

Titles of the SELECT students' posters

Clinic Flow in a Multidisciplinary Setting: The USF Diabetes Center

Ian Mark and Chris Pothering

Preceptor: Dr. Henry Rodriguez, USF Diabetes Center at the Morsani Center

There is No "I" in Team: A Quality Improvement Survey

Ian Osburn and Jennifer Chevinsky

Preceptor: Dr. June Leland, James A. Haley VA

Improving the Bone Health Screening of Premature Infants

Rachel Appelbaum and Alexandra Printz

Preceptor: Dr. Antoinette Spoto – Cannons, Complex Chronic Peds Center - St. Joseph's Children's Hospital

USF Healthy Weight Clinic Intake Form

Justin R. Abbatemarco and Sasha Yakhkind

Preceptor: Dr. Denise Edwards, USF Healthy Weight Clinic

Proactively Preparing Interns for their NICU Rotation

Kirk Chassey and Shawn Palmeri

Preceptor: Dr. Terri Ashmeade, NICU – Tampa General Hospital

Multidisciplinary Care & Parkinson's: Miracle or Mess?

Sven Oman and Yasir Abunamous

Preceptor: Dr. Robert Hauser, USF Parkinson's Disease & Movement Disorders Center – Byrd Institute

A Multi-Disciplinary Definition of an Episode of Care for Patients in a Urogynecology and Pelvic Reconstructive Surgery Practice

Keith O'Brien and Kyle Ingram

Preceptor: Dr. Lennox Hoyte & Dr. Renee Basally, USF Urogyn & Female Pelvic Reconstructive Surgery, USF Health South

Finding the Meaning in "Meaningful Use" of Electronic Health Records

Emma Qureshey and Aresh Ramin

Preceptor: Dr. Elizabeth Lawrence & Dr. George Rankin, Turley Family Health Center (Baycare)

Explorations of Team-Based Communication

Kanchi Batra and Norman McKoy

Preceptor: Dr. Sally Zachariah, VA Medical Center of Bay Pines – Division of Strokes

End of Visit Care and its Effect on Patient Compliance

Kyle Correll

Preceptor: Dr. Pamela Grover, Dunedin Primary Care (BayCare)

USF Healthy Weight Clinic Intake Form

Justin R. Abbatemarco MSI & Sasha Yakhkind MSI

Dr. Denise Edwards, MD

Background

The USF Healthy Weight Clinic located at USF's South campus is a multi-disciplinary Internal Medicine and Pediatric Clinic managed by Dr. Denise Edwards.

- **Clinic Theme:** Offers comprehensive, holistic approach for weight management and eating disorders
- **Clinic Structure:** A psychologist and registered dietician are available for each patient
- **Opportunity for improvement:** Lacks one comprehensive intake form for all the specialties
 - ❖ Created inefficiencies within the clinic
 - ❖ Possible safety concerns

Plan

Developed a standardized patient intake form, specifically for overweight and obese adult patients, that encompasses all of the specialties involved with patient care.

- Objectives:
 - ✓ Created formal document intended for sharing information among team members
 - ✓ Included pertinent information from each speciality
 - ✓ Collected a unified history focused on weight management
 - ✓ Identified patient's specific needs prior to encounter
 - ✓ Allowed patients to explore lifestyle factors that contribute to their disease
 - ✓ Tracked patient's progress

Methods

Performed a search of published intake forms and adapted models towards our document.

- Utilized existing intake forms from different subspecialties (nutritional, psychology)
- Incorporated objective measures such as *Epworth Sleepiness Scale*
- Challenges:
 - **Audience** – Should form pertain to all patient populations (pediatrics, eating disorders)?
 - **Length of document** – Determined that less than 2 pages is best for efficacy
 - **Question Style** – Objective and insightful questions

Needed patients to forget about weight and shift focus on energy level and goals

Form began with lifestyle questions so that patient realizes its implication on weight loss

A central theme in clinic, which lends to holistic approach

The team of psychologists use cognitive behavioral therapy so patients can best cope with stress

One RCT outlined significant weight loss when accompanied with stress management while decreasing cortisol levels²

Ensured no underlying medical issues

Outlined specific nutritional information for dietician in detailed chart

Addressed the need to expose the underlining reasons for overeating

In the clinic, most patients reported that hunger is not driving them to overeat

USF Healthy Weight Clinic Patient Intake Form

We'd like to welcome you as a new patient. Please take the time to fill out this form as accurately as possible so we can most appropriately address your health needs. The confidentiality of your health information is protected in accordance with federal protections for the privacy of health information under the Health Insurance Portability and Accountability Act (HIPAA).

I. **Goals and Motivation:**

1. What is your goal for this visit? _____
2. What is your motivation for achieving this goal? (Check all that apply).
 To improve my health To improve my quality of life For my family An upcoming event Other: _____
3. How satisfied are you with your health? (Please circle one)
 Not at all Somewhat satisfied Very satisfied
 1 2 3 4 5 6 7 8 9 10

II. **Lifestyle:**

1. How many hours do you typically sleep per night? _____
2. How long does it typically take you to fall asleep? _____
3. How many times, on average, do you wake up once you fall asleep? _____
4. Do you wake up most mornings feeling rested? Yes No
5. Has anyone told you that you snore? Yes No
6. Please use the scale below to answer the next several questions in relation to your energy level while performing the following activities.
 0 = no chance of dozing 2 = moderate chance of dozing
 1 = slight chance of dozing 3 = high chance of dozing

Sitting and reading	_____
Watching TV	_____
Sitting inactive in public place (e.g. theater or meeting)	_____
As a passenger in a car for an hour without a break	_____
Lying down to rest in the afternoon when circumstances permit	_____
Sitting and talking to someone	_____
Sitting quietly after a lunch without alcohol	_____
In a car, while stopped for a few minutes in traffic	_____
TOTAL (for staff use only):	_____

7. Which of the following factors contribute to stress in your daily life? (Check all that apply).
 Family Work Finances School Your health Your family's health Friends Your weight Trouble with the law Other: _____
8. What techniques do you use to cope with stress? (Check all that apply).
 Exercise Food Sleep TV Reading Browsing the internet Mindfulness (meditation/yoga) Time with family Religion Other: _____

Explored patient's motivation and directs it toward long-term lifestyle changes rather than short term diet

Studies show high drop-out rates and low effectiveness after one year for most diets³

Utilizes *Epworth Sleepiness Scale*⁵ which has been cited in numerous articles denoting objective tiredness value

Correlated relationship between patient's sleep patterns with their metabolism - which many patients are not aware of⁴

Studies show increased consumption and appetite with sleep deprived patients¹

USF Healthy Weight Clinic Patient Intake Form

III. **Exercise History:**

1. How often are you physically active for 20 minutes or longer? Never 1-2x/week 3-4x/week ≥5x/week
2. Which type(s) of exercise do you do? (Check all that apply). Walking Running Weights Other: _____
3. Do you have any barriers that limit your ability to safely exercise? Yes No
 Please check all that apply: Work Family Energy level Medical conditions Pain Motivation Other: _____

IV. **Eating Habits:**

1. How many times do you eat out in a typical week? _____ Please list the restaurants that you most often: _____
2. Please outline a typical day of your eating habits in the chart below. Please indicate if the food was prepared at home and if so by whom, or purchased out, and if so where.

Meal	N/A	Time	Food
Breakfast			
Snack			
Lunch			
Snack			
Dinner			
Snack			

3. What do you typically drink? (Check all that apply). Water Juice Soda Diet Soda Coffee Tea Other: _____
4. How many alcoholic beverages do you consume in one week? 0 1-3 4-6 >6
5. Please check the appropriate column for each of the following questions:

	Never	Rarely	Sometimes	Often	Almost Always
Does your family eat meals together?					
Do you read the food labels/nutritional information when you shop for food?					
Does nutritional information influence your decision to buy/eat certain foods?					
Do you eat in front of the TV?					
Do you eat with others?					
Do you eat when you're stressed?					
Do you eat when you're anxious?					
Do you eat when you're lonely?					
Do you eat when you're not hungry?					
Do you eat when you are bored?					

Reminded patients that eating out, especially lunch, represents a large portion of daily calories

Alcohol may be used as a form of self-medication for stress and adds to caloric intake

Study has implicated correlation between anxiety and drug usage including alcohol abuse⁶

Study

The form was reviewed and revised by the healthcare team to ensure it encompassed the different specialities. These are direct quotes from their feedback.

- "It allows me to formulate questions tailored to the patient's situation, streamlining the intake process." Dr. Mario Rodriguez, Ph.D. - Licensed Clinical Psychologist
- "Prevents the patients from having to answer the same basic questions more than once." Dr. Michelle Albers, Ph.D. - Registered Dietician
- "Gets patients & families to start thinking about some of these questions we ask." Jeannette Fleishcher, ARNP - Nurse Practitioner

Future Plans

Our future plans include continual assessment and integration of the form into the Healthy Weight Clinic. Specific initiatives include:

- Follow-up feedback from healthcare team
- Feedback from patients
- Inclusion of form in electronic medical records

References

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2. Cox, Tiffany L, et al. "Stress Management-Augmented Behavioral Weight Loss Intervention for African American Women: A Pilot, Randomized Controlled Trial." *Health Education and Behavior* (2012): 1-10.
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4. Mulgrew, A T, et al. "The Impact of Obstructive Sleep apnea and Daytime Sleepiness on Work Limitation." *Sleep Medicine* (2007): 42-53.
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Acknowledgements

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Sven Oman, B.A. & Yasir Abunamous, B.A.

