WAIT TIME MANAGEMENT

https://www.youtube.com/watch?v=nA_5C_F6SUw&feature=youtu.be

A mobile system whereby patients and families can see what is occurring in anticipation and during procedures.

Market Trends

- US Healthcare System is becoming increasingly consumer-driven.
- Patient experiences are key drivers of hospital revenue.
- In 2017, $1.7B in Medicare reimbursements will be withheld from hospitals with poor HCAHPS surveys.
- Subjective patient satisfaction scores matter!

Patient Satisfaction

Matters

Image Source: Christian Science Monitor

Problem: Wait Time Management

- Long wait times can lead to:
  - Declining patient satisfaction scores
  - Reduced likelihood of referrals
  - Increased patient walk-outs without receiving care.
  - Decrease in hospital revenue
- There's robust need for a wait time management tool to ease patient anxiety and lessen perceived wait time.

As wait time goes up, patient satisfaction drops

Overall patient satisfaction

Time spent waiting	Satisfaction
0-5 minutes	95.4
6-10 minutes	93.7
11-15 minutes	91.6
16-20 minutes	89.8
21-25 minutes	87.7
25-30 minutes	86.1
More than 30 minutes	80.4

*Based on 4,830,042 survey responses from 989 facilities received between Jan. 1 and Dec. 31, 2012.   Source: Press Ganey Associates, 2013
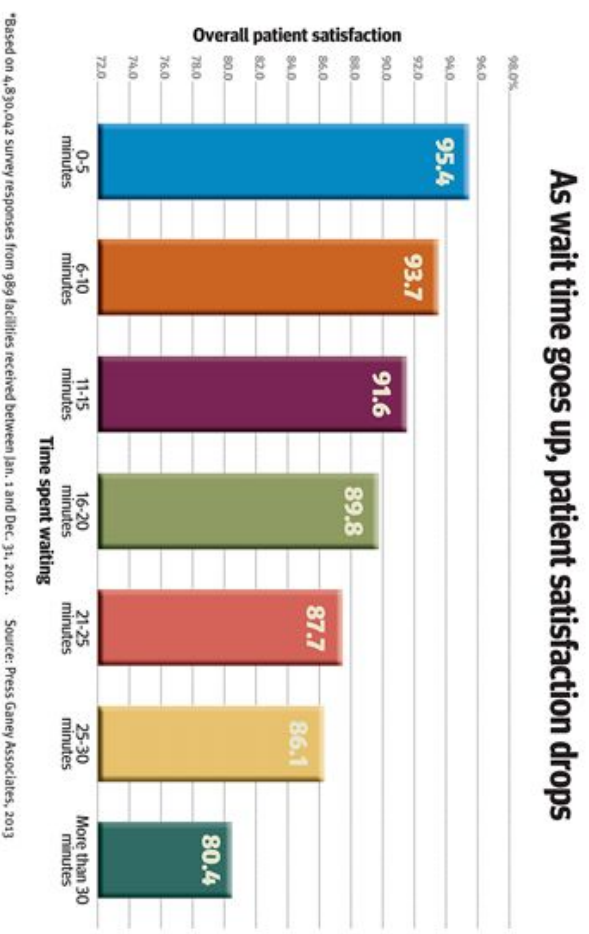
Image Source: Hospitals & Health Networks Magazine

Business Case

- Improve patient experience
  - Reduce anxiety for patients and families
- Increase hospital revenue
  - Medicare reimbursements
  - Increased referrals
  - Returning patients
- Lessen burden on clinical and practice staff in providing regular updates or soothing anxious patients/families
  - Staff can focus on other patient care tasks.

Image Source: Shutterstock

Business Proposal

- Current commercial products for wait time management can be cost-prohibitive and cumbersome (Ease Applications, LLC)

- We will develop an easy-to-use, FHIR enabled, wait-time tracking tool with anonymized patient data that provides real-time updates, so patients and families can see what is occurring in anticipation of procedures.

  - This includes a global view that is color-coded so provider and staff can rapidly assess which patients have been waiting the longest (and may be in need of additional attention/reassurance)

Challenges

- Buy-in from Clinic Staff
  - Disparate systems are cumbersome to navigate
- Health Insurance Portability and Accountability Act (HIPAA)
  - How do we assign an easy-to-remember alias to each patient?
- Personalized Care
  - Low literacy options
  - non-English language options
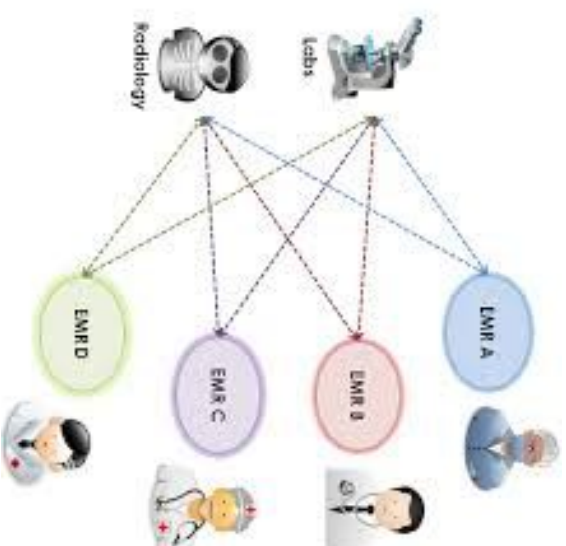
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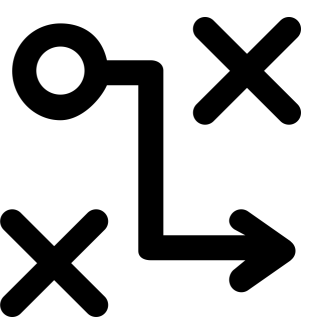
Created by iconsmind.com
from Noun Project

