



Woodruff Leadership Academy 2010

**EXPANDING THE ROLE OF NON-PHYSICIAN HEALTH
CARE PROVIDERS IN THE SETTING OF CHRONIC HEALTH
CARE DELIVERY AT EMORY**

Executive Summary

The *Visionary* Team



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Mission and Goals

Our project investigates current staffing models across Emory Healthcare and proposes expansion of the clinical roles and functions of physician assistants (PAs), nurse practitioners (NPs), registered nurses (RNs), licensed practical nurses (LPNs), and medical assistants (MAs) in the context of care delivery for chronic conditions, in accordance with state and federal laws and guidelines.

The goals of the project are to improve the quality of patient care, expedite access to the healthcare team, and improve patient, caregiver and staff satisfaction. We propose to leverage the unique capacities of Emory's health professional schools to promote advanced validated training leading to broader responsibilities and functions for non-physician members of the healthcare team across the outpatient and inpatient settings.

Implementation of these extended roles will improve the satisfaction of all stakeholders, increase efficiency of the care team, improve the quality of patient-healthcare provider interactions, and set new standards in the delivery of care consistent with the projected health care reform.

Objectives:

- ▶ To investigate current staffing models across Emory Healthcare
- ▶ To examine the advantage and the feasibility of expanding the clinical roles of non-physician clinical staff, in accordance with state and federal laws (PAs, NPs, RNs, LPNs and MAs)
 - Broaden responsibilities and functions for non-physician healthcare staff
 - Promote advanced clinical staff training
 - Promote the concept of team care
 - In contrast to similar approaches, e.g. the medical home, this approach would be applied to specialized chronic care.

Expected Outcomes:

- ▶ Improved quality of patient care
 - Improved access to care
 - Improved efficiency of care
 - Improved quality of patient-physician interactions
 - Establishment of a sustainable care delivery
- ▶ Improved patient, caregiver and staff satisfaction
- ▶ Establishment of a sustainable model of chronic care delivery

Rationale for Expanding the Roles of Non-Physician Health Care Providers

There is national consensus about the fact that our current health care delivery system will be unsustainable in the near future. Costs of healthcare in the US have markedly outpaced inflation and wage increases over the past decade. This has led to an increasing percentage of uninsured Americans (currently ~46 millions or 15%) with lack of proper access to health care. In addition, escalating health care costs have resulted into increasing financial burden for individuals, employers and the government. This imbalance has translated into perhaps the poorest delivery of preventive care among industrialized nations,¹ which contrasts with the United States' image of a leader in medical discovery and treatments. In many instances, unnecessary or inappropriate health care services are provided because of poor coordination of patient care among providers or across sites of service. Medical care at the end of life consumes more than a quarter of the Medicare budget. Avoidable errors and safety issues are common. Disparities in the quality of health care persist along geographic, racial, ethnic, and socioeconomic lines.^{2,3} This situation is expected to worsen with the expanding aging population in the United States.

Because of these problems, patient satisfaction about their health care is often suboptimal. Physicians, on the other hand, are pressured to see more patients in less time and are inundated with administrative paperwork and regulatory requirements. In this environment, trusting relationships with patients have markedly suffered.

This situation has culminated nationally into a long overdue health care reform by the Obama administration. The details and future application of such reform will be subject to long term debate, and the benefit of enforcing subscription by all Americans to one or another form of healthcare insurance may be offset by restrictive conditions of coverage within the law, limited payments of health care providers, additional red tape and high co-payments for patients. Thus, although the reform will plug some of the most gaping holes in our national healthcare system, the outcome is not necessarily going to provide easier access to healthcare, improve patient care and satisfaction or satisfaction of health care providers.

It should also be noted that the health care reform calls for strengthening prevention. For example, new provisions by the health reform legislation include Medicare coverage of proven preventive services without cost-sharing; Medicaid programs to expand coverage for proven preventive services; and promotion of chronic disease self-management.⁴ **Providers of health care, such as Emory, should not only be prepared to implement novel systems of care that best align the upcoming changes in legislation but should actually be on the leading edge in order to maximize quality of care and reimbursement. Such health care models should be centered on prevention, team care, and chronic disease management.**

There is therefore an urgent need to develop alternative ways to deliver care to the current fee for service system especially for select patient groups who are followed continuously. Patients referred to Emory for specialty treatment with long-term follow up care would benefit from continuous ACTIVE monitoring in order to maintain 1) quality of life; 2) health values within a normal range and c) prevent frequent readmissions. Such approach will require profound changes in the care delivery model and the composition of integrated healthcare teams. It will leverage existing strengths at our institution, but will also require a drastic cultural change. Given Emory's academic teaching mandate, it is imperative that such changes be initiated and

explored not only for its own patient population and health care providers but also for the teaching that the latter in training will experience and disseminate in their future careers.

Given limited primary care services provided by Emory, we believe that the expansion of the role of non-physician health care providers within the setting of specialized chronic care and should be the focus in preparing Emory for the changing landscape of health care delivery. This approach will differentiate Emory from less advanced healthcare systems.