Plan

- In discussing Parkinson's treatment with Dr. Hauser, CCM preceptor, we arrived at the concept of multidisciplinary care
 - Guided by existing literature on the efficacy of multidisciplinary care models in the treatment of other chronic illnesses
 - Assess **feasibility** from patient, as well as provider, perspective
 - Determine patient perspective on **need** of localized auxiliary services

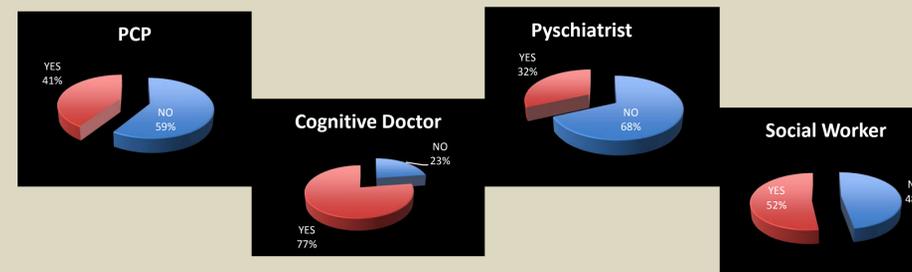
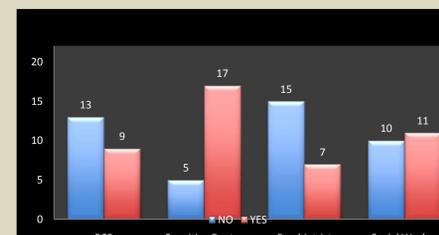


Do

- Worked with site staff to construct four-part patient questionnaire, assessing patient needs and preferences
 - Administered to twenty-two follow-up patients
- Visited Morsani Center ALS clinic and Byrd Center Alzheimer's clinics to research provider perspective on costs & benefits via shadowing and interviews
- Collected data and periodically met with CCM site preceptor to discuss expectations and results

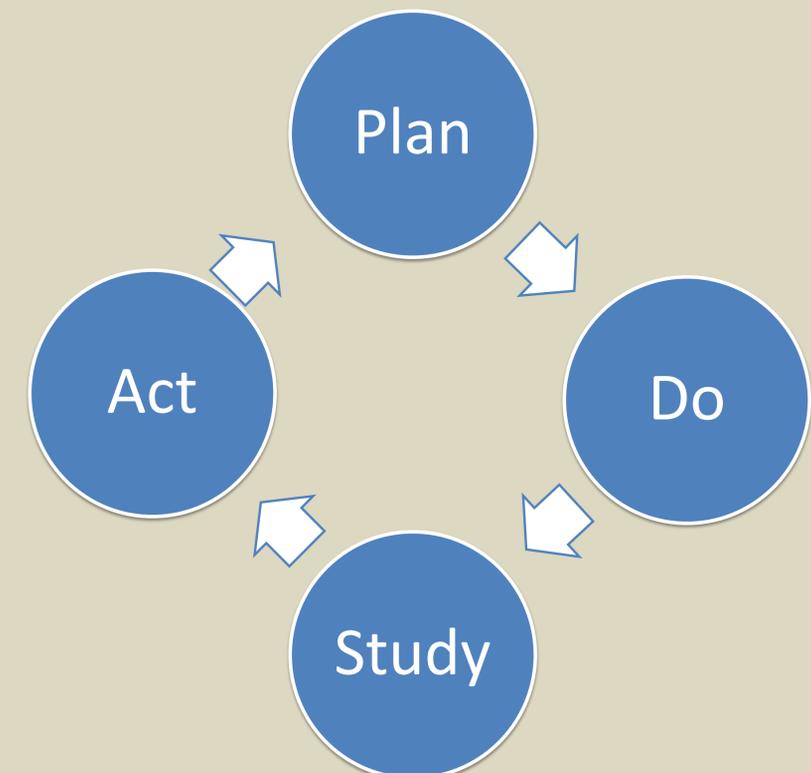
Study

- Providers agreed on the effectiveness and benefits of incorporating multidisciplinary care into the treatment and management of chronic, incurable diseases
 - Consistently noted cost as main impediment to adopting this model
 - Expressed willingness to assist with adaptation of model to Parkinson's clinic, but stressed prerequisite of sustainability
- Patients: n=22
 - Provided mixed feedback
 - PCP: 9 "Yes", 13 "No"
 - Cognitive Physician: 17 "Yes", 5 "No"
 - Psychiatrist: 7 "Yes", 15 "No"
 - Social Worker: 11 "Yes", 10 "No"



Act

- Discuss and analyze findings with CCM site team
- Construct and implement site-specific financial feasibility study for the Parkinson's Disease & Movement Disorders Center
 - Employ the help of professional financial officer and Dr. Hauser's support staff
- Conduct second round of survey administration
 - Work to eliminate effects of confusing or unclear hypothetical question wording



Background and Study Purpose

In any service or industry, communication is essential for not only the efficiency but also the effectiveness of this entity. This fact remains true for the healthcare industry. Because the lives of people are at stake, team communication in a healthcare setting could potentially be the deciding factor between life and death. With a misinterpretation or a lacking of given critical information, situations in which medical errors can occur are created. According to the Joint Commission, the number of medical errors that occur, if they were included in the National Center for Health Statistic's list of top reasons for death, would rank ahead of accidents and be placed at number five. Moreover, the Joint Commission also cites that failures in communication are the leading cause for medical error. These errors include delays in treatment, incorrect surgical procedures performed, improper administration of medication, and the like (Hughes, RG).

The purpose of this study was to:

- observe and document the existing team-based communication
- analyze these observations
- make suggestions to enhance and improve the quality and efficiency of care

Methodology

Participants

Neurology Division team at the VA Bay Pines consists of 10 team members: Five Neurologists, Two Electroencephalograph Specialists, One Physician Assistant/Doctor of Eastern Medicine/Acupuncturist, One Administrative Assistant, One Research Coordinator

Data Collection

- Four individual interviews were performed with four out of five neurologists
- Surveys on team communication were given to all ten team members and collected in an enclosed white envelope for anonymity

Data Analysis

- Each interview transcript was reviewed by the two researchers, and key responses were identified and discussed to highlight
- Survey data and results were compiled and analyzed
- Data that could be represented via visual representation was transposed into graphs
- Researchers identified and compiled responses from the interview transcripts that correlated to survey responses

Preliminary Findings

Q: What are the typical means of communication on the team?

- "...informal communication...10% email, 90% face-to-face"
- "...on the spur of the moment we talk about patient issues..."
- "...we don't have regularly scheduled sit-downs..."
- "...previously, staff meetings were every couple of months..."
- "...no resolution or follow-through..."

Q: Please describe your team's communication strengths.

- "I don't know about the strengths..."
- Proximity of offices to each other
- "...all full time..."
- "...very open to each other..." when talking about patient care
- "...keep strength of friendship and colleagues..." with potlucks or office parties

Q: Please describe your team's communication weaknesses.

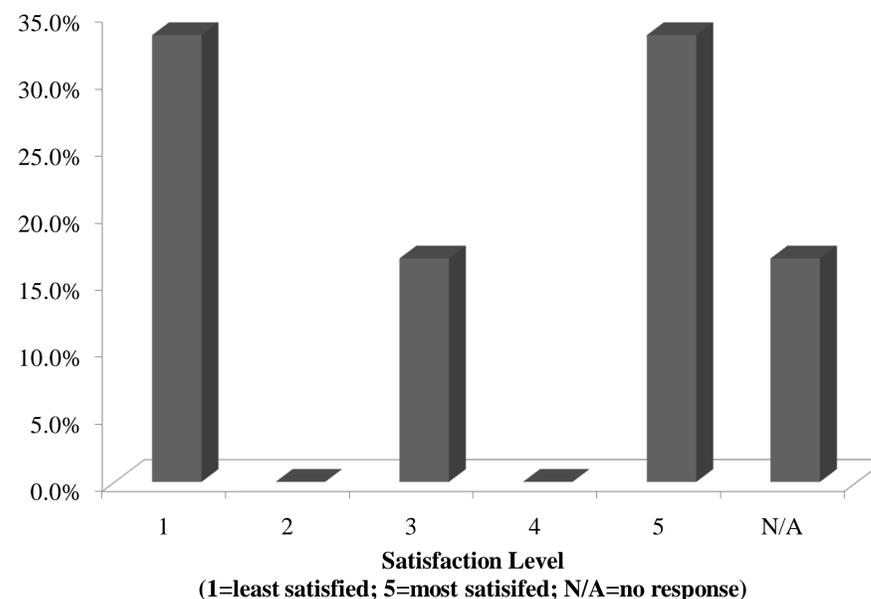
- "no regularly scheduled meetings"
- "...not being able to spend time with students or residents..."
- Confusion of which physician is on call for the week
- Overlapping patient appointments
- Restriction of 20 minute follow-up appointments and 40-minute new patient appointments

Q: What are some changes that could potentially improve team communication?

