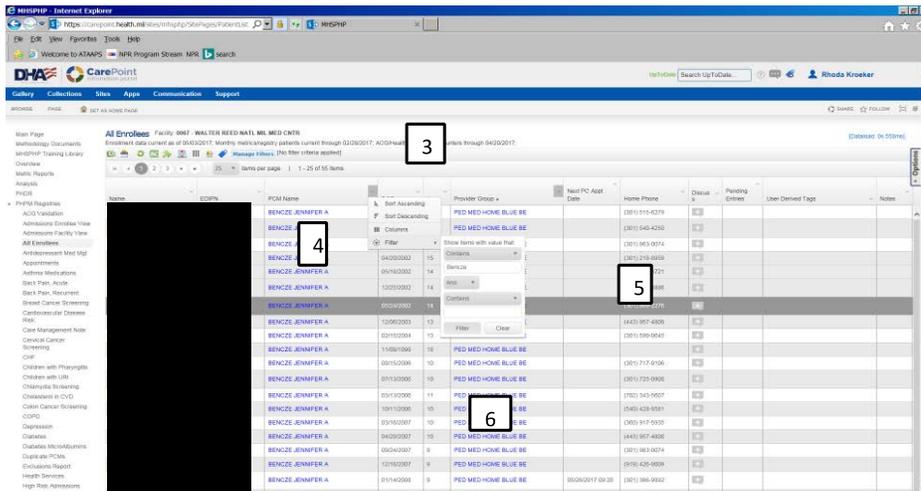
1. Sign onto Carepoint. The URL is posted on the NCCped.com website.
2. Pull up your continuity panel, using the following guidance. Rearrange/hide the columns as you see fit.

HOW TO PULL PROVIDER PATIENT PANELS IN CAREPOINT/MHSPSP (5 easy steps)

- GO TO NCCPEDS.COM UNDER “CLINICAL RESOURCES”. LOG INTO CAREPOINT. GO TO “APPS” AT THE TOP, THEN “ALL APPS”, THEN OPEN MHSPSP.
- CONSIDER ADDING MHSPSP AS A FAVORITE FOR EASY ACCESS NEXT TIME.
- CLICK ON “PHPM REGISTRIES”, THEN “ALL ENROLLEES”.



- 3.) CLICK ON THE DOWN ARROW BY PCN NAME. (You may have to press the right Keyboard arrow or click and drag right to view the column for provider group
- 4) HOVER CURSOR OVER THE WORD “FILTER”
- 5) IN THE “CONTAINS” BOX, WRITE “LAST NAME FIRST NAME” (LIKE “RICHARDS AUTUMN”). CLICK ON FILTER.



3. Discuss: how might you filter your empanelment to find females age 16-24? **Faculty Answer: Click on “Manage Filters” and enter the following, followed by clicking the**

“search”button:

The screenshot shows a 'Query Builder' window with a table of filters. The table has columns for AND/OR, Selected Field, Operator, Value, and a Delete button. The filters are:

AND/OR	Selected Field	Operator	Value	Delete
	Gender	Equal	Female	Delete
AND	Age	Less Than Or Equal To	24	Delete
AND	Age	Greater Than Or Equal To	16	Delete

Below the table, there is an 'Available Fields' dropdown menu with the text 'Choose a Field...'. At the bottom left, there are 'Search' and 'Clear' buttons. At the bottom right, there is a 'Close' button.

4. Can you further filter your panel to determine which of your 16-24 yo females has an appointment in our clinic before 1 Mar 2018?

The screenshot shows a 'Query Builder' window with a table of filters. The table has columns for AND/OR, Selected Field, Operator, Value, and a Delete button. The filters are:

AND/OR	Selected Field	Operator	Value	Delete
	Gender	Equal	Female	Delete
AND	Age	Greater Than	16	Delete
AND	Age	Less Than	24	Delete
AND	Next PC Appt Date	Less Than	3/1/2018	Delete
AND	Next PC Appt Clinic	Contains	med home	Delete
AND	PCM Name	Contains	YOUR NAME HERE	Delete

Below the table, there is an 'Available Fields' dropdown menu with the text 'Choose a Field...'. At the bottom left, there are 'Search' and 'Clear' buttons. At the bottom right, there is a 'Close' button.

5. How might you find 16-24 yo female patients that you will be seeing for an appointment in the next 30 days? What other information is available about these patients?

