

# Patient Education Kiosk Program

## White Paper

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## INTRODUCTION

# Background and Challenges of the Patient Education Program

**This paper describes the experience of a select group of nurses who strongly believe that appropriate and comprehensive patient education improves their patients' care experience and quality of life.**

Patient education has been one of the primary functions of a nurse. With longer life expectancy, increasing disease chronicity and trend to keep patients at home, effective patient education has become a priority focus in health care. Unfortunately, even if patient education is an important health care function, it is subject to inconsistency and low priority. Given a single educational topic, any nurse who has an encounter with the patient/family will provide patient education that is dependent on her knowledge on the topic, teaching ability, and available time for teaching. Additionally, there was a dearth of educational materials written at appropriate reading levels and/or in languages other than English (Freda, 2004). Therefore, patient education posed a serious challenge to the health care industry.

In 2004, the Recuperation Skills Training Department of a major medical facility in California, a 250-bed acute care hospital, was assigned to take charge of performing complex procedures such as PICC (peripherally inserted central catheters) and mid-line insertions, SNF and home infusion therapy discharges and teaching diabetic patients and their caregivers complex skills to ensure a safe discharge. There were a number of factors that made this assignment very challenging:

1. Limited resources: the department was not to add staff nor work hours. The department consisted of six nurses who were on-duty 8:30 AM – 8:30 PM (Monday – Friday) and 8:30 AM – 5 PM (Saturday, Sunday and holidays).
2. The nurses were only able to teach basic survival skills for patients with Diabetes prior to discharge.
3. No consistent education since no one taught the same information exactly the same each time.
4. Increasing number of diabetic patients being admitted.
5. Many occasions when the nurse was ready to teach but the patient/family was not ready to learn. This often led to missed opportunities that resulted in patients being discharged with little or inadequate education or the discharge was delayed until the patient was taught.

Faced with these challenges, the department manager met with her team to create action plans to meet the new expectation for their department. The team identified the need for a tool that would provide consistent and effective patient education without strain on the department's staffing and hours. The team's searches lead them to The Patient Education Kiosk by Winstanley Associates.

### Definitions:

**Education** is about teaching and learning skills and knowledge. Education means helping people to learn how to do things and encouraging them to think about what they learn. According to Dr. Martin Luther King, Jr, “Education must enable a man to become more efficient, to achieve with increasing facility the legitimate goals of life” (1947). In Nursing, education is a two-way information sharing process, which involves one party (nurse) sending a message that is easily understood by the receiving party (patient/family).

**Health literacy** is an important part of patient education. It is defined as the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions and/or prevent or treat illness (CDC, 2014). Health literacy refers to both the capacity of the patient to learn and to the skills of the provider to teach. It is dependent on individual and systemic factors: Communication skills of laypersons and professionals.

**Simple education** is giving the patient/family information about the test, disease, medication, etc., answering questions and testing comprehension.

**Complex education** is a combination of simple education plus a skill that needs to be performed. The patient/family is provided with the information needed to perform the skill. The nurse then demonstrates the skill and the patient and/or caregiver demonstrates that they can perform the skill independently, safely and competently prior to being discharged home. These topics take more time to teach effectively for a safe discharge.



**Patient Education Kiosk (PEK)** is a technological tool and medium for patient education. It is a mobile computerized system with touchscreen capability that contains patient education modules created at a 5th grade level. It has a printer so the patient receives the printed information once they have completed the educational modules.

**Characteristics and benefits of an effective patient education:** An effective patient education is synonymous to therapeutic patient education as characterized by The WHO Working Group on Therapeutic Patient Education.