In addition, such novel approach will boost non-physician health care providers' engagement, responsibility and stature within the Emory system. It will lead to additional training, monetary reward and ultimately better provider satisfaction and retention.

Last but not least, expansion of the role of non-physician health care providers in the setting of chronic care will shift much of such care from fee for service delivered by physicians to team based care delivered by non-physicians, according to specific established guidelines and standard operating procedures, rendering the new approach economically viable.

Emory Healthcare: Why a Change is Needed in The Way We Provide Chronic Care

External: The patient's side

The most successful health care organizations act upon the needs of all customers to improve the delivery of care and achieve organizational results. Improving patient satisfaction is vital to the success of medical practices. Lower patient satisfaction scores indicate that patients experience less-than-optimal interactions with their care providers. The main drivers of patient dissatisfaction are listed below:

1. Access
 - a. Ability to obtain desired appointment
 - b. Convenience of office hours
 - c. Helpfulness on the phone
 - d. Ease of scheduling appointments
 - e. Promptness in returning calls
2. Care & Concern
 - a. Time care provider spent with patient
 - b. Sensitivity to needs
 - c. Care of nurse/assistant for problem
3. Patient & Family centered care
 - a. Efforts to include in decisions / plan of care
 - b. Clear instructions for follow up
 - c. Family able to participate in care and/or decisions

Part of the problem lies with the complex current system of scheduling patients and in the fragmentation of care. For example, in many of our medical practices, if a phone triage call reveals the need for a patient to be seen, most RNs must obtain "permission" to add a patient to the provider's schedule through the medical secretary. Also, in the current system, physicians and associate providers feel pressed to see more patients in less time, and experience

escalating administrative paperwork and regulatory requirements. This situation has profound impact on the provider's ability to provide quality care to the individual patient.

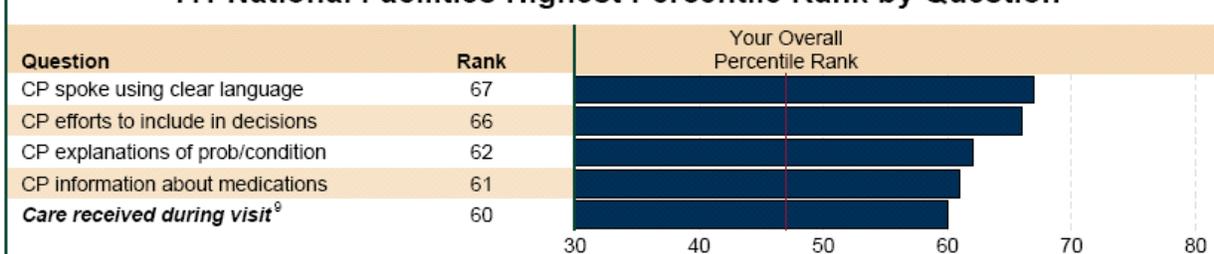
The Press Ganey report below illustrates Emory Clinic's standing for the December 2009 through February 2010 period, showing rankings with much room for improvement.

MEDICAL PRACTICE SUMMARY REPORT

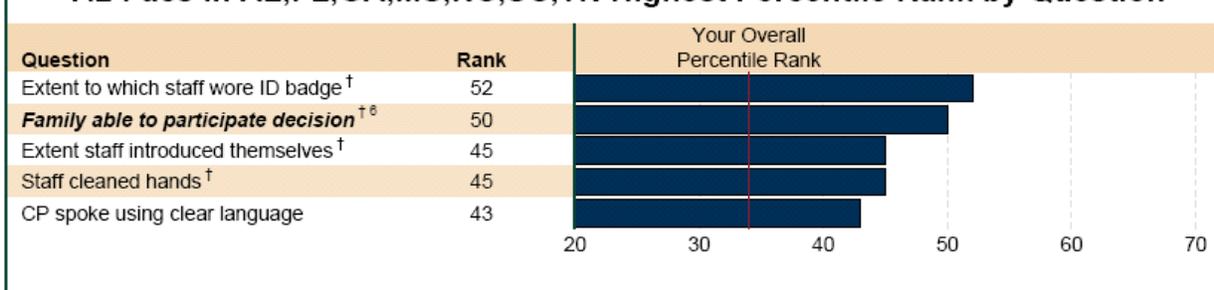
8.0 Greatest Increase In Scores by Question

n	Question	Last Mean Period Score n=4750 Trend	This Period n=4601 Mean Change	All Facilities N=598		SE States N=974		Academic N=25		
				Mean	Rank	Mean	Rank	Mean	Rank	
3,931	Staff cleaned hands [†]	 88.5**	+0.5	89.0	N<7	N/A	88.9	45	N<7	N/A
3,827	Our promptness in returning calls[§]	 85.0	+0.4	85.4	85.2	40	86.8	33	85.1	44
4,174	Ability to get desired appointment [†]	 85.5*	+0.3	85.8	86.2	42	87.2	33	84.7	57
4,466	Convenience of office hours	 88.4	+0.3	88.7	88.0	55	89.9	30	87.6	78
3,860	Family able to participate decision^{†§}	 91.4	+0.3	91.7	N<7	N/A	91.6	50	N<7	N/A

7.1 National Facilities Highest Percentile Rank by Question



7.2 Facs in AL,FL,GA,MS,NC,SC,TN Highest Percentile Rank by Question



Internal: The health care provider's side

The following section represents a **summary of responses given by non-physician health care providers** during **three focus groups** held in the Emory clinic. The providers were asked to describe obstacles to better health care, and perceived barriers to changing the system.