Further Research

- Current Patient Opinion
  - Sentiment analysis
  - Surveys
- Patient Engagement
  - How do we get patients to use this technology? How are they interfacing with it?
- Existing Patient Solutions
  - How do patients normally handle this situation? What methods do they use and what makes them feel the most comfortable?

Image Source: CDW

Plan of Action

Image from: Wait Time Management Project Gantt Chart

PROJECT TITLE	Wait Time Management (CS 6440, Fall 2017)
PROJECT MANAGER	Yuanshan(Tracy) Hu
TEAM NAME	The A Team
DATE	10/3/2017

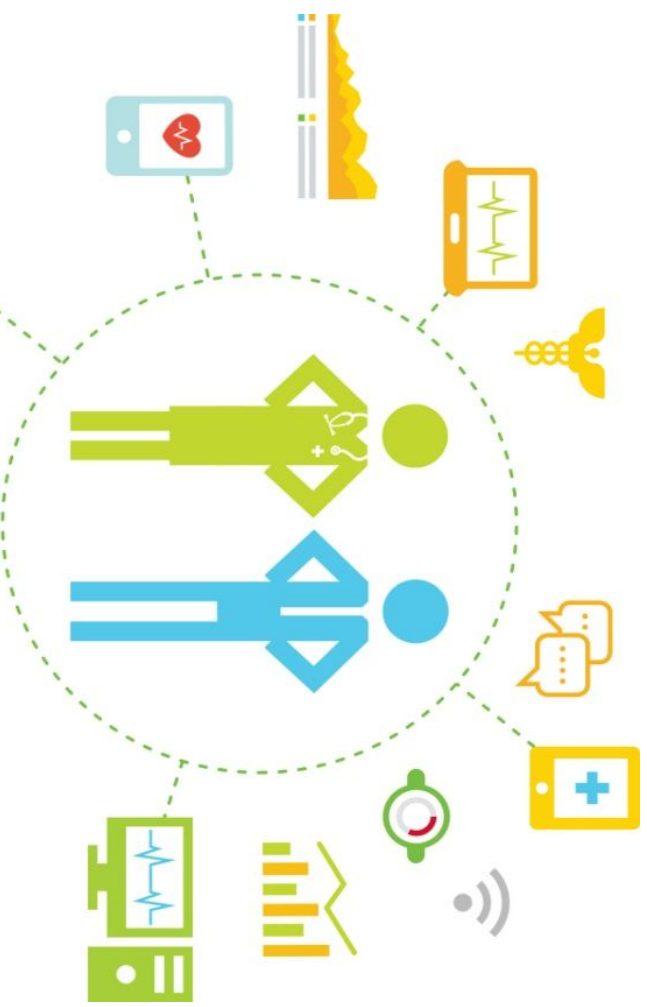| WBS NUMBER	TASK TITLE	TASK OWNER	START DATE	DUE DATE	DURATION	PCT OF TASK COMPLETE
1	Milestone #1: Establish Business Case					
1.1	Research Business Case	Heidi, Tracy	10/4/17	10/8/17	4	30%
1.2	Finalize Proposal	All	10/4/17	10/4/17	4	0%
1.3	Solicit Stakeholder Feedback	All	10/11/17	10/21/17	10	0%
1.4	High-level requirements	All	10/11/17	10/15/17	4	0%
1.5	Status Report #1	All	10/9/17	10/15/17	6	0%
2	Milestone #2: Technical Requirements					
2.1	Product Design	All	10/18/17	10/21/17	4	0%
2.2	Finalize Technical Specifications	All	10/21/17	10/25/17	3	0%
2.3	Sprint 1 (Dev)	Alan, James, Rajen, Heidi	10/23/17	11/5/17	12	0%
2.4	Status Report #2	All	10/23/17	10/29/17	4	0%
2.5	Status Report #3	All	11/1/17	11/5/17	4	0%
3	Milestone #3: Progress Report					
3.1	Sprint 2 (Dev)	Alan, James, Rajan	11/6/17	11/19/17	13	0%
3.2	Status Report #4	All	11/15/17	11/19/17	4	0%
3.3	Sprint 2 (QA)	Heidi, Tracy	11/15	11/19/17	4	0%
4	Milestone #4: Finalize & Present Build					
4.1	Status Report #5	All	11/20/17	11/26/17	4	0%
4.2	Sprint 3 (Dev)	Alan, James, Rajan	11/20/17	12/3/17	13	0%
4.3	Sprint 3 (QA)	Heidi, Tracy	11/27/17	12/3/17	6	0%
4.4	Final Sign-Off and Implementation	All	11/29/17	12/3/17	4	0%
4.5	Finalize Write-Up	All	11/29/17	12/3/17	4	0%
	Presentation Schedule					
1	Business Case & Proposal	Heidi	10/4/17	10/8/17	4	0%
2	Technical Specifications	Alan	10/18/17	10/22/17	4	0%
3	Team Progress Report	Tracy	11/8/17	11/12/17	4	0%
4	Final Presentation	James & Rajen	11/29/17	12/3/17	4	0%

