

## House of Quality, Functional Specs

CUSTOMER REQUIREMENTS/NEEDS		Spec #1	Spec #2	Spec #3	Spec #4	Spec #5	Spec #6	Spec #7	Spec #8
		<i>Time it takes to find and</i>	<i>Percentage of false positives</i>	<i>Number of connections from device to power</i>	<i>Number of different settings/modes to adapt to varying hand dexterities</i>	<i>Transmission range</i>	<i>Battery life</i>	<i>Water resistance</i>	<i>Cost of device</i>
Priority									
1	Easily accessible for patients with limited mobility	X			X				
2	Should be understood by patients with limited cognitive ability				X				
3	Reduce the amount of false-positives going to the nurse's station		X						
4	Reduces excessive wiring			X			X		
5	Transmit the signal to multiple receivers					X			
6	Durable and can withstand accidents (ex. water spray)							X	
7	Able to be produced/purchased at competitive cost								X
Competitive Values Marginal Value Ideal Value		1-2 min (2)	85% (1)	1-2 (Current system at Duke requires two connections to wall reach wall power)	1 (per adapted call bell device) (3)	152 m (4)	0- Needs wall-power	IPX5	\$150 (from comparative chart on Market Analysis tab)
		1 min	20%	1	2	200 m	2-3 months	IPX4	\$100
		0.5 min	5%	0-wireless	4 (one device for various types of mobility)	300 m	6 months	IPX5	\$70

### Sources:

- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3928208/>
- <https://www.frequencyprecision.com/products/touch-sensitive-button-pager-linked?variant=6167456003>
- <https://curbellmedical.com/specialty-call-cords/>
- [https://www.amazon.com/Housecare-Caregiver-Caregivers-Waterproof-Transmitters/dp/B07DHTVBH1/ref=sr\\_1\\_4?ie=UTF8&qid=1539227293&sr=8-4&keywords=nurse+call+system+for+hospital](https://www.amazon.com/Housecare-Caregiver-Caregivers-Waterproof-Transmitters/dp/B07DHTVBH1/ref=sr_1_4?ie=UTF8&qid=1539227293&sr=8-4&keywords=nurse+call+system+for+hospital)