It is a continuous process that is integral to health care. It is patient-centered and is designed to help patients and their families understand the disease and the treatment, cooperate with health care providers, live healthily, and maintain or improve their quality of life (WHO, 1998)

## THE PATIENT EDUCATION KIOSK (PEK) PROGRAM

### The Beginning



The Recuperation Skills Team researched the literature for new and innovative ideas to do patient education. The team learned of a patient education kiosk program that was being used by the Veteran's Hospital and Clinic Systems across the USA. Dr. Leonard Goldschmidt, Ophthalmologist and Medical Director for Telemedicine and Medical Informatics arranged for us to view the kiosk. It is a stationary kiosk designed by Winstanley Associates located in a clinic waiting room where the patients/families came to use the kiosk. They had educational programs on the kiosk with the ability to do an Internet search of selected health websites. The concept was what was needed but the inpatient setting needed something more portable. Dr. Goldschmidt suggested that we work with Winstanley Associates who had designed the kiosks used at the Veteran's Clinics.

The team contacted Winstanley Associates and worked with them to design a patient education kiosk system that was portable and went to the patient/family at the bedside. The nurses also made sure that the portable kiosk met the following requirements:

1. Easy to move from one room to another
2. Easy to clean according to Infection control guidelines
3. Able to lock the wheels when at the bedside
4. Large touch screen for the patient to use
5. Integrated printer for the information so the patient could take it home
6. Easy for the nurses and the patients to use - no computer or technical knowledge needed
7. Educational programs would be easy to read, understand or ones that talked to the patient if they were a non or poor reader
8. Education would include a knowledge check of the patient's/family's understanding of the information presented
9. Certificate of completion indicating patient's name or Medical record number, date, time and name of module completed — this could be a printed copy or sent to the electronic medical record
10. Education consistent and current, each patient receives the same information
11. Education that could be completed in small amounts of time about 10 – 15 minutes per topic
12. Available 24/7 in English and Spanish
13. Education interesting and interactive to motivate patients/families to learn
14. Independent kiosk system not linked to facility IT but has the full capability to be connected to Electronic Medical Record (EMR)

## THE PATIENT EDUCATION KIOSK (PEK) PROGRAM

### Implementation

September 2004, the medical facility started with one portable patient education kiosk that was designed by Winstanley Associates and the Recuperation Skills nurses. It consisted of a 13-inch touchscreen monitor attached to an adjustable arm. It was attached to a metal square box, which housed the printer and CPU. The unit had four locking casters with a handle, which made it easy to push and maneuver around the patient's bed.

Because of the increasing number of admission of diabetic patients, the group chose to start with the Diabetes Education Library. The task to educate them about their disease and how to do self-care at home before they were discharged was the department's greatest challenge. With its limited resources, nurse time and staffing, the department's staff members were only able to teach the patients and families survival skills until they could attend a class on Diabetes. This resulted in some unnecessary Emergency Department visits and readmissions because the patients didn't understand the information presented or they were not ready to be taught when the nurse had the time and were discharged with little or no information.



The Diabetes Education Library consisted of various topics or modules, similar to chapters in a book. The topics included Introduction to Diabetes, Type 1 and Type 2 Diabetes, Diabetes and Meal Planning, How to Inject Insulin, Foot Care, and others. As an HMO member, the patients are discharged with a certain glucose meter. This led the group to develop a topic on Using the Blood Glucose Meter. Next, the dietitians wanted a module on Carb Counting. This provided the impetus for this team "to customize our education for the patients".

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### Benefits of the Patient Education Kiosk Program

Using the kiosk allows the patient/family to spend as much time as they need on the topic while the nurse spends about five minutes getting the patient set up to use the kiosk. When the patient has finished the education on the kiosk, the nurse returns to answer any questions, demonstrates the skill and watches the patient/family do a return demonstration. The patient has the ability to watch the education more than one time so they have a better understanding of what needs to be done. They felt more confident and secure in their ability to continue doing the task at home. The nurse need not stay with the patient during the PEK education session. This means that she is able to take care of her other patients while a particular patient uses PEK.

#### **Time allotted for a patient/family to be safely educated depends on several factors:**

1. The individual's readiness to learn
2. The environment
3. Comfort of the person being taught as well as the person who is doing the teaching
4. How much can the person comprehend in an allotted amount of time
5. Time allotted for teaching, a feeling of being rushed
6. Health and reading literacy
7. Knowledge base and the person's ability to present the education.
8. Can/does the educator present the information in the style that the patient/family can learn?
9. Does the patient/family feel you have the time to educate them or do they feel rushed and say they understand when they really don't?