Faculty Answer: here is one way, from the screen we have been working from:

Query Builder

Filters My Filters

AND/OR	(	Selected Field	Operator	Value)		
		Next PC Appt Provider	Contains	YOUR NAME HERE		Delete	↑ ↓
AND		Next PC Appt Date	Equal	Today Plus 30 Days		Delete	↑ ↓
AND		Age	Greater Than Or Equal To	16		Delete	↑ ↓
AND		Age	Less Than Or Equal To	24		Delete	↑ ↓
AND		Gender	Equal	Female		Delete	↑ ↓

Available Fields: Choose a Field...

Search Clear

Close

Another way: Click on “Appointments” on the left tool bar. Click on “Manage filters” at the top, and enter the following:

Query Builder

Filters My Filters

AND/OR	(	Selected Field	Operator	Value)		
		Appt Provider	Contains	richards autumn		Delete	↑ ↓
AND		Gender	Equal	Female		Delete	↑ ↓
AND		Age	Less Than	24		Delete	↑ ↓
AND		Age	Greater Than	16		Delete	↑ ↓
AND		Appt Date	Equal	Today Plus 30 Days		Delete	↑ ↓

Available Fields: Choose a Field...

Search Clear

Close

You can search for appointments for different time periods by popping out the “Options” tab on the far right side of the screen.

- The Carepoint Informatics Team has set up a ready-made filter specifically for Chlamydia HEDIS (see left tool bar). Here’s what it looks like:

Query Builder

Filters My Filters

AND/OR	(	Selected Field	Operator	Value)		
	(	Age	Greater Than Or Equal To	16	)	Delete	↑ ↓
AND		Age	Less Than Or Equal To	24	)	Delete	↑ ↓
AND		Gender	Equal	Female	)	Delete	↑ ↓
AND	(	EDC Codes	Contains	INFO05	)	Delete	↑ ↓
OR		EDC Codes	Contains	FRE01	)	Delete	↑ ↓
OR		EDC Codes	Contains	FRE04	)	Delete	↑ ↓
OR		EDC Codes	Contains	FRE10	)	Delete	↑ ↓
OR		EDC Codes	Contains	FRE14	)	Delete	↑ ↓

Available Fields: Choose a Field...

Search Clear

The listed “EDC codes” are diagnoses or lab tests that suggest sexual activity (e.g. pregnancy, prior STI). While this will not list you ALL the patients who qualify for Chlamydia screening, it will get you close.

Other Carepoint filters to run if you have time during the session:

Patients age 12+ you are seeing in the next 2 months who have not ever had lipid screening

Using the appointment registry, search for next 2 months, and filter with column “CHOL” = null.

Patients on your panel age 12-15 months due for a well child check

Click on “Well Child” on the right tool bar and filter with your name as PCM and the appropriate age range. Patient show up as bright yellow (overdue) or light yellow (due). You can use the “Next PC Appointment Reason” to determine if they are already scheduled for a well checkup.

Patients age 12+ coming to see you in the next 2 months with a history of depression

Using the appointment registry, search for the next 2 months, and filter with column “Depression” = DEPR.

Patients coming in for an acute visit today who are due for a well checkup

Using the appointment registry, search for today’s appointments in our clinic (“Ped Med Home”), and filter with column “Overdue/Due” (sort descending to force the overdue/due patients to the top).

Consider saving your filters for ease of use later. Build the filter, then click on “My Filters”, give your filter and name and description, and click create. It will now show up as a Saved Filter on the left tool bar.

Discuss the following questions:

- What are some of the barriers to Chlamydia screening in our clinic?

Possible answers: not enough appointment time, discomfort with the topic, parents are often present with patients for appointments, lack of knowledge about screening requirements, patients in this age group rarely come in for appointments.

- How can we address some of these barriers?

- Effective immediately, providers seeing 20-min appointments will have 40 minutes to see all adolescent physical exams. This may allow adequate time to screen for STIs.

- Increasing knowledge among providers with discussion in November safety huddle and at this continuity module.

- Consider engaging the ER to run NAAT with pregnancy tests.

- Reach out to patients who haven't been seen in >12 months – schedule them a physical!

- What are some of the ways you could use Carepoint to improve the quality of care for your patients?

- Answers may vary. Examples: find asthma patients with >2 ED visits in the past year, find patients who have seen subspecialists in the last year but not a primary care provider, find patients 12+ with co-morbid diagnoses which may be appropriate to move to the adolescent clinic

- Do we have disease/case/utilization/referral management professionals in our medical home? If not, do we have these professionals anywhere in our hospital?

-We have DM and CM imbedded in our clinic (Rhoda Kroeker and Cindy Coleman). UM and RM are departments in the Directorate for Healthcare Operations (DHO).

- How do we support each facet of the Quadruple Aim in our clinic?

- Answers may vary.