- "regularly scheduled meetings"
- Use same media of communication
- "...time to discuss patient care, operational aspects, grand rounds"
- Add nurse and neurosurgeon to the team
- Get rid of beepers and implement use of cell phones

Secondary Findings

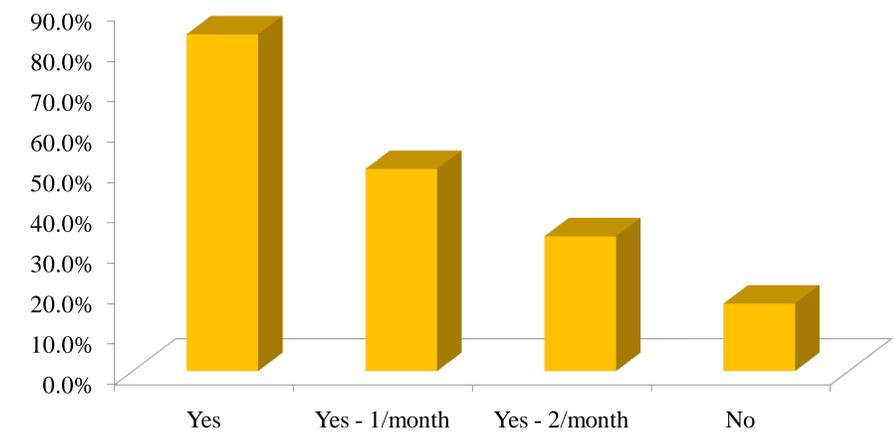
Q: How satisfied are you with the current state of communication among team members at team meetings? (n=6)



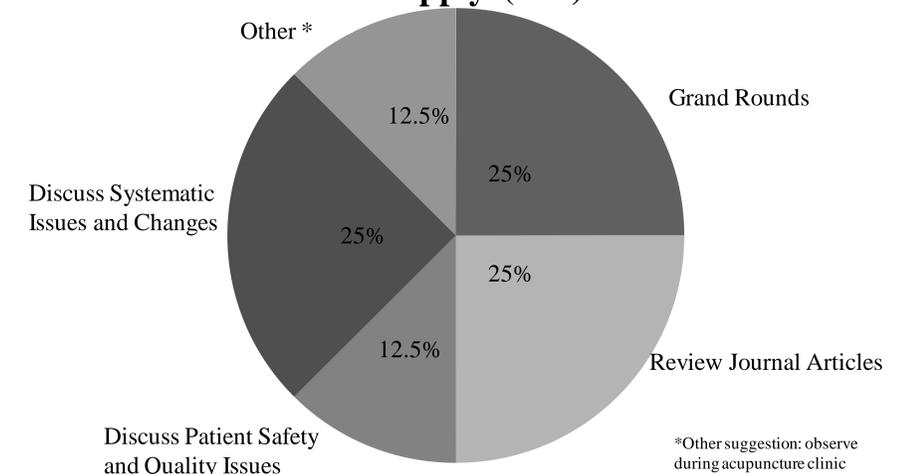
Q: How often do you have scheduled team meetings?

- "One this year"
- "never"
- "once in two years"
- "Team meetings are not scheduled on a regular basis...have had one such meeting in almost two years."

Q: Would you want to increase the frequency of scheduled team meetings? If 'Yes,' how often (per month)? (n=6)



Q: What should team meetings be geared towards? Please check all that apply. (n=6)



Highlighted Findings and Future Plans

Highlighted Findings

After the results were reviewed, the following findings were particularly of interest.

- Team members recognized the need for and **wanted a regularly scheduled meeting** when one was lacking
- Team members would like to see a **variety of topics at team meetings**

Future Plans

Plans were discussed that included the following to assure for successful team communication in the healthcare setting:

- **Team-STEPPS training**, to facilitate efficiency and effectiveness of communications between and among each team member
- An **assigned facilitator at the formal team meetings** for moderation
- **Regularly scheduled team meetings** that would reinforce team communications and enhance the patient safety of each patient on their service as well as meet the individual needs of the members among the team

Overall, these three key steps can be implemented in any healthcare setting to ensure proper team communication while limiting medical errors.



Proactively Preparing Interns for their NICU Rotation

Kirk Chassey MS1 and Shawn Palmeri MS1
Preceptor: Dr. Terri Ashmeade, MD



Background

Teaching hospitals like Tampa General Hospital (TGH) play a vital role in educating the future generation of medical professionals. In the case of future physicians graduating from medical school, thousands begin their residency training in hospitals like TGH; this transition involves a significant increase in patient care responsibilities for first-year interns.² Long hours coupled with writing prescriptions for the first time contribute to the possibility of errors occurring during the learning process. In fact, studies have shown there to be an increase in medical errors that correlates with this time period, the so-called “July effect.”²

In the Neonatal Intensive Care Unit (NICU) at TGH, a new set of interns begins a rotation through the department every four weeks. Due to the degree of specialization required for the care of acutely ill infants, this high rate of resident turnover leaves potential for the interruption of quality patient care or manifestation of the “July effect” once a month rather than once a year. Full-time staff maintain a system of checks and balances to catch such errors, but this increases their workload. Pre-emptive resident education may be the solution to reducing those errors that would mutually benefit all parties involved.

Previous research has suggested that such improvements to resident education prior to starting a new rotation leads to less anxiety and overall better patient care.^{1,3} NICU residents at TGH reported feeling less than adequately prepared for some of the unique tasks at the beginning of their four-week rotation (Figure 1). We determined that providing new residents with a handbook containing valuable NICU protocols and medication dosage information could potentially decrease the time required for them to become comfortable with the daily tasks required while they are on service in the NICU.

Study Methods

Six first-year NICU residents were anonymously interviewed about their experience with the NICU rotation at TGH. Participants were asked to rate their level of confidence with various patient care tasks using a 1-10 scale (1 = no confidence; 10 = extreme confidence) – (Figure 1).

After compiling data on new resident confidence, we interviewed two neonatology attending physicians, one neonatology fellow, and three neonatal nurse practitioners to determine the most valuable information that would be useful to have in a new resident handbook. Data were gathered on each of the above subjects from multiple sources including TGH Portal (online handbook) and former unit handbook (TGH NICU 2006). The handbook was then systematically reviewed by one nurse practitioner, one attending physician and two interns.

Results

The interns, fellows, nurse practitioners and attending physicians compiled the following list that consisted of two general topics: unit protocol and patient care protocol.

Unit Protocol

- Unit Personnel and Responsibilities
- Team Members
- On-Call Obligations
- Unit Didactics
- Schedule of Rounds

Patient Care Protocol

- Amount of Primary Patients per Week
- Charting
 - New Admission Procedures
 - Progress Notes
- Sign-Out/Hand-Off

Tables, figures and high-yield information were compiled to elicit the best possible resource for interns (and all practitioners) with quick ease of access (see figures 2 & 3).

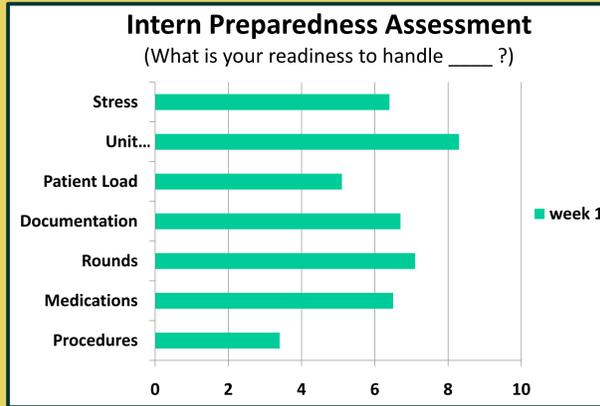


Figure 1. Interns reported various levels of comfort with the typical tasks required of them while on service in the NICU at TGH. Familiarity with medical procedures was, on average, the lowest-ranked category. (n = 6; Scale: 0 = no confidence, 10 = extreme confidence)

CALORIE AND FLUID CALCULATION	
1. Fluid (ml/kg/day): Total ml of all fluids (include blood products, IV meds, flushes, IV, HAL, IL) in 24 hrs ÷ kg	
2. General Information	
• Dextrose = 3.4 kcal / gm	○ D10W = 3.4 × 10 = 34 kcal/100ml or 0.34kcal/ml
• Protein = 4 kcal / gm	○ D12.5 = 3.4 × 12.5 = 42.5kcal/100ml or 0.42kcal/ml
• Intralipids	○ 20% IL = 2 kcal/ml
• MCT oil = 7.5 kcal/ml	
• Polyose = 2 kcal/ml	
• Bepreproten® = 25 kcal (6 gms protein) per packet (packet = 7gms or 1/4 tsp)	
• Formula	
○ 20cal/oz = 0.67kcal/ml	
○ 22cal/oz = 0.73 kcal/ml	
○ 24cal/oz = 0.8 kcal/ml	
○ 27cal/oz = 0.9 kcal/ml	
○ 30 cal/oz = 1.0 kcal/ml	
• Cereal = 15 kcal/tbsp	
• Human Milk Fortifier = 3.8 kcal/pkg	
3. Calorie Calculation	
• TPN	
○ Calories from Carbohydrates (CHO): (Final concentration ___ % dextrose) × (volume infused (ml) ___) × 0.034	
○ Calories from protein: (Actual volume infused in ml) × (grams/kg/day of Amino Acids) × (weight in kg) × 0.04	
○ Calories from IL: (Volume infused in ml) × 1.8 for 20% lipids or 1 for 10% lipids	
○ Total calories from TPN in 24 hrs: Calories from: CHO + Protein + IL = kcal/kg/day	
• Breast Milk and formula	
○ (Volume ingested (ml) in 24 hr) × (kcal/ml for each product) = kcal/kg/day	
• IV Glucose	
○ (Total fluid volume (ml) in 24 hr) × (kcal/ml for each product) = kcal/kg/day	
• Parenteral and Enteral:	
○ (Total ml IV fluids) × (kcal/ml for each solution) + (total ml PO feedings) × (kcal/ml for each product) = kcal/kg/day	
4. Glucose Infusion Rate (GIR)	
• Glucose mg/kg/min = ml/kg/day × % dextrose × 10	
1440	
• Glucose mg/kg/min = hourly rate × % dextrose	
6 × weight (kg)	

Figure 2. An excerpt from the handbook – a Neonatal nutritional calculation guide