#### **PEK is very beneficial to the patient/family because:**

1. They can learn at their individual pace in private.
2. They can choose their learning preference; audio, visual, reading.
3. Poor or non-readers can listen to the education.
4. The program is interactive, using a touch screen to do the education, keeps the person alert, awake, and involved in the learning process.
5. Education is consistent, available 24/7, in English and Spanish. There were no delays in starting the education waiting for a Spanish interpreter.
6. Consistent education gives the patient/family the same information across the continuum of care; inpatient, outpatient, causing less confusion for the patient. This is extremely important in the new environment of affordable health care. Everyone gets the same education regardless of co-pays.
7. Learning is reinforced by questions the patient must answer correctly throughout the modules.
8. Easy to use – user friendly, patient satisfaction scores are in the 98 percentile, it makes the patient/family realize the importance of the education.



9. Learning Modules written at a 5th grade level, takes about 20 – 30 minutes to complete depending on the topic, person’s health literacy, and readiness to learn.

10. The learner is able to repeat the page, go back or do the module again.



11. The learner receives a summary print-out of the information to take home.

12. The work flow is very simple: take the kiosk to the patient, plug it in, automatic start up, the patient receives instruction on how to use and the topics to complete.

13. When the nurse brings the kiosk to the patient, the patient understands the importance and value of the education. This is vital for the patient’s recovery and discharge as well as continued wellness at home. It means more than asking a patient to change the TV channel from their favorite program to watch an educational video. This is an interactive program customized to meet the Medical Center’s protocols.

14. It is a tool that helps the nurse to educate the patient for discharge, ready to co-manage their conditions with their health care providers.

## THE PATIENT EDUCATION KIOSK (PEK) PROGRAM

### Nurses' Experience with PEK

The following are statements from the nurses who had first-hand experience with PEK:

**“The Patient Education Kiosk Program was very successful.** The patients that were admitted with a diagnosis of Diabetes were well educated upon discharge and better prepared to manage their disease process at home. There was a patient who was admitted with a blood sugar of 1000. Once the patient was stabilized we had the patient/family review all the topics in our Diabetes Library. They embraced the education, took their time, and even repeated several of the modules. Their questions were realistic and they felt well prepared to go home. Their personal physician was very impressed with the education that the patient received and within one year the patient returned to see us. The family thanked us for the kiosk education and the support we provided. The person had followed the diet, exercised, lost weight and now had a normal blood sugar.”

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“Within two years, we needed to add another Patient Education Kiosk because of the high demand. During this time, there was neither increase in staff nor any increase in the hours of operation.”

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“We were performing more complex procedures and the number of patient teaches increased. Patient and staff satisfaction were high.”

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“The unit nurses realized the benefit of patient education. However, they were aware of the challenges such as: Individuals presented the education differently, not consistent, needed to make sure all aspects of the education were presented. The Patient Education Kiosk solved this.”

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“Several nurses may be teaching the same information to the patient, but each nurse may have a different teaching style which could cause the patient/family to be confused or take them longer to learn because they need to adapt to the different teaching styles. The Patient Education Kiosk allowed for consistent learning.”

## THE PATIENT EDUCATION KIOSK (PEK) PROGRAM

### Patients' Experience with PEK

At the end of the education module, there is an opportunity for the patient/family to answer seven questions, which evaluate the program. The choices are yes, no or N/A. The evaluations have been consistently rated at the 98 percentile.

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The following are statements from patients who had first-hand experience with PEK:

A 70-year old patient stated, "I don't know how to use a computer and I can't use the kiosk to learn about Diabetes." One of the nurses explained how to use it and took the time to help her get started with the education. It was a day that a nurse surveyor for Joint commission was present and interviewed this patient about the educational experience. The patient stated, "I learned how to use a computer and learned all about my Diabetes."