PHASE ONE — WEEK 1, WEEK 2 (M T W R F Sa Su)
PHASE TWO — WEEK 3, WEEK 4, WEEK 5
PHASE THREE — WEEK 6, WEEK 7
PHASE FOUR — WEEK 8 (Thanksgiving), WEEK 9

Phase I Details

WBS NUMBER	TASK TITLE	TASK OWNER	START DATE	DUE DATE	DURATION	PCT OF TASK COMPLETE
1	Milestone #1: Establish Business Case					
1.1	Research Business Case	Heidi, Tracy	10/4/17	10/8/17	4	30%
1.2	Finalize Proposal	All	10/4/17	10/8/17	4	0%
1.3	Solicit Stakeholder Feedback	All	10/4/17	10/14/17	10	0%
1.4	High level requirements	All	10/11/17	10/15/17	4	0%
1.5	Status Report #1	All	10/9/17	10/15/17	6	0%
	Presentation Schedule					
1	Business Case & Proposal	Tracy	10/4/17	10/8/17	4	0%
2	Technical Specifications	Alain & Heidi	10/18/17	10/22/17	4	0%
3	Team Progress Report	Tracy	11/8/17	11/12/17	4	0%
4	Final Presentation	James & Rajan	11/29/17	12/3/17	4	0%

Phase II Details

WBS NUMBER	TASK TITLE	TASK OWNER	START DATE	DUE DATE	DURATION	PCT OF TASK COMPLETE
2	Milestone # 2: Technical Requirements					
2.1	Product Design	All	10/18/17	10/22/17	4	0%
2.2	Finalize Technical Specifications	All	10/22/17	10/25/17	3	0%
2.3	Sprint 1 (Dev)	Alain, James, Rajan, Heidi	10/23/17	11/5/17	12	0%
2.4	Status Report #2	All	10/25/17	10/29/17	4	0%
2.5	Status Report #3	All	11/1/17	11/5/17	4	0%
	Presentation Schedule					
1	Business Case & Proposal	Tracy	10/4/17	10/8/17	4	0%
2	Technical Specifications	Alain & Heidi	10/18/17	10/22/17	4	0%
3	Team Progress Report	Tracy	11/8/17	11/12/17	4	0%
4	Final Presentation	James & Rajan	11/29/17	12/3/17	4	0%

Phase III Details

WBS NUMBER	TASK TITLE	TASK OWNER	START DATE	DUE DATE	DURATION	PCT OF TASK COMPLETE
3	Milestone # 3: Progress Report					
3.1	Sprint 2 (Dev)	Alain, James, Rajan	11/6/17	11/19/17	13	0%
3.2	Status Report # 4	All	11/15/17	11/19/17	4	0%
3.3	Sprint 2 (QA)	Heidi, Tracy	11/15	11/19/17	4	0%
	Presentation Schedule					
1	Business Case & Proposal	Tracy	10/4/17	10/8/17	4	0%
2	Technical Specifications	Alain & Heidi	10/18/17	10/22/17	4	0%
3	Team Progress Report	Tracy	11/8/17	11/12/17	4	0%
4	Final Presentation	James & Rajan	11/29/17	12/3/17	4	0%

Phase IV Details

WBS NUMBER	TASK TITLE	TASK OWNER	START DATE	DUE DATE	DURATION	PCT OF TASK COMPLETE
4	Milestone # 4: Finalize & Present Build					
4.1	Status Report # 5	All	11/22/17	11/26/17	4	0%
4.2	Sprint 3 (Dev)	Alain, James, Rajan	11/20/17	12/3/17	13	0%
4.3	Sprint 3 (QA)	Heidi, Tracy	11/27/17	12/3/17	6	0%
4.4	Final Sign-Off and Implementation	All	11/29/17	12/3/17	4	0%
4.5	Finalize Write-Up	All	11/29/17	12/3/17	4	0%
	Presentation Schedule					
1	Business Case & Proposal	Tracy	10/4/17	10/8/17	4	0%
2	Technical Specifications	Alain & Heidi	10/18/17	10/22/17	4	0%
3	Team Progress Report	Tracy	11/8/17	11/12/17	4	0%
4	Final Presentation	James & Rajan	11/29/17	12/3/17	4	0%