Medications			
Antibacterials/Antifungals/Antivirals:			
Acyclovir	20mg/kg/dose	Q8 hours	IV
Amoxicillin (UTI Prophylaxis)	Less than 34 weeks PCA	Q12 hours	IV
Amphotericin B	10-20 mg/kg/dose	Q24 hours	PO
No test dose required in neonates	0.5-1 mg/kg/dose	Q24 hours	IV
Infuse over 2-6 hours			
Amphotericin B Lipid Complex (Abelcet)	5-7 mg/kg/dose	Q24 hours	IV
Infuse over 2-6 hours			
Ampicillin	100mg/kg/dose	Q12 hours	IV
Infuse over 10-15 minutes			
Bactrim	150mg TMP/m ² /dose	3x weekly (MWF)	IV/PO
UTI Prophylaxis	2mg TMP/kg/dose	Q24 hours	PO
Do not use < 2 months of age			
Cefazolin (Ancef)	25mg/kg/dose	**See Cefotaxime Table	IV
Cefotaxime (Claforan) 50 mg/kg/dose IV			
Postmenstrual Age (weeks)	Postnatal Age (days)	Interval	
Less than or equal to 29	0-28	Q12 hours	
	Greater than 28	Q8 hours	
30-36	0-14	Q12 hours	
	Greater than 14	Q8 hours	
37-44	0-7	Q12 hours	
	Greater than 7	Q8 hours	
Greater than or equal to 45	All	Q6 hours	
*Reserve for suspected or confirmed CNS infection			
Ceftazidime (Fortaz) 30-50 mg/kg/dose IV			
Postmenstrual Age (weeks)	Postnatal Age (days)	Interval	
Less than or equal to 29	0-28	Q12 hours	
	Greater than 28	Q8 hours	
30-36	0-14	Q12 hours	
	Greater than 14	Q8 hours	
37-44	0-7	Q12 hours	
	Greater than 7	Q8 hours	
Greater than or equal to 45	All	Q8 hours	

Figure 3. Another excerpt from the handbook – a Neonatal medication dosing guide.

Results (continued)

Statistically, interns that underwent teamwork-training in Neonatal Resuscitation exhibited better teamwork, faster resuscitation times and better workload management than interns who did not.⁴ Similarly, interns that underwent training of standardized sign-out procedures were more likely to detect missing information and more likely to lower communication error rates.³ Applying these principals to NICU, pre-emptively providing new interns with additional standardized information about the these topics (as opposed to verbal communication from previous interns) should aid in building team cohesion and competency.

Once the final draft of the handbook is completed, it will be introduced to future NICU residents prior to their start-date in the unit. A follow-up study could measure differences in the confidence level of these residents using the same scale as previously described.

Conclusions

With a unit as unique in operations and procedures as the NICU, it is natural for there to be a slower learning curve during an intern’s first rotation. These accepted adjustment periods create more work for the rest of the medical care team. While the unit does a phenomenal job accommodating efficient learning periods without creating dangerous lapses in patient care, improvements could be made to the orientation process. Currently, orientation occurs by short-lived, informal verbal communication between interns leaving the unit and interns coming on to their new rotation. It was clear after interviewing interns that informal learning is not the most efficient way to prepare and that a handbook might provide a simple, self-guided way to learning more about the unit beforehand. Also, the ease of access to high-yield formulas and charts that are used regularly could help expedite patient care and medical team decisions.

Research has shown that better orientation and preparation leads to an increase of preparedness and a decrease in errors.¹ The aim of this project was to increase ease of orientation for interns, independent of preceptor training. Results and metrics are as yet undetermined and both short-term and long-term analysis would be extremely beneficial.

Citations

1. Improving surgery intern confidence through the implementation of expanded orientation sessions. Antonoff MB - *Surgery* - 01-AUG-2010; 148(2): 181-6.
2. A July spike in fatal medication errors: a possible effect of new medical residents. Phillips DP, Barker GE - *J Gen Internal Med.* 2010 Aug;25(8):774-9. Epub 2010 May 29.
3. Standardized sign-out reduces intern perception of medical errors on the general internal medicine ward. Salerno SM - *Teach Learn Med* - 01-APR-2009; 21(2): 121-6.
4. Team training in the neonatal resuscitation program for interns: teamwork and quality of resuscitations. Thomas EJ - *Pediatrics* - 01-MAR-2010; 125(3):

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THERE IS NO "I" IN TEAM: A QUALITY IMPROVEMENT SURVEY

By Ian Osburn and Jennifer Chevinsky

Team Development Measure

The Team Development Measure (TDM) was designed by the Center for Implementation Practice & Research Support chartered by the Systems Redesign Steering Committee (Part of the Systems Improvement Subcommittee). The TDM has been implemented in 86 Veterans Integrated Service Networks across the country.

The TDM indicates the degree to which a team has and uses the components needed for highly effective teamwork. The four components of teamwork include Cohesiveness, Communication, Role Clarity, and Goals-means Clarity. Each of the four components can be evaluated as an independent entity as well as a marker for team development progression.

Cohesiveness is the social glue that binds the team members together as a working unit. Communication involves a full range of topics including decision-making and problem-solving. Role clarity ensures that all members are aware of clear role definitions and expectations. Goal-means clarity presents an agreement on the team's goals and the strategies to achieve them.

The measure also reveals two levels of solidification of the team, 'in place' and 'firmly in place.' The two levels of solidification along with the four components form the eight stages of team development (see below). Movement from one stage to the next is more of a flow in the development of a team than it is a distinct step up the ladder of team development.

The report score indicates where the team is on the scale of team development, which of these four components are in place, and how firmly they are in place.

STAGE	SCORE RANGE	COMPONENTS	SOLIDIFICATION
Pre-team	0-36	None to Building	---
1	1-46	Cohesiveness	In Place
2	47-54	Communication	In Place
3	55-57	Role Clarity	In Place
4	58-63	Goals-means Clarity	In Place
5	64-69	Cohesiveness	Firmly In Place
6	70-77	Communication	Firmly In Place
7	78-80	Role Clarity	Firmly In Place
8	81-86	Goals-means Clarity	Firmly In Place
Fully Developed	87-100	Everything	Firmly In Place

Methods

The Team Development Measure, an anonymous survey, was delivered via email to the James A. Haley VA Home Based Primary Care team. Of the 46 members, there were 40 respondents for a completion rate of approximately 87%. The team members were given three weeks to fill out the survey. The survey consists of 31 statements with four response categories ('strongly agree,' 'agree,' 'disagree,' or 'strongly disagree'). The results were sent directly to the VA for analysis. A team report was generated and distributed to all members of the team. The report was reviewed by the team leadership and the 9 responses that generated at least 15% dissatisfaction will be openly discussed with the HPBC team at an upcoming team meeting.

Background

The Tampa VA HBPC (Home Based Primary Care) team delivers high value care by an interdisciplinary team consisting of physicians, nurse practitioners, social workers, kinesiologists, pharmacists, psychologists, physician assistants, dietitians, and a geriatric psychiatrist. Each geographic team (Tampa, Pasco, Lakeland) cares for a largely geriatric population of veterans, many of whom are homebound, chronically ill, and nearing the end of their lives. Care is directed at patient and caregiver goals for primary and palliative care, and the management of serious and often life-limiting illnesses.



Discussion

The Tampa VA HBPC scored a team average of 64, falling within stage 5 (Cohesiveness Established, Firmly in Place). This leaves room for development in the categories of Communication, Role Clarity, and Goal-means Clarity.

The most positive responses came from the Cohesiveness component. The two statements with 98% agreement are: "I enjoy being in the company of the other members of the team" and "As a team we come up with creative solutions to problems."

Role Clarity is the component with the most negative responses. The lowest rated item in this category, with 35% agreement, is "Some members of this team resist being led." Discussion with the leadership reflected that this finding might be a result of staff recruitment strategy, with a focus on independence. Each member of the staff must be able to autonomously practice in a high-risk environment.

The potential area of most concern was found in the communication component, with 40% feeling that "Team members talk about other team members behind their back." This item will be brought to the attention of the team for open discussion on methods to rectify this issue.

The results of this survey reflect the point in time of the assessment. A meeting will be held in the near future where ideas will be shared as a team in order to process the TDM results, pinpoint broad areas of improvement, and identify realistic action steps to support momentum in each. With the base line marker provided by the TDM, the Tampa VA HBPC will be able to evaluate their progress over time.