A patient was instructed to watch certain modules in the Diabetes Library. The patient commented, "that she shut off her Television and watched all the modules because they were so interesting and she learned so much about her Diabetes."

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Talking with patients and families, they indicate that they value the education because they can take their time and repeat the information so they understand it or can ask a question that makes sense. When being taught by the nurse, at times they felt like they had to agree even if they didn't understand the information because the nurse had other things to do. The patient/family did not feel rushed.

## THE PATIENT EDUCATION KIOSK (PEK) PROGRAM

### Issues Resolved

Use of the Patient Education Kiosk allowed the department to resolve numerous issues such as:

1. **Staffing** – need to be able to block at least 30 minutes to do the education each shift per nurse. Simple versus complex education can take 120 minutes or more. What happens on days when staffing to care for patients is a challenge? How much time is allocated for patient teaching?
2. **Patient readiness to learn** – nurse had the time to present the education but the patient is in pain, scheduled for a test or the family member caring for the patient is not available due to work or child care schedules. The Educational opportunity is missed. When the nurse has the opportunity to educate, will the patient be ready to learn? Will the family member be available? This could cause a delay in patient discharges to home.
3. **Missed opportunities could mean delays in discharges or patients discharged with inadequate education.** This could translate into higher patient care costs; increase patient length of stay, lack of information to do self-care at home causing an emergency department visit or a readmission to the hospital.
4. **Consistent education** – the education content was always the same ensuring that all the key aspects of the topic were covered. Nurses that were not as familiar with the education topic now had a tool to help them educate the patient/family for discharge and/or self-care. It allowed for the patient/family to choose their learning preference: audio, visual, reading.

## THE PATIENT EDUCATION KIOSK (PEK) PROGRAM

### Progression

The nurses on the nursing units asked if they could use the kiosk to teach their patients about Diabetes. As the unit nurses realized the benefits of the Patient Education Kiosk program, they began asking leadership for a kiosk on their units and to add other educational topics such as the Cardiology and Skills Library. It was an overwhelming response from the collective bargaining nurses to want to embrace patient education. They felt that they had a tool that was easy to use, provided them with the time, and made them more comfortable about the knowledge that the patient was receiving since they did not have to be the expert on every subject.

Since 2006, the Patient Education Kiosk Program was implemented in several other major medical facilities throughout California and Oregon. By the year 2008, the original medical facility had a total of six Patient Education Kiosks. During the next six years, more of the Medical Center Hospitals in the Health Network System have embraced the concept of using the kiosk to do Patient Education with good success. The majority of the impetus was the nurses who wanted this tool to help them educate the patients properly. How could you deny the people who are charged with this important task?

The Home Infusion/Oncology clinics of the major medical facility purchased kiosks in 2010 and 2013. The nurses are educating their patients/families how to do their infusion at home, care for their central line, and/or about the different types of cancer, treatment options, life care planning, and chemotherapy.

As the relationship with Winstanley Associates continued, more customized patient education libraries were added such as Infectious Disease, Home Infusion, Oncology, and Trach and Vents. In 2014, the Pediatrics and Nephrology libraries were developed and completed. Updates were made to the Diabetes, Cardiology and Skills libraries. *(See attached Exhibit A for a complete list of the libraries and the topics taught).*

Winstanley Associates has listened to the comments from the patients/families and nurses to streamline the kiosk without diminishing its functions. The 2004 kiosk had a 13" touchscreen, in 2008 a 15" touchscreen, and currently it is a 19" touchscreen so the patient and family can learn together. As the touchscreen size increased, the size of the kiosk became smaller which made it easier to clean. Other improvements were locked casters that move more quietly and a raised handle for workplace safety.