Current obstacles to better care

- Current hierarchy is too vertical--change often opposed by physicians.
- Perceived lack of support for change proposed or initiated by non-physicians.
- Ratio of physician to RN is lopsided: too few RNs and midlevel providers per MD.
- Lack of standardization of care for common problems.
- Patient access is inefficient: call center slow and inaccurate in relaying patient issues.
- Patient "ownership" is lacking.
- Emory Clinic fails to recognize nurse specialization.
- Limited opportunities and encouragement for additional training.
- Limited engagement and accountability of support personnel.
- Documentation of expectations, roles, & responsibilities is not uniform.
- The system does not reward good performance but rather directs resources to problem areas.
- Too much administrative work for nurses.
- Work ethics is variable across Emory Healthcare, especially for MA and other clerical staff.
- Lack of timeliness of clinical laboratory results prevents good care.

Perceived barriers to change

- Physician acceptance: resistance to giving up autonomy to provide alignment with team.
- Patient acceptance: care not dispensed by an MD for every visit. Patient orientation is essential at the start with introduction of the team care concept.
- Lack of engagement of MAs and administrative staff.
- Reimbursement model needs to reward efficiency and effectiveness rather than more dollars for more care.

Existing Models Nationally: The Medical Home

The patient-centered medical home (PCMH) model of health care delivery has received growing support in the past few years. The PCMH combines traditional concepts of primary care (a personal physician providing first-contact, continuous, and comprehensive care) with newer methods, such as the use of chronic disease registries, information technology, and telemedicine.⁵ The medical home concept has received attention because it may allow better access to health care, increase satisfaction with care, improve health and decrease health care costs.^{6 7}

The framework for the model was created by the American College of Physicians (ACP), the American Academy of Family Physicians (AAFP), the American Academy of Pediatrics (AAP), and the American Osteopathic Association (AOA) and has been endorsed by the American Medical Association (AMA) and several medical specialty associations, including the American College of Cardiology, the American College of Chest Physicians, and the American Academy of Neurology.⁸ This model is a prominent component of the health care reform bill recently signed by President Barack Obama and is being tested in many pilot projects around the country.⁵

In the medical home concept, responsibility for care and care coordination resides with the patient's personal medical provider working with a health care team. Teams form according to patient needs and include specialists, midlevel providers, nurses, social workers, care managers, dietitians, pharmacists, physical and occupational therapists, family, and community.⁶ Medical home models vary but a common goal is focus on the needs of a patient or family one case at a time, recruiting social services, specialty medical services, and patient capabilities to solve problems.

Essential functions of a Patient-Centered Medical Home

1. Provide each patient with an ongoing relationship with a **personal physician** who is trained to provide first-contact, continuous, and comprehensive care.
2. Provide **comprehensive care** for acute and chronic conditions, preventive services, and end-of-life care, or arrange for other professionals to provide these services.
3. **Coordinate care** across all elements of the health care system, with coordination facilitated by the use of registries and information technology.
4. Provide **enhanced access to care** through systems such as open scheduling, expanded hours, and new options for communication between patients and the practice's physicians and staff.
5. **Quality and safety** are enhanced by a care planning process, evidence-based medicine, clinical decision-support tools, performance measurement, active participation of patients in decision-making, information technology, and other measures.

Concept of the Medical home

Patient's personal medical provider works with a health care team

Team forms according to patient needs

- Specialists
- Midlevel providers
- Nurses
- Social workers
- Care managers
- Dietitians
- Pharmacists
- Physical therapists
- Occupational therapists
- Family members

Team works together to solve problems

Being tested in many pilot projects around the country

Scientific evidence

Recent peer-reviewed literature that examines the prevalence and effectiveness of medical homes includes:

- Researchers from the Centers for Disease Control and Prevention published a study (2007) involving interviews with 5400 parents; the authors concluded that continuous primary care in a medical home was associated with higher rates of vaccinations for the respondents' children.⁹
- In a survey of 3,535 U.S. adults released in 2007, only 27% of the respondents reported having four indicators of a medical home. Having a medical home was associated with better access to care, more preventive screenings, higher quality of care, and fewer racial and ethnic disparities.¹⁰
- Schoen and colleagues (2007) surveyed adults in seven countries, using the answers to four questions to categorize the respondents as having a medical home or not.¹¹ Having a medical home was associated with less difficulty accessing care after hours, improved flow of information across providers, a positive opinion about health care, fewer duplicate tests, and lower rates of medical errors.
- A review of 33 articles by Homer et al. on medical homes for children with special health care needs published in 2008 provide moderate support for the hypothesis that medical homes provide improved health-related outcomes.¹²
- A 2008 review of peer-reviewed studies by Rosenthal determined that the care of patients who identify with a primary care medical home is of higher quality, with fewer errors, and is associated with increased patient satisfaction.⁶

