What is the purpose of this study?

This study will explore using a tablet called an iPad and a video based connection with a physical therapist to deliver home physical therapy after a total knee replacement surgery rather than in-person physical therapy. This has been studied in Canada, Australia and Spain. We want to learn if physical therapy delivered through an internet-based video connection results in the same or better level of functional recovery as in-person physical therapy. You are being asked to participate in this study because you will go to Jefferson House after having a total knee replacement performed at Hartford Hospital.

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Am I a good candidate for this study?
A good candidate for this study meets the following:
1. Age greater than 60
2. Had a total knee replacement at Hartford Hospital followed by a stay at Jefferson House for post-operative rehabilitation care

What will be expected of me if I participate?
After being discharged from Jefferson House rehabilitation you will be asked to receive home physical therapy services with a licensed physical therapist using an iPad in your home rather than in-person visits to your home. These iPad centered physical therapy visits are known as “telerehabilitation” (TR) and will be held 3 times per week for 3 weeks following your discharge from Jefferson House.

The iPad will be connected to your home Wi-Fi network if such a network is available, otherwise connection via a cellular service based connection will be made. The cellular service will be paid for by HHC. You will be given instructions on how to connect your iPad to your home network, if you have difficulty with getting the iPad to work at home, call Jefferson House and the primary investigator will make an in home troubleshooting visit. All equipment (iPad, tripod, mount and FitBit) will be checked out from Jefferson House on the day you go home and returned to Jefferson House, during the 3-week follow-up after finishing the TR sessions at Jefferson House.

The principal investigator may arrange to have the equipment picked up from your home by an HHC employee at a scheduled time depending on the needs of the study. Your home network setting will be deleted from the iPad upon equipment turn in. The iPad will be cleared of all data and reset to factory settings upon return of the iPad to HHC.

While you are at Jefferson House, you will meet with Kathleen Sullivan, a physical therapist at Jefferson House and investigator in this study. She will train you on how to use the iPad and the software you will use for physical therapy at home with the iPad. In addition to an iPad, iPad case and tripod, you will be given a FitBit. This is a small device you wear around your wrist, like a bracelet, that measures the number of steps you take in a day. This information will help us set activity goals just for you and better understand how your body is responding to different levels of activity following your total knee replacement.

How long will the study last?
The iPad centered visits will last 3 weeks with 3 sessions each week, for a total of 9 sessions at your home. The total time you will participate is 6-8 months which includes the pre-surgical measurements and the 6-month follow up questionnaire measurement. Once the iPad centered visits are complete we will ask you do 3 additional activities for this study:
1. Participate in a 3-week in-person physical therapy assessment at Jefferson House
2. Participate in a two-month follow-up phone call given by the Bone and Joint Institute Nurse Coordinator
3. Complete a questionnaire 6 months following the date of your Total Knee Replacement.

What are the potential risks of participating?
The risks of participating in this study are minimal. The primary risk is a breach of confidentiality, however measures have been taken to protect the security of your protected health information. You will receive the same standard of physical therapy care. The only exception will be that hands-on-care is not possible via an iPad centered physical therapy visit.

What are the potential benefits of participating?
There may be no direct benefit to you for participation in this study. This study may provide the potential benefits of increased convenience (because you will not have to travel to a clinic for outpatient physical therapy) and increased privacy (because you will not have to invite physical therapists into your home). You will also be able to view your physical therapy home exercise program, FitBit activity and advice on the iPad at any time. This is in addition to the iPad based video encounters with the physical therapist.