Dignity Health is made up of more than 60,000 caregivers and staff who deliver excellent care to diverse communities in 21 states. Headquartered in San Francisco, Dignity Health is the fifth largest health system in the nation and the largest hospital provider in California. Dignity Health is an integrated health care organization with a faith-based heritage; telemedicine plays a large role in bringing the latest, high quality care to the diverse patients and communities it serves. The Dignity Health Telemedicine Network (formerly the Mercy Telehealth Network) began in 2008 in the Northern California Sacramento service area, thanks to a generous charitable contribution from the Elliot Family Foundation. The Dignity Health Telehealth Network (DHTN) supports 40 hospitals across a large geographic region in California, Arizona, and Nevada. The guiding principle of the DHTN is that every patient deserves high quality care regardless of their location. DHTN services cover acute care, advanced clinical care and long term care, as well as transitional and home based care.
Organizational Structure and Infrastructure
Dignity Health benefits from a centralized Telehealth Director with a defined hierarchy of support staff. The organization supports 83 “end points”1 staffed by 52 specialists across 11 different service lines. The Dignity Health Telehealth Network enabled 11,743 virtual consults in FY 2015.

The Dignity Health Teledmedicine Network (DHTN) physicians are connected to patients at remote care sites via a secure Internet broadband technology through five-foot tall “end points” referred to as robots. Most Partner Sites name their robot. Through the robot’s flat screen monitor, Dignity Health doctors conduct live patient assessments, recommend treatments and provide ongoing support with the help of on-site hospital care teams. The robots are pre-programed for each partner sites with bed locations pre-set for physicians. This allows the robots to autonomously navigate to a specific room, location, or patient within any of the 40 participating sites.

Key technologies employed by the organization include the following:
InTouch Health
One Pass
Doctor on Demand
Care Innovations
AirStrip
Telehealth Organizational Structure

Integrated and Timely Scheduling
The Dignity Health Telemedicine Network benefits from centralized scheduling for telehealth consults. The scheduling of telehealth consults is overseen by the Dignity Health Transfer Center. This singular number for scheduling telehealth consults is also responsible for scheduling other specialist consultations throughout the organization. The typical response (call back) time from the Telespecialist is less

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1 The term endpoints includes handheld or ambulance mounted tablets as well as life sized robots
than 3 minutes and tracked by the organization as a key performance indicator. The program goals are for a potential stroke patient to have a rapid medical assessment (RMA) by an onsite provider conducted within 5 minutes, also a CT scan performed within 5 minutes, and activation of the Dignity Health Telemedicine Network within 