- In a survey of parents or legal guardians of children with special health care needs published in 2009, 47.1% of the children had a medical home, and the children with a medical home had less delayed or forgone care and significantly fewer unmet needs for health care and family support services than the children without a medical home.¹³

Comparison with “gatekeeper” models

Some suggest that the medical home mimics the managed care “gatekeeper” models historically employed by HMOs; however, there are important distinctions between care coordination in the medical home and the “gatekeeper” model. In the medical home, the patient has open access to see whatever physician they choose. No referral or permission is required. The personal physician of choice, who has comprehensive knowledge of the patient’s medical conditions, facilitates and provides information to subspecialists involved in the care of the patient. The medical home puts emphasis on medical management rewarding quality patient-centered care.

Projects evaluating medical home concepts

As of mid-2009, it was reported that 22 pilot projects involving medical homes were being conducted in 14 states. The projects are evaluating factors such as clinical quality, cost, patient experience/satisfaction, and provider experience/satisfaction. Some of the projects are sponsored by corporations like IBM, CIGNA, and UnitedHealth Group, as well as government agencies like the state of Maine. The Geisinger Health Systems, a large provider in Pennsylvania, is testing a care model similar to the medical home, by providing round-the-clock access to primary and specialty care services (by using nurse coordinators, care managers and home-based monitoring), access to electronic health records for providers and patients, automated reminders, evidence-based care for patients with chronic diseases, and electronic scheduling. Preliminary data show 20% lower hospital admissions 7 % lower total medical costs.

Other examples of medical home system being tested in select academic institutions are presented in Table 1 below

Can the Medical Home concept be extended to specialized care?

Reforms to expand the PCMH model may increase payments to practices that qualify as medical homes, and potentially decrease pay for specialists. Recently, however, it has been proposed that this model could be expanded to specialists who see patients frequently for a chronic disease.¹⁴ The AMA House of Delegates recently passed a resolution in support of permitting specialist practices to serve as medical homes. The ACP Council of Subspecialty Societies has produced a detailed statement arguing that specialist practices that provide long-term “principal care” for a chronic condition should be eligible to serve as medical homes.²

In the recently passed reform law, the definition of the medical home states that medical homes must include “personal physicians” (Sec. 3502c). Personal physicians are not defined, and the law elsewhere refers to medical homes as providing primary care. “Primary care” is defined as “the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs” (Sec. 3502f). The law also requires that medical homes meet criteria similar to those set out in the PCMH model jointly developed by the ACP, the AAFP, the AAP, and the AOA.⁵

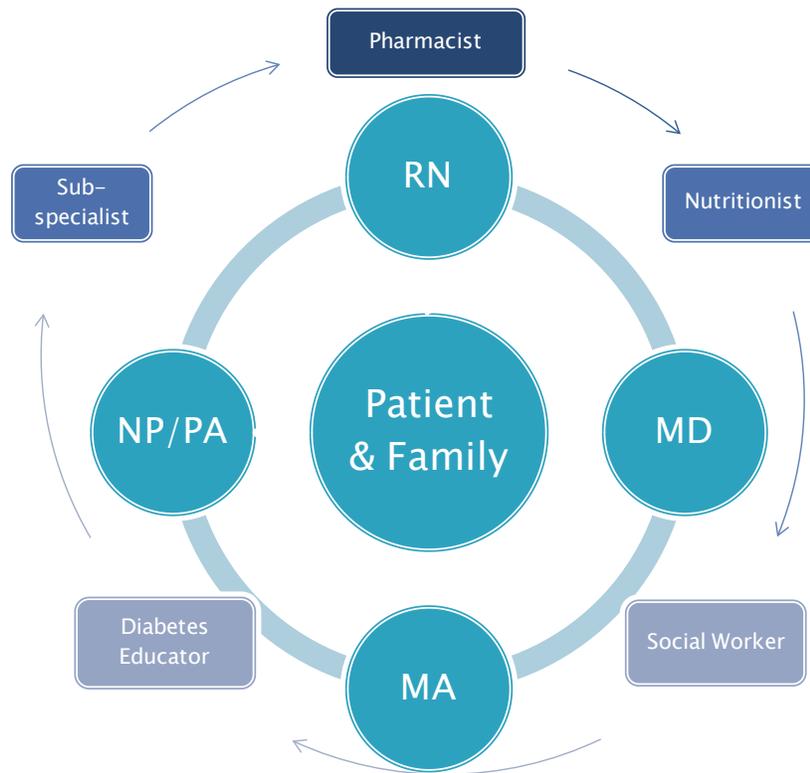
Currently, most specialists provide limited to no primary care to their patients.⁵ From the perspective of the health care system and individual providers, it may not be an efficient allocation of resources for specialists to spend their time trying to function as primary care physicians. For these reasons, **we propose a redesign of specialty medical practice that focuses on expanding responsibilities and functions of non-physician members of the healthcare team. This system will cause a major shift of chronic patient care from physicians to a team of primarily non-physician care providers.**

Table 1: Examples of patient centered medical homes and current outcomes.