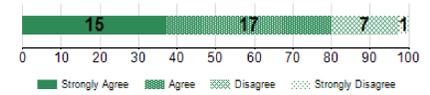
Acknowledgements

June Leland, MD
Darlene Davis, MHA
Tampa VA HBPC

Results

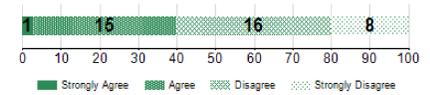
COHESIVENESS

All team members feel free to express their feelings with the team

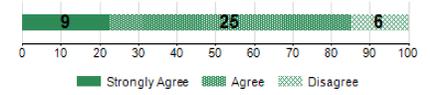


COMMUNICATION

Team members talk about other team members behind their back

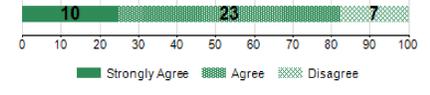


The team openly discusses decisions that affect the work of the team before they are made

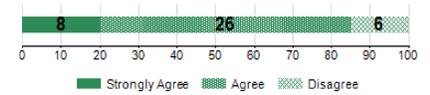


ROLE CLARITY

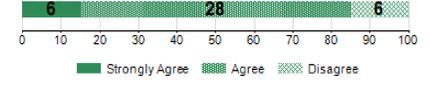
Roles and responsibilities of individual team members are clearly understood by all members of the team



All team members place the accomplishments of the team ahead of their own individual accomplishments



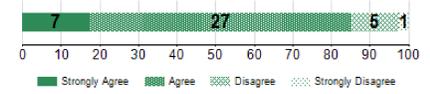
All team members define the goals of the team as more important than their own personal goals



Some members of this team resist being led

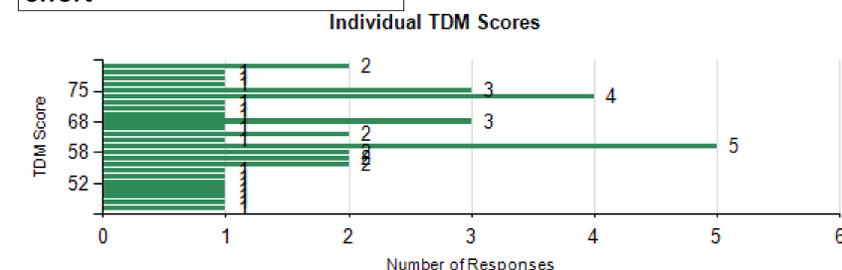
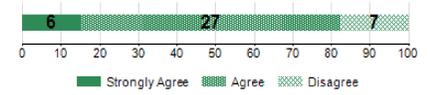


On this team the person who takes the lead differs depending on who is best suited for the task



GOALS AND MEANS

The team has agreed upon clear criteria for evaluating the outcomes of the team's effort



Team Avg = 64 | Stage 5 | 64 - 69 | Cohesiveness Established

End of Visit Care and its Effect on Patient Compliance.

*Kyle Correll & Pamela Grover, MD

Abstract: The goal of this study was to assess if the end of the visit wrap-up and summary was sufficient in properly informing the patients of their overall health status and on the steps needed to complete their care.

After spending several weeks observing the clinical team at Dunedin Primary Care (a level 3 Patient-Centered Medical Home) it appeared that the coordination between the clinical team at the end of the visit was slightly disrupted. A possible explanation for the minor disruption at the end of the visit was an inconsistent use in the EMR vs. paper forms in order to complete the patients' care. While some medications, lab tests, consultations, immunizations, etc. were being entered into the EMR, others were completed in the paper form. This seemed to cause some overlap in roles between the physician and medical assistant and effective communication was sometimes hindered when it came to wrapping up the patients' visit.

In order to examine this further, an anonymous survey was created. The five question survey, which was to be completed after each patient encounter, aimed at assessing the patients' level of understanding and confidence in completing the necessary follow-up procedures. In addition, the survey asked patients for any suggestions that would improve their future visits. The overall goal of this study was to assess the patients' knowledge and confidence in completing the recommended treatment plan, while also gaining valuable insight into what specific areas of the patient experience could be improved.

HYPOTHESIS: If the end of the visit is fragmented by inconsistency in the use of EMR vs. paper forms and excessive communication among the health care team, than the patient's understanding of their care plan will be negatively affected.



April 23, 2012

Materials and Methods:

Measuring Patient Understanding of Care plan

End of Visit Survey – Anonymous

1) After you leave today's visit, how confident are you in your ability to complete the necessary follow up (i.e. filling prescriptions, getting lab tests, consults etc.)?

1 2 3 4 5
Little Confidence Fairly Confident Extremely Confident

2) How clear are the steps you need to take in order to complete your care?

1 2 3 4 5
Not clear at all Fairly Clear Extremely Clear

3) In order to conclude your visit, how beneficial would you find it to be given a written summary of your visit?

1 2 3 4 5
Not beneficial Somewhat beneficial Extremely beneficial

4) After this visit, your overall understanding of your complete health status is:

1 2 3 4 5
Not clear at all Fairly Clear Extremely Clear

5) If you were to recommend one change that would improve your future visits, what would that be?

Discussion:

Based on the patient reports:

→ Although the system, when it comes to the end of the visit may seem at times slightly convoluted by the inconsistency of EMR use and proximity of multiple health care providers in a small facility, **patients appear to have a good understanding as to their overall health status and feel confident in their ability to complete the necessary care.**

→ Being a small facility, Dunedin Primary Care has found a system that fits their personal preferences and a way of wrapping up patient care that works best for them.

→ After interviewing 49 patients, almost all of the patients reported that they **would not change a thing** in the way they are receiving care. When asked what makes this practice stand out, several responses were consistently given:

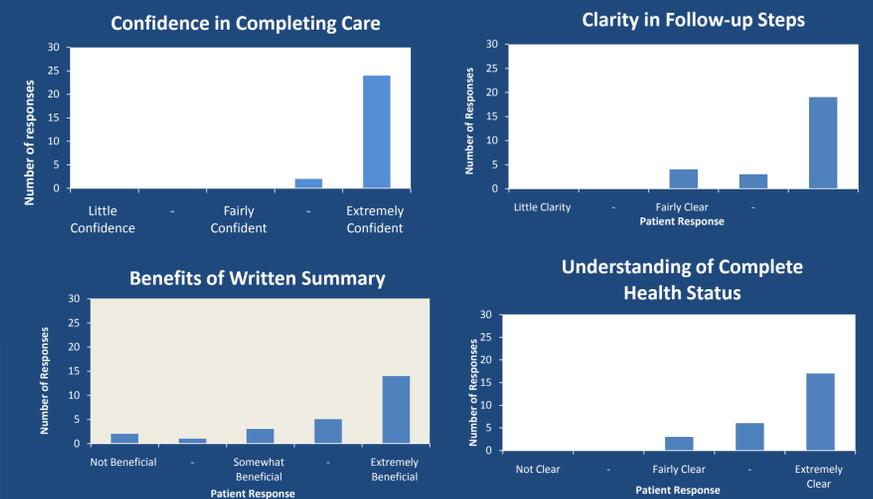
- Faculty listens to me
- Dr. Grover does a great job explaining personalized treatment plans
- Very empathetic, treats me like a human being
- Organized and efficient care

→ In general, the patients reported having a strong understanding of how to complete their care. In most cases (73%), the steps needed to take after leaving the office were **extremely clear**, and 92% of patients surveyed said they were **extremely confident** in their ability to complete their care. In addition, 53% of patients said that their complete health status was **extremely clear**.

→ Surprising, there was a mixed reaction to whether or not a written summary would be beneficial to concluding the patient visit. Although patients may not always find the written summary useful, it is required that every patient receives a copy (PCMH).

- Limitations:
- 1) Time
 - 2) Patients like their doctor too much to give critical feedback.

Results:



Part 2: One suggestion that may improve future visits – verbatim comments

- "I am very happy with how my doctor explains everything to me! Dr. Grover is the best."
- "Clone doctor Grover!!"
- "Nothing – Staff and Doctor always are supportive and dedicated to patient care."
- "Nothing - everyone here treats me well and is very patient with me."
- "Time factor – wait."
- "Very efficient office and staff. Lab work at site is helpful."
- "Dr. Grover and her nurse, Andrea are fantastic. I can't imagine anything they could do better."
- "Great services."
- "Nothing – Dr. Grover is awesome. She takes the time to listen to me and treats me like a human being. She is spot on and always understands me. I have been with many, many doctors and she is the best by far."
- "None. Staff is pleasant and very empathetic."
- "No change. Keep the same. The practice is very organized and there is no wait time."
- "Very satisfied with service and care provided. Cannot think of what could be done differently."
- "Any important information that we need to remember Dr. Grover gives us in written form now- visits here are great – we see no need for any improvements at this time."
- "Sometimes when you call, you are not able to get through to a live person that day. It would be helpful if you could talk to someone on that business day."

Recommendations:

-Increase use of patient summaries via EMR.

*Problem = the summaries are too lengthy. Therefore, a future project may be to find a way to highlight or bullet specific changes in a patient care (meds, consults, life-styles habits, etc.), making it more simplistic for patients' sake.

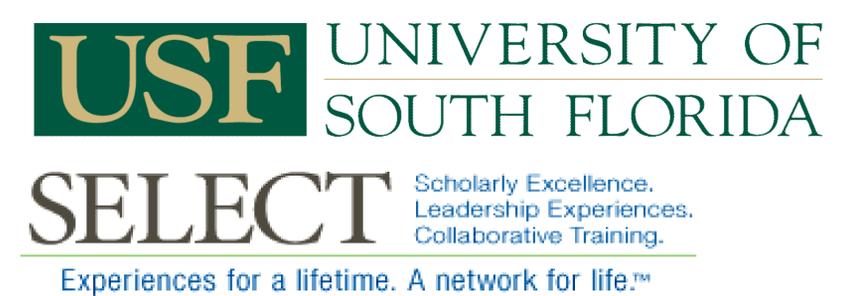
-Before leaving the office, ask the patient if they have any questions pertaining to their treatment plan.

Follow up study: Monitor patients' compliance to their treatment plan. Secondly, create a survey investigating why the patients are not complying – financial, time constraints, etc.

What I gained from my CCM experience: Evident why this facility is a Level 3 Patient-Centered Medical Home. Throughout my observations it has been obvious that what matters most to Dr. Grover and the staff at Dunedin Primary Care is maintaining a continued relationship with the patient. As evident by the survey comments, people are extremely responsive to a physician who spends time getting to know you as a person and truly listens to your concerns. I hope to one day emulate these qualities as a future physician. Thank you Dr. Grover!

