A Novel Use of TeleHealth Services: Virtual Simulation for Patients with Heart Failure

PROBLEM STATEMENT
Evaluating patients with heart failure in a meaningful manner in which to engage them in their care requires a novel approach.

BACKGROUND
- Heart failure (HF) patients require self-care education to live well with this chronic illness.
- Errors in self-care lead to preventable readmissions and contribute to hospital penalties— an area of national focus.
- Educating patients with Intermountain's MAWDS (Medications, Activity, Weight, Diet and Symptoms) tools given in paper form upon hospital discharge has been the standard of care, yet does little to meaningfully engage patients.
- This antiquated approach is being replaced with patient-based simulation that allows for individualized, patient-centered care through experiential learning and helps to teach patients how to follow MAWDS.
- Offering “virtual” simulation is a novel twist on simulation, accomplished through partnering with Intermountain’s TeleHealth and Homecare teams.
- We developed a process by which MiFi-enabled tablet technology taken to the patient’s home for “virtual” connection allows participation with the in-person group simulation session.

RESULTS
Preliminary results: 27 patients have been enrolled in HFSimEd. Eight patients have completed “virtual” simulation and eight have completed “in-center” simulation.

- A large and clinically significant increase in KCCQ scores were noted after simulation
  - Scores range 0-100, higher scores reflect better health status
  - p=0.007 for positive change in score for all patients; p= 0.072 for in-center simulation and p=0.04 for virtual simulation
- Improvements in self-care maintenance are encouraging
  - All patients after simulation show improvements in self-care behaviors to maintain their health
  - Maintenance scores were significantly higher, p=0.003
- Post-simulation experience evaluations reveal that every patient would recommend simulation to others living with HF.
  - Patients revealed favorable ratings on their simulation experience, finding it helpful.
  - Impact of HFSimEd on a patient—“(Simulation) reinforced my need to [do self-care] and do what I’m supposed to do. I learned things that I didn't know. I now know why I’m supposed to be tracking everything my doctor asks for and I can follow what I’m supposed to do.”
- Virtual simulation allows patients with transportation or mobility limitations to benefit from simulation-based education.

REFERENCES

CONCLUSION
- Educating patients in a manner that engages them in self-care is critical.
- Preliminary results suggests that not only does offering “virtual” simulation fill a void in patient education, but utilizing existing tele health services to do so can be successful and feasible.
- This novel approach has shown positive trends in self-care management, confidence and quality of life scores for patient's attending simulation training.