Practice	Outcomes
Johns Hopkins Guided Care PCMH Model	<ul style="list-style-type: none"> • 24% fewer total hospital inpatient days • 15% fewer ER visits • 37% fewer skilled nursing facility days • Annual net Medicare savings of \$1364 per patient and \$75,000 per Guided Care nurse in a practice
Group Health Cooperative	<ul style="list-style-type: none"> • 29% reduction in ER visits • 11% reduction in ambulatory sensitive care admissions • Unpublished data from the 24 month evaluation reportedly show a statistically significant decrease in total costs
Community Care of North Carolina	<ul style="list-style-type: none"> • 40% less hospitalizations for asthma and 16% less ER visits • Total savings to the Medicaid and SCHIP programs \$135 million for TANF-linked populations and \$400 million for the aged, blind and disabled population
HealthPartners Medical Group BestCare PCMH Model	<ul style="list-style-type: none"> • 39% decrease in emergency room visits • 24% decrease in hospital admissions • Overall costs in the PCMH clinics decreased from being 100% of the state network average in 2004 to 92% of the state average in 2008, in a state with costs already well below the national average

Our Proposal: An Integrated Health Team Care Model

We propose a profound revision of the healthcare delivery model at Emory with expansion of the professional roles of non-physicians in an integrated health team approach for specialized chronic care.



The nucleus of the team is composed of nurses each with a portfolio of patients to manage, one or more nurse practitioner or physician assistants, 1 or 2 physicians and administrative support. The external team (specialists, pharmacist, dietician, etc.) are available for consult.

As outlined in the introduction, expansion of the role of non physician healthcare providers has been slow, markedly lagging the changes that have been introduced to the Georgia laws pertaining to health care provision. One example of such "lack of adaptation" has been prescriptive authority.

Requirements for an Integrated Health Team (IHT) Care Model

Critical to the success of an integrated team care model is **acceptance of the model by all stakeholders**. It is particularly important that physicians invest in a system that is centered on the relationship of each patient with a team, as opposed to the current model in which the primary relationship is between the patient and the physician. Engagement and empowerment of non-physician providers is also essential, as their roles expand to include many new tasks and functions. Finally, there must be patient acceptance of the advantages of a relationship with a primary team, rather than with one highly skilled (but scarce) individual provider.

Evidence-based treatment algorithms for management of common problems are essential tools that enable the care team to function on a day-to-day basis. Such guidelines exist for most common medical problems, e.g. hypertension, diabetes, COPD, etc. as well as most specialty areas. Explicit rules must be implemented regarding which team members are empowered to make specific diagnostic and treatment decisions, and these guidelines will necessarily be specialty-specific. Physician acceptance of adoption of standardized practices is again critical to the success of the approach.

Initial and ongoing specialty-specific training must be implemented in order for quality care to be maintained. Non-physician team members will require coaching on role changes as well as orientation to specialty-specific management algorithms. Continuing medical education for all providers becomes critical as roles change and non-physician providers are asked to make more nuanced medical judgments. The experience levels of non-physician members of the team will determine the roles that individual team members can assume, and advanced experience and expertise should be recognized by assignment of advanced titles and responsibilities.

Better engagement of care providers (“owning the patient”). Engaged employees are more productive. They are more profitable, more customer-focused, safer, and more likely to withstand temptations to leave. The most recent Gallup survey, published November 2009, demonstrates lower job satisfaction for TEC RNs in the core workgroup engagement items, as well as many of the client-specific questions. TEC generally remains locked in a hierarchical structure. Once RNs enter TEC few are utilized to their maximum abilities or experience leading to a 20% turnover rate in spite of otherwise more favorable work schedules. Additional responsibilities within the team will revalorize individual health care providers self image and improve engagement.

Regular team meetings will be essential, both for visit and treatment planning, and for review of patients seen and results of testing. This is particularly important for review of activities such as phone and email contacts that do not involve face-to-face visits. Review of emergent problems and patterns will also lead naturally into quality improvement activities within the section or department.

Communication is at the center of an integrated team model, and novel and varied communication tools will be needed to make the system work. Access to the team should be easy and efficient for all patients, which means that many options for contact must be constructed, with dedicated time and personnel for data collection, and regular group meetings for review of reports and planning for next steps. Phone contact should be directly with the team, rather than a call center. In addition, options such as email or a web-based portal (HIPAA compliant) should also be available. In order for access to be timely, staff workflow must be structured such that triage and real-time attention to messages are possible. In addition, team-

specific staff-staff contact must be streamlined to permit physician and midlevel input to occur in a timely way.