A Multi-Disciplinary Definition of an Episode of Care for Patients in a Urogynecology and Pelvic Reconstructive Surgery Practice

Keith O'Brien, Kyle Ingram, Lennox Hoyte, MD, MSEECS, Renee Bassaly, DO, H Leigh Terwilliger, MSN, FNP-BC



Background and Methodology

- Overview:** Our Community-Based Clinical Mentoring (CCM) experience for the SELECT program was with the USF Female Pelvic Medicine and Reconstructive Surgery Practice (a division of the Department of Obstetrics and Gynecology). Every Tuesday morning from November 2011 through April 2012, each student was present in either the Gynecologic Surgery OR at the Women's Center of Tampa General Hospital, or, in the ambulatory setting at the USF Morsani Center for Advanced Health Care. This rotating CCM format allowed students to observe patients longitudinally across the continuum of care and at different points in their clinical course (i.e. initial visits, pre/post operatively, follow up).
- Description of the Practice:** The Female Pelvic Medicine and Reconstructive Surgery Division focuses primarily upon the diagnosis and management of female pelvic floor disorders. Patients are typically women 55 years and older, but may include women of childbearing age. Typical diagnoses related to urinary/fecal incontinence, complications of vaginal prolapse surgery, pelvic prolapse, bladder and vaginal pain, vesicovaginal and rectovaginal fistulas, and childbirth related pelvic floor injury. Team Members Include: Urogynecologists, Fellows, ARNPs, Physical Therapists, Medical Assistants, Surgical Technicians, Ancillary Service Specialists (Dynamic MRI, Urodynamic testing) and other specialists patients may be referred to/from (Gastrointestinal, Urology, OB/GYN, Psychiatry).
- Action Research Project:** Students were asked to evaluate the Division in the context of Clayton Christensen's book "*The Innovator's Prescription: A Disruptive Solution for Health Care*". To enable 'disruptive innovation', Christensen asserts that there are three essential components: a technological enabler, business model innovation, and a value network. Christensen believes the Health Care industry needs to separate its business models (into the categories listed below). **Students identified patients in the practice that correspond to each of Christensen's models, and studied their experience from the perspectives of medical care, pathophysiology, surgical intervention, quality of life, and billing/reimbursement. Students also provided recommendations to the practice for opportunities going forward based on their experiences.**
 - Value-Adding Process (VAP) Businesses:** Treating conditions that have a well understood and clearly defined solution. The notion is to take in something incomplete/broken and transform it into more complete output of higher value. In health care, this would be procedures performed after a definitive diagnosis.
 - Solution Shops:** The diagnosis and solving of unstructured/complex problems, requiring a need for intuitive investigation (versus results-based treatment for conditions that are well understood).
 - Facilitated Networks:** Enterprises in which people exchange things with one another. In health care, this would be networking for patients with chronic illnesses (dLife; patientslikeme.com).
- Rationale:** The Patient Protection and Affordable Care Act (PPACA) has encouraged new payment and delivery models to enhance quality and reduce expenditures. Development of Accountable Care Organizations (ACOs) that utilize bundled payments through episodes of care have been at the forefront of health care reform. We believe that our analysis offers a preliminary exploration of defining an episode of care at surgical practice, utilizing Christensen's framework.

Value Added Process (VAP) Model: Pelvic Organ Prolapse w/Incontinence

Visit Date	CPT-4 Code	CPT-4 Code Description	RVUs	Total Charges ^a	Total Payment ^a
11/4	72195	MRI pelvis w/o dye	12.24	\$1,090.00	\$755.37
11/23	51729	Cystometrogram	9.78	\$1,042.00	\$488.32
	51797	Intra-abdominal pressure test	3.13	\$335.00	\$210.63
	51784	Anal/Urinary Muscle Study	5.56	\$296.50	\$148.50
	51741	Electro-Uroflowmetry, First	0.94	\$131.50	\$65.41
	52000	Cystoscopy	5.75	\$312.00	\$156.00
12/27	57425	Laparoscopy, Surg, Colpopexy	29.32	\$3,242.00	\$1,545.73
	57288	Repair Bladder Defect	20.87	\$1,157.00	\$569.34
2/14	99213	Office/Outpatient Visit, Established Pt.	2.11	\$138.00	\$101.90
2/20	57288	Repair Bladder Defect	20.87	\$2,314.00	\$1,138.68
3/2	74178	CT Abdomen/Pelvis w and w/o contrast	13.35	\$1,520.00	\$708.11

TOTAL **123.92** **\$11,578** **\$5,888**

^a Professional fees charged and collected for services provided. Facility fees were not available due to a the limited time between discharge date and cost calculation.

"Solution Shop" Model: Sub-Urethral Sling Revision

Visit Date	CPT-4 Code	CPT-4 Code Description	RVUs	Total Charges ^a	Total Payment ^a
9/29 ^c	99204	Office/Outpatient Visit, New	4.8	\$351.00	\$182.00
12/18	99203	Office/Outpatient Visit, New	3.13	\$226.00	\$119.50
	76830	Transvaginal Ultrasound, Non-OB	3.61	\$379.00	\$150.00
	76377	3D Rendering, w/Post Process	2.26	\$244.00	Not Covered
1/19	99213	Office/Outpatient Vist, Established Pt.	2.11	\$138.00	\$78.50
2/20	53500	Urethrllys, Transvag, w/Scope	21.91	\$2,460.00	\$952.20
	57287	Removal or revision of sling for stress incontinence	20.04	\$1,111.00	\$423.49
	64614	Destroy Nerve, Extrem Muscle	4.7	\$278.50	\$83.75

TOTAL **62.56** **\$5,188** **\$1,989**

^a Professional fees charged and collected for services provided.

^c This patient was treated between 2007-2008.

Network Model: Chronic Pelvic Pain; Interstitial Cystitis

Visit Date	CPT-4 Code	CPT-4 Code Description	RVUs	Total Charges ^a	Total Payment ^a
3/20	99244	Office Consultation	5.2	\$411.00	\$248.71
	51700	Irrigation of Bladder	2.38	\$257.00	\$117.38
	81002	Urinalysis, Non-Auto w/o Scope	0.1	\$12.00	\$2.39
PT ^b	97001	PT Evaluation	-	N/A ^b	\$45.00 ^b
	97110	Therapeutic Exercises	-	N/A ^b	\$45.00 ^b

TOTAL **7.68** **\$2,355^b** **\$2,043^b**

^a Professional fees charged and collected for services provided. Facility fees were not available due to a the limited time between discharge date and cost calculation.

^b PT patients are seen for 45 minute sessions, and typically complete 12-20 sessions depending on the severity and duration of symptoms. For example, pain patients are usually seen 2x/week for 6/weeks. Private payers reimburse at a fixed rate (\$40-\$50). Medicare can be billed in 15 minute increments. For this patient, we assumed 15 visits at a rate of \$45 per visit (\$1,675 in total payment collected).

Abstract

Optimizing patient flow present a great challenge in any clinical setting. The USF Diabetes Center must navigate this path while providing multidisciplinary services to their patients. The multidiscipline services include practitioners (MD, ARNP, etc), registered nurses, social work, registered dieticians and psychologists. In an effort to identify specific areas of improvement, we set fourth to capture the current flow from the patient perspective. Three time periods were measured showing that the majority of time in the clinic was spent with providers (48 min) however significant amounts of time were spent in prior to intake waiting areas/intake (34 min) and after intake waiting areas (32 min). Results generated were used to give the staff an overall view of patient flow.

Methods

The student accompanied patients from the time they entered the office for their clinical visit until the time they ended their visit with the provider. The student measured the amount of time the patient spend in several different segments of the visit.

Appointment Time- As marked in the USF scheduling system

-Arrival Time- When the patients arrived to the Diabetes Center

-Encounter Time- Following vitals and time with the Medical Assistant, when the patient was placed in the Encounter Room

-Practitioner in- When the patient entered the examination room to see the practitioner

-Practitioner Out- When the patient completed their visit with the practitioner and exited the examination room

Results - Data

Figure 1

Pt	1	2	3	4	5	6	7	8	9	10	Avg
Time	-11	-43	+4	+12	-16	-29	-30	0	-20	+10	-12.3

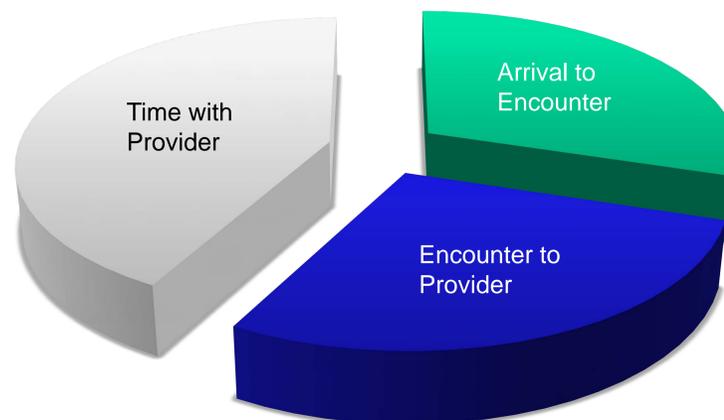
Figure 1 shows patient arrival times in reference to the appointment time. Times shown in black are indicative of the time spent in the waiting room prior to appointment time. Times shown in red are indicative of patients arriving later than appointment time.

Figure 2

Figure 2 and Figure 3 show the amount of time patients spent in each of three catagories within the clinic.

Patient Location	Time (min)
Arrival to Encounter	0:34
Encounter to Provider	0:32
Time with Provider	0:48

Figure 3



Average arrival to Practitioner Out: 1 hr, 54 min

Results - Analysis

On average patients arrived approximately 12 minutes prior to the appointment time. Patients averaged nearly half the time in clinic with the provider at approximately 50 minutes (Fig 2 and 3). This differed from new (1hr 5min) to old (44min) patients. It must be noted that patients time in these areas was increased due to interaction with medical students during time in the encounter room. On average patients spent a total time of 1 hour 54 minutes with the multidisciplinary staff.