2004 – 13" Touchscreen



2008 – 15" Touchscreen



2014 – 19" Touchscreen



THE PATIENT EDUCATION KIOSK (PEK) PROGRAM

Conclusion

**The patient education kiosk program has proved to be very successful.** The nurses have embraced it as a tool to help them provide quality care and patient education. The education is consistent, timely and allows the nurse to provide the necessary education for discharge and self-care at home. Patient and nurse satisfaction is high. Since it is available 24/7, the burden of education does not fall to one shift but can be done when the patient/family is ready and/or available to learn. Over the years, Winstanley Associates has listened to the comments from the patients and nurses to streamline the kiosk without diminishing its functions.

Over a 10-year period, the Patient Satisfaction Evaluations have been consistently rated at the 97 to 98 percentile.

2014 KIOSK Patient Survey

	FRE - IP	ROS - PEDS	ROS - IP & PEDS	SFO - IP	SRO	VAC - IP	VAC - RSTC	VAC - Clinic	VAL - IP	VAL - RSTC	VAL - Clinic
<b># Agree / # Disagree</b>	3682/69	1723/47	19062/565	2269/66	322/2	4763/98	2034/34	821/23	12138/264	5242/110	2621/57
<b>Patient Survey Questions</b>	<b>% Agree</b>	<b>% Agree</b>	<b>% Agree</b>	<b>% Agree</b>	<b>% Agree</b>	<b>% Agree</b>	<b>% Agree</b>	<b>% Agree</b>	<b>% Agree</b>	<b>% Agree</b>	<b>% Agree</b>
1. The information and graphics presented in this program were easy to understand	99.48	99.64	98.97	98.59	100.00	99.21	99.39	99.25	99.38	99.17	99.76
2. It was easy for me to learn how to answer questions and operate the program	99.11	99.64	99.01	98.85	100.00	98.77	99.39	99.25	99.42	99.64	99.76
3. The program helped me better understand information about my disease	98.89	94.40	95.82	98.82	100.00	97.52	94.32	95.73	98.13	97.19	96.76
4. The information presented in the program was the same as the information my healthcare team provide	94.9	96.30	93.91	95.30	97.56	95.21	98.05	98.02	95.15	96.63	94.90
5. The program took a reasonable amount of time to complete	95.33	94.76	95.90	92.35	100.00	97.31	97.55	96.18	95.00	94.91	97.49
6. I would recommend this program to a friend who is interested in improving their health	99.39	97.72	96.50	97.18	97.78	98.15	99.20	94.12	98.21	98.28	96.70
7. I am glad that my healthcare team made this patient education program available to me	99.64	98.44	98.91	98.81	100.00	99.18	100.00	97.62	99.30	99.39	99.00
<b>% Average Agree</b>	<b>98.16</b>	<b>97.34</b>	<b>97.12</b>	<b>97.17</b>	<b>99.38</b>	<b>97.98</b>	<b>98.36</b>	<b>97.27</b>	<b>97.87</b>	<b>97.94</b>	<b>97.87</b>
<b>Number of Responses</b>	3751	1770	19627	2335	324	4861	2068	844	12402	5352	2678

IP - Inpatient  
RSTC - Recuperation Skills Dept  
PEDS - Pediatrics

## THE PATIENT EDUCATION KIOSK (PEK) PROGRAM

### Recommendations

In the era of affordable health care, it is important that patients/families be educated about how to maintain their health; whether it be preventative or managing a chronic condition. The patient education kiosk program is a cost effective way to consistently educate people on different health care topics.

Emergency departments and urgent care clinics would benefit from using the kiosk to educate patients/families about post visit care at home such as wound care, diet, exercise and other topics as indicated.

Clinics and physician offices could benefit from the Patient Education Kiosk program. An example, patient is diagnosed with CHF/Heart Failure or Diabetes. No one has the time to do one on one education at the visit so patients are given times and dates to attend a class, which are most likely Monday to Friday, 9 to 5. Many times the patient is not able to take more time off from work. They begin to feel better and limp along with the limited education that they received to manage their chronic condition. Eventually, the patients will visit the Emergency Department or end up being admitted to the hospital. That certainly is not affordable health care or quality care.

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