Monitoring of the progress of the integrated team care model is critical for process improvement and assessment of the impact of system change. Benchmarks exist within most specialties that lend themselves to objective monitoring of progress, and information technology can be leveraged in order to collect data at a very granular level. Formal team-specific meetings at set intervals should facilitate examination of quality data and small modifications of the model on a regular basis.

Changing Providers Roles

For the implementation of an integrated health team care model, a drastic change in provider roles and a general change in culture will be necessary. These changes can provide improved quality of patient care, better staff engagement and retention, and improved patient satisfaction.

Physician role in the IHT

- ▶ Agrees to work in a team setting, relinquishing some of the oversight to other team members (collective responsibility).
- ▶ Acts as the medical reference for the team.
- ▶ Must be available for consultation if needed.
- ▶ Participates in team meetings for patient care reviews.
- ▶ Provides necessary training for other team members.

Nurse Practitioner and Physician Assistant

Proposed expansion:

- ▶ NP/PA serves as a reference for team members when patients presents with values outside pre-established ranges or new problems.
- ▶ Prescriptive authority is essential.
- ▶ Ability to order and review tests labs.
- ▶ Ability to prescribe treatments based on team defined algorithms (SOPs) within pre-established guidelines.
- ▶ Ability to alter treatment algorithms within pre-defined limits.

RN

Proposed expansion (“RN Navigator,” under physician approved protocols)

- ▶ Orders for Labs, point of care testing, diagnostic tests.
- ▶ Prescriptions (example: GA PH protocols: hypertension).
- ▶ Prescribe treatments based on team defined algorithms (SOP) within pre-established limits.
- ▶ Maintain preventative care: vaccines, mammogram, colonoscopy, etc. through registry.
- ▶ AMS referral, virtual / home management.

Medical Assistant

Proposed expansion:

- ▶ Would take direction from NP / PA and RN Navigator.

- ▶ MA certification varies; standardize responsibilities across the Emory Clinic.
- ▶ Assist with results tracking through defined protocols.
- ▶ Role needs redefining with change in prescription policy, patient call processes, etc. Pay grade should align accordingly.

Need for enhanced IT support:

The proposed model can only be economically sustainable if novel communication methods and HIPAA compliant methods of communication and data gathering are available. Efforts are already underway within EHC to adopt a Cerner based system consisting of:

- 1) An electronic portal allowing patient to communicate with care providers, enter data and symptoms, ask questions, and schedule appointments. The system will also serve as message board between care provider and patient. Alert to new messages can be delivered as personal email.
- 2) Care management tool to alert/remind care team about procedures due within standard care of a patient.
- 3) Ready access to the patient's clinical data from a registry within EHC.

Existing Models of Integrated Health Team Care within EHC

Our proposal expands models already successfully applied within Emory Healthcare. The integrated team care model can be applied to some types of subspecialty care, and there are numerous current examples within Emory Healthcare. We will focus on two examples that involve different types of cancer care, because they illustrate how this approach can be adapted to address subspecialty-specific challenges. In addition, the use of navigators and coordinators, which are central to the integrated team model, are becoming accepted as useful and even essential components of quality cancer care.

The Breast Cancer Team: *The challenge is integration*

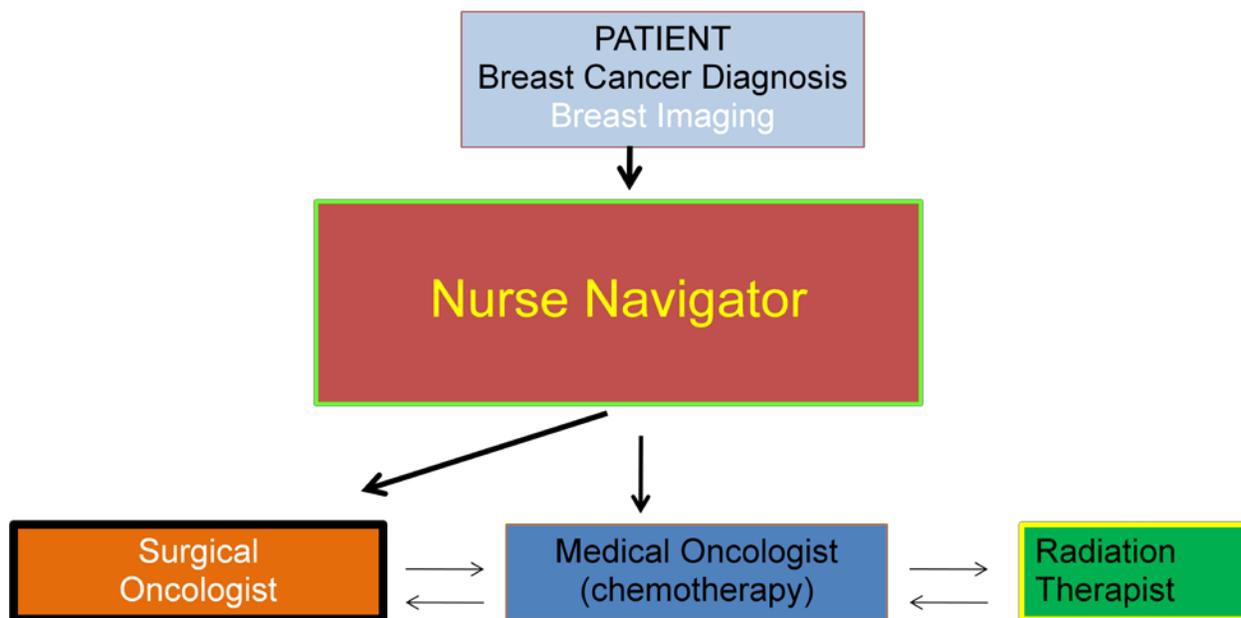
Following an initial diagnosis of breast cancer, a woman faces a daunting maze filled with diagnostic tests, doctors, and procedures that require integration of the many services necessary for producing the best outcome. During the course of care, the patient must navigate between breast imaging, radiology, surgical oncology, medical oncology, radiation oncology, clinical trials, and the infusion center. Quality care can only be achieved through efficient and coordinated evaluation, treatment planning, treatment and follow-up.