Conclusion

How are improvements made?

1. Communication with patients regarding arrival times is vital to avoid excessive patient wasteful time. This information must be presented in a concise format to increase the likelihood of gaining appropriate attention from patients.
2. Providers and other staff must be aware of the time that patients spend in the clinic that could be termed "wasted" time. This is something the staff has pointed out as a particular area they would like to become more aware of and reduce.
3. Another helpful factor for decreasing time spent in waiting areas would be to have patients download their own diabetes pump information prior to the visit. There is already an established protocol for patients to participate in this method, however it is not widely used.

Acknowledgements

Special thanks to the USF Diabetes Center, particularly Dr. Henry Rodriguez, MD, Sheryl Tindell, ARNP CDE, and Juanita, RN for their assistance in this project and their guidance through this clinical experience.

The Chronic Complex Pediatrics Clinic

- Patients must have at least 2 chronic medical problems
- Ages 5-21 years
- >50% Hispanic population
- Team of several pediatric hospitalists (MD,DO), nurses, nurse practitioners, child life specialist, and social worker

Osteopenia Of Prematurity at the Chronic Complex Pediatric Clinic

- Increased number of discharges from local NICU with undiagnosed VitD deficiency
- Delay of treatment leading to rickets and leg bowing



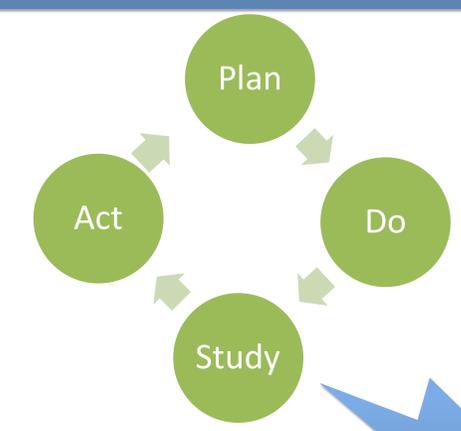
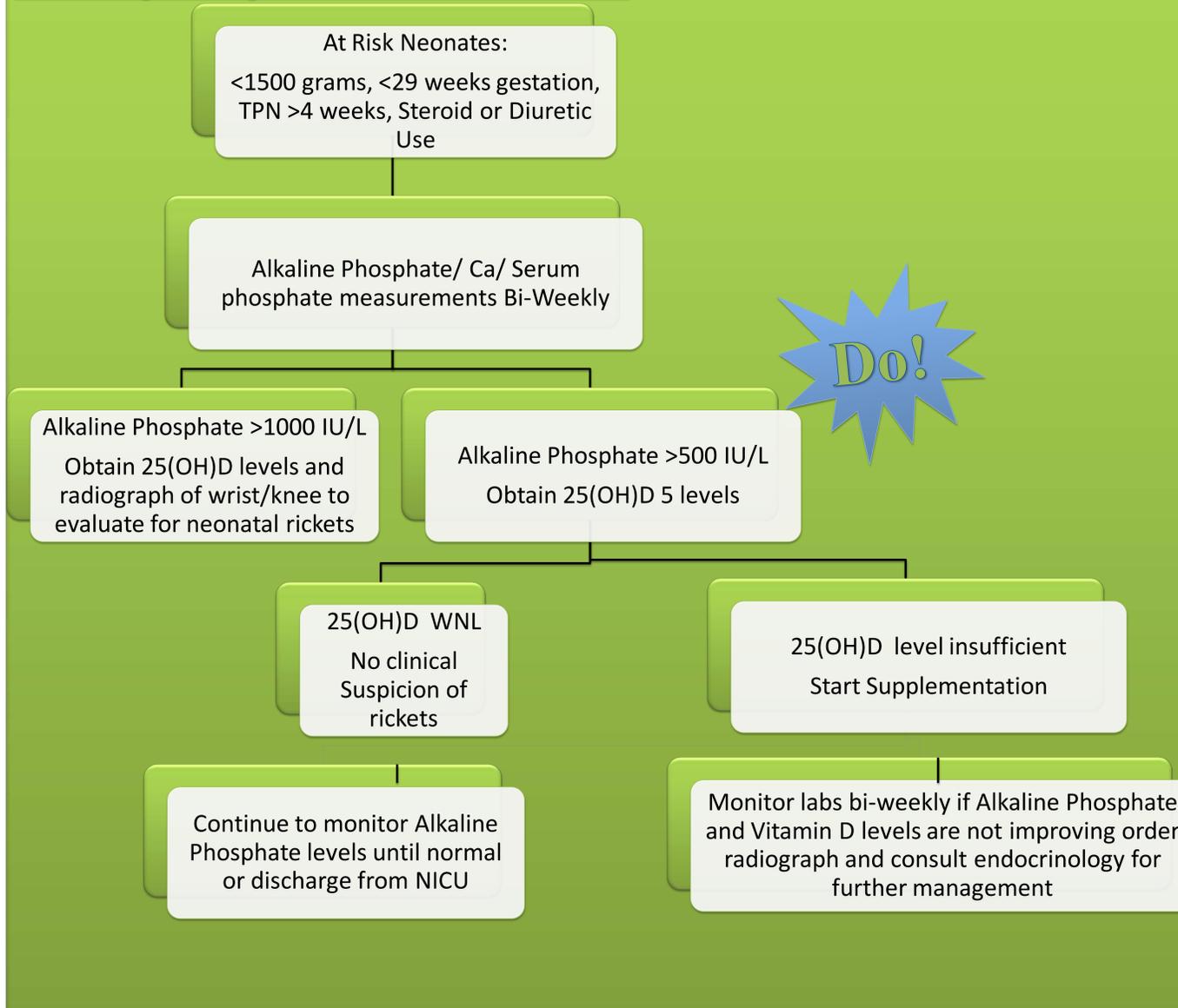
Osteopenia Of Prematurity

- 55% of infants with BW <1000g and 23% of infants with BW <1500g have low bone mineralization
- Low bone mineralization leads to respiratory distress, rickets, bowing of legs, and poor growth in childhood.
- Very diverse clinical approaches to diagnosis and treatment
- Limited research on screening protocol

Study Objectives:

- Observe negotiations between healthcare leaders during the implantation of protocol for osteopenia of prematurity
- Research current osteopenia of prematurity literature and review current protocols
- Measure the current rate of NICU transfers with undetected Osteopenia of prematurity
- Present all research to healthcare team members working to implement protocol
- Follow the process of protocol development and implementation until the completion of the academic year.

Protocol developed to improve osteopenia of prematurity bone health screenings of high risk neonates in NICU.



Protocol Outcomes

- Leadership meeting resulted in organizational buy-in
- Protocol presented to local NICU was implemented
- Since March all patients transferred from NICU have been screened and appropriately treated for VitD deficiency

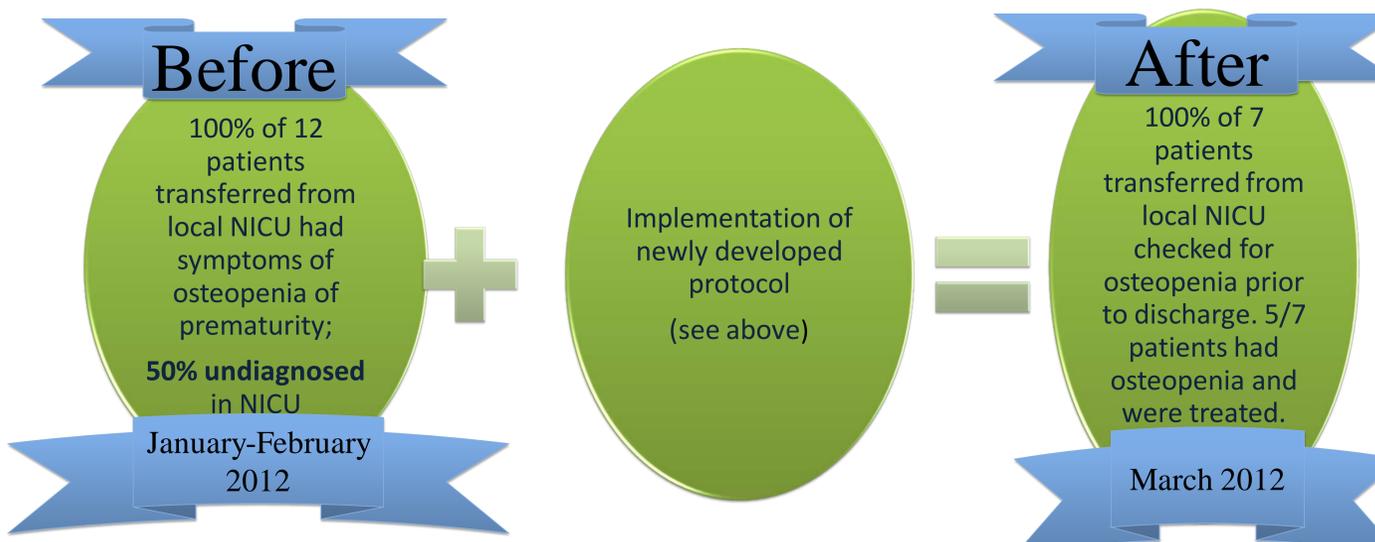


Further Inquiry

- Analyze the impact on the hospital from improved Osteopenia of prematurity prevention, detection, and treatment
- Analyze the impact on the patient from improved Osteopenia of prematurity prevention, detection, and treatment
- Measure the success of the protocol implementation:

Conclusions

Development of a protocol for bone health screening of at risk neonates has allowed for improved detection and treatment of osteopenia of prematurity in the NICU, preventing complications of low bone mineralization such as rickets.



Finding the Meaning in “Meaningful Use” of Electronic Health Records

Emma Qureshey, MS1 and Aresh Ramin, MS1
University of South Florida Morsani College of Medicine
Turley Family Health Center

Abstract

Widespread use of EHR's in the United States is inevitable but conversion to them is not an easy task. The Health Information Technology for Economic and Clinical Health Act (HITECH) authorized by Congress and the Obama Administration allowed for incentive payments through Medicare and Medicaid when providers adopt EHR's and demonstrate “Meaningful Use”. Implementation of EHR can lead to significant improvements in care. The meaningful use rule strikes a balance between acknowledging the urgency of adopting EHRs to improve our health care system and recognizing the challenges that adoption will pose to health care providers¹.

Past research shows that patients are interested in being active participants in their medical care electronically². We decided to look at the barriers that may be preventing our patient population from utilizing the electronic resources available to them. The barriers that we identify may lead to process improvements that optimize enrollment.

Therefore, we hypothesized that in our population of patients, there is a systematic limitation to patient enrollment at the time of check-in or check-out during the patient clinical visit.

What is WebView?

Our clinical precepting site at the Turley Family Health Center provides a no-cost internet based patient portal site in partnership with WebView/McKesson for the use of its established patients. The patient portal is designed to enhance patient-physician communication and is an easy and convenient way for patients to communicate with their primary care physicians.

WebView allows patients to ask questions that do not require a lot of discussion, request prescription refills, request referral and appointment scheduling and make billing/insurance inquiries. Patients are able to view most areas of the medical record including test results (labwork and radiology) as they are received in the EHR.

Upon enrollment, it is made clear through a signed agreement that WebView is a partnership between the provider and the patient and there are responsibilities on both ends. It is not intended for emergencies and may not be checked on weekends. Participants understand that any communication through the portal becomes part of the medical record. The goal is to have at least 10% of patients enrolled in WebView.

Methods

Surveys were administered during March and April 2012 at the Turley Family Health Center, a residency-based clinic in Clearwater, Florida. After being roomed by the Medical Assistant, but before being seen by the physician, the medical students verbally administered the survey. Verbal consent was given by the patient or the patient's parent/guardian if applicable. A total of 29 surveys were completed. Data was analyzed once surveying was completed utilizing Excel.

Results

Sex*	
M	11
F	16
Age Range*	
0-18	4**
19-40	6
41-60	10
>61	7
Language Spoken at Home	
English	27
Spanish	4
Ethnicity	
White	17
Asian	1
African American	4
Hispanic	6
Other	1

* Two Respondents declined to give age or sex;
** Guardians were surveyed for those under 18yo.

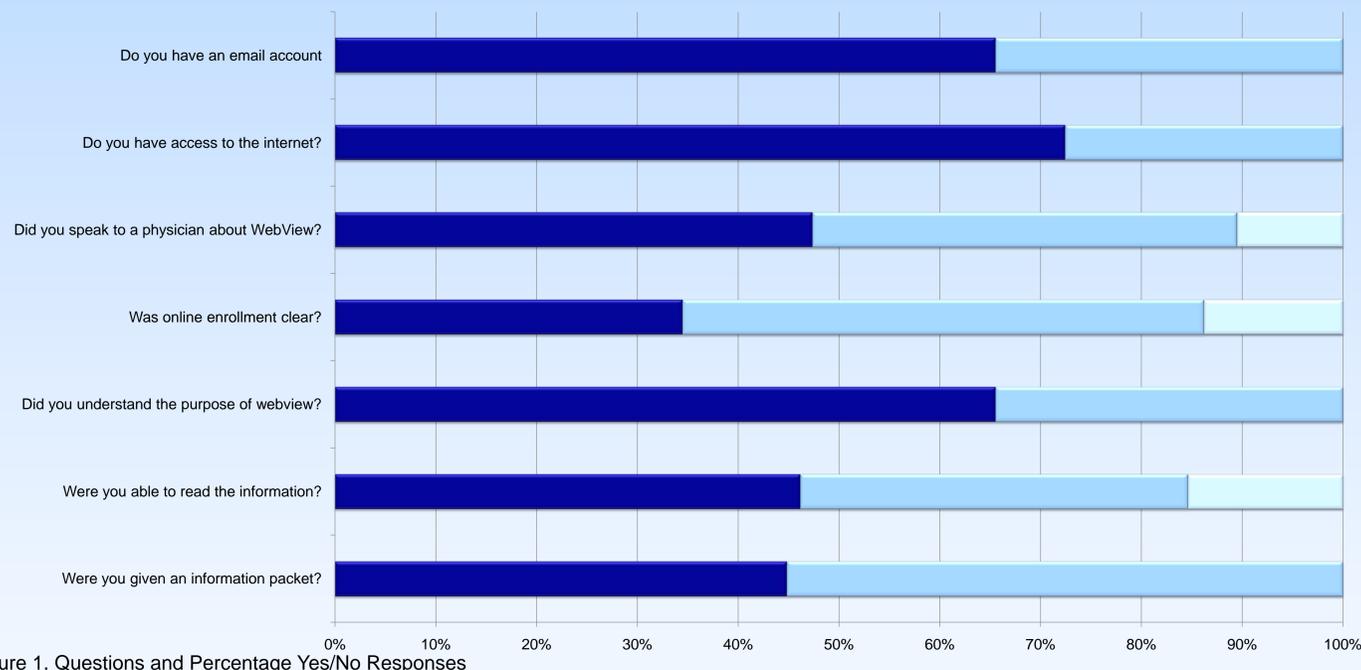


Figure 1. Questions and Percentage Yes/No Responses

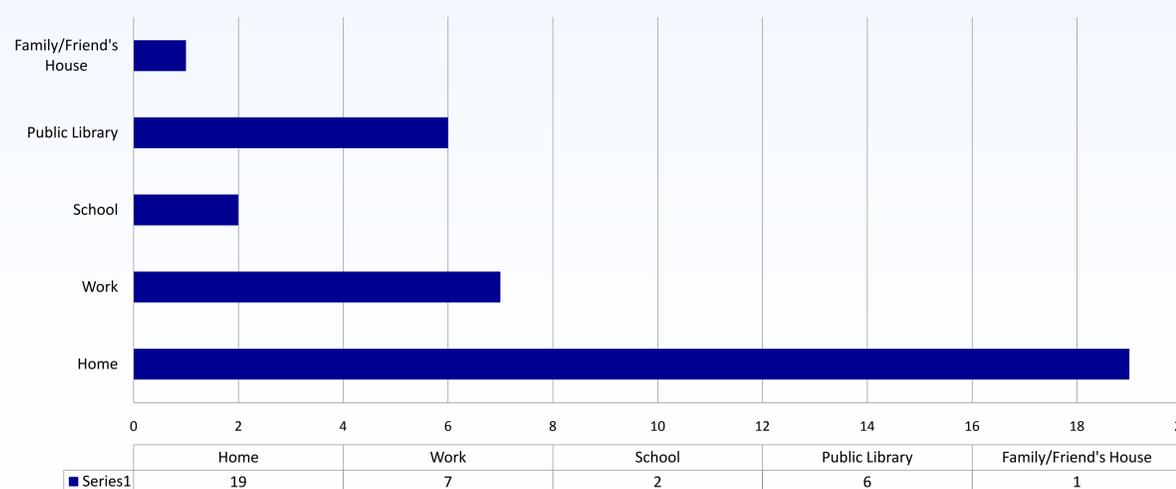


Figure 2. Types of Respondent Internet Access

Discussion

The demographic information indicated in Table 1 shows that over half of the respondents were female at 55%. Most of the respondents were in the age range of 41-60. Most spoke English predominantly in the household and described their ethnicity as being White. These demographic data represent a small sample of the patient population in our clinic. Figure 1 shows that 72% of the respondents have internet access but only 55% of patients had been offered WebView at any previous or current clinic visit. This is our first area of targeted improvement. Of those patients who were offered WebView upon check-in, 45% were then provided with the written packet containing enrollment information (Figure 1). Surprisingly, about 66% of the patients surveyed felt they understood the purpose of WebView (Figure 1). This represents a higher percentage than those who were offered enrollment. It is also shown that over half of the respondents did not feel the enrollment process was made clear through either verbal or written means. Most patients surveyed did not have a chance to speak with their physician about WebView (Figure 1.) The majority of surveyed patients have access to the internet at their home (Figure 2).

There are several limitations to our study. Our sample size of n=29 is not large enough to draw an accurate picture of the factors reducing patient participation but did identify a possible communication issue with the front desk staff offering services to patients at check-in or check-out. There was a selection bias as surveys were only given to patients who came to the clinic and were not sent to all Turley patients. Therefore this sample may not be entirely representative of our patient population.

Conclusion

Our data support our hypothesis that in our population of patients, there is a systematic limitation to patient enrollment at the time of check-in or check-out.

We feel improvements can be made through front desk staff participation and provider follow-up. This could start with offering incentives to the front desk staff to increase the occurrence of patients being offered WebView upon check-in. It is essential that patients understand the purpose of WebView and their provider's investment in the relationship. We believe that patients will be more likely to actively participate in their health care electronically if they discuss the benefits with their physician. Future action research should involve implementing the proposed mechanisms for change and evaluating whether these methods are effective at increasing the percentage of patients enrolled in WebView after six months.

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