Integration of care across sub-specialties is crucial, so a nurse navigator is at the center of the overall breast cancer team. This individual coordinates activities from the time of initial referral onward. The navigator plays a particularly critical role immediately after diagnosis, not only for diagnostic and therapeutic care coordination, but also for patient education regarding this new diagnosis and some of the options that lie ahead. Since the medical oncology team typically coordinates the breast cancer patient's longitudinal care, the navigator is embedded within the medical oncology team which also includes a physician, NP or PA, and a clinic nurse.

The Breast Cancer Working Group is composed of all of the specialists (and their respective teams) involved in breast cancer care, including medical oncologists, radiation oncologists,

surgical oncologists, and breast imaging physicians. The group **meets regularly**, and exists for two primary purposes: first and foremost, the group **facilitates integrated care of individual patients**; the second aim is to **develop and conduct cutting edge clinical (and basic) research**. At working group meetings, new cases are discussed, treatment plans considered, and patients who may be candidates for an ongoing clinical trial are identified.

Breast cancer team: It is about navigating the system:



The medical oncology team facilitates longitudinal care of the patient through all phases of treatment, and they utilize a team model. The physician drives the basic treatment plan and evaluation of progress/response, however the midlevel provider and nurse are empowered to provide much of the routine care. *The nurse is the access point for patient-team communication*, and the roles and responsibilities of the non-physician team members are well defined. Regular small team meetings are also essential for exchange of information and ongoing treatment planning. This model permits the physician’s time to be prioritized toward critical functions such as treatment planning, communication at nodal points in care, evaluation of complications and unexpected events, and close supervision and scrutiny of the care of patients on clinical trials.

The Bone Marrow Transplant (BMT) Team: The coordination of complex care of critically ill patients

The BMT team cares for patients with a variety of diagnoses, primarily hematologic malignancies, referred from throughout the southeast. The transplant process itself is medically complex, with significant inpatient and outpatient components of care which must be coordinated. In addition, there are substantial insurance hurdles to be navigated in order to gain approval for the transplant itself—assuming that the patient has insurance. Finally, the team is committed to the conduct of clinical research into the transplant maneuver itself as well as

supportive care. In order to facilitate this research, an academic model in which physicians have protected time must be maintained.

The BMT team is a **true group practice, both horizontally and vertically**. The core of the team consists of seven individual MDs (~4 FTEs), seven midlevel practitioners, six pre-transplant nurse coordinators, two clinic nurses, inpatient and outpatient clinical pharmacists, MAs, a medical secretary, a phone nurse, an intake nurse, two intake coordinators, and two social workers. In addition, there is a BMT inpatient nursing unit (8E), and an outpatient infusion center where patients receive transfusions, chemotherapy, and supportive care. BMT programs are required by law to maintain and report information on all transplants performed at the center, so a three-person data management group is devoted to maintaining the BMT database.

Simply put, it takes a village...

BMT Team: Patient care relationships

Each MD (6) + 2 RNs-pre & post-BMT

NP/PAs x 7

Social Worker

PharmD

Secretary, MAs, Schedulers

In order to facilitate care, the team has agreed upon a set of **standard operating procedures (SOPs) which cover all of the common problems** encountered in our clinical practice. These serve as a guide for the nurses and midlevel providers, and also a touchstone for the physicians. The SOPs are maintained on the Winship Cancer Institute intranet site, allowing for immediate access from the ward, home, or on the road.

Patients are referred through the BMT intake office, and assigned to a nurse coordinator who manages the pre-transplant evaluation, education, and coordination with the referring doctor and the insurance company. **A physician sees a patient at the time of referral, and maintains ownership of the patient throughout their care.** The physician's role is to evaluate candidacy for transplant, develop a treatment plan with the referring doctor, implement that plan, supervise the ongoing care of the patient, and provide direct care at nodal points in the process. These nodal points include finalization of the plan and signing of consents, inpatient care, review of post-transplant restaging studies, counseling at relapse or disease progression, and end of life discussion. **Midlevel providers provide much of the routine post-transplant care**, which usually consists of visits several times per week, using the SOPs as a guide. Nevertheless, a physician "doc of the day" is always present in the clinic for decision making, and weekly team meetings facilitate information sharing about ill or problem patients. **The nurses are the points of contact for patient problems, and provide ongoing education regarding problems, medications, etc.**

The success of such a large and diverse team requires acceptance of the model and trust on the part of all stakeholders. Patients must be informed and oriented to the model from the start of care. Physicians must be willing to follow evidence-based guidelines, and to empower other team members to implement many aspects of care. Non-physician team members must be educated on an ongoing basis to advances and changes in the field, and must accept their expanded roles as care providers.

Proposed Integrated Health Teams in Subspecialty Chronic Care

Much subspecialty care is episodic and does not lend itself to the Integrated Health Team approach. Subspecialty care for health maintenance (pelvic exams, colonoscopy) or acute episodes of disease (hip fracture, pneumonia) is appropriately delivered within several visits in the current system. Many subspecialties, however, deliver **chronic care** to a defined population of patients. These populations are most likely to benefit from care delivered by an Integrated Health Team.

Several examples illustrate different approaches. The Endocrinology Clinic currently sees patients with Type I Diabetes, Type 2 Diabetes and Thyroid disease, among other diagnoses. While thyroid disease is best managed with episodic consultative care, Type I Diabetes management is ideal for the integrated team approach. Many Type I diabetes patients currently regard the endocrinologists as their primary physicians. The endocrinologists often manage their hypertension, lipids and other medical issues. The endocrinology team is best suited to assuring appropriate guidelines, such as those for eye exams, foot exams, renal assessment and diet and exercise recommendations are followed. There are only a limited numbers of endocrinologists and thus, the Integrated Health Team approach would ensure that their patients receive standard adult preventative care and referral to other subspecialists without the need for a primary care medical home or an overextension of endocrinologists.

Specialty care in digestive diseases is most often episodic. Two major exceptions are in Inflammatory Bowel Disease and chronic liver disease. Both diseases require specialized, intensive, chronic management and lend themselves well to a team approach. For both diseases there are published clinical care guidelines, and both conditions require special adaptation of health maintenance care for specific patient characteristics. A 2000 report¹⁵ showed that introduction of specialty nurses in an IBD clinic reduced hospital visits by 38%, reduced inpatient stays by 19%, increased disease remission by 6% and improved patient satisfaction. Ease of access to information on IBD, advice on avoidance of illness and maintenance of health were also noted. In a pilot study,¹⁶ telephone hotlines reduced unnecessary follow up visits and reduced the time to rapid response during relapses of IBD.

The specialty clinic which most closely resembles the Integrated Health Team approach to chronic care within Emory Healthcare is the Heart Failure team. This clinic employs a large group of specialized nurses who provide intensive telephone and post-discharge care to CHF patients. Heart disease, hypertension, diet and weight management are all coordinated out of this clinic. In order to function as a complete medical home, this team would need to incorporate a provider for diabetes management and routine adult preventative care.

All of these examples include an expanded role for Nurses, Nurse Practitioners and Physician Assistants in direct, frequent contact. The proposed teams would follow practice-specific

guidelines, improve access and disease outcomes and facilitate more personalized care for patients.

Recommendations

The following recommendations are put forward by this panel to address the upcoming changes in health care delivery across Emory Healthcare:

- 1) Systematically evaluate the quality of care delivered to patients needing chronic care, and patient and provider satisfaction within the system as it currently exists.
- 2) Evaluate existing team care models in specific divisions and specialties at Emory (e.g. cancer care, CHF).
- 3) Enable full range of clinical care roles of non-physician staff in accordance with state and federal laws—this may require training.
- 4) Approach health care insurers regarding a patient/condition-based fee structure as an alternative to fee for service reimbursement.
- 5) Explore the IHT approach first in a limited setting (pilot projects), with the potential for gradual expansion across Emory Healthcare.
- 6) Recruit team members among the healthcare providers within a chosen specialty.
- 7) Recruit patients following their initial or regular visit to their physician to provide the choice to opt into the integrated health team based care.
- 8) Set-up an integrated IT based system allowing for proactive monitoring of patients, rapid access to patient medical records for care providers, interactive online communication with patients, and ability for patients to access their information and their providers.
- 9) Monitor progress of the exploratory IHTs from the patient and health care provider's sides, using established metrics such as disease-specific outcome measures, 30 day readmission rates, and practice-specific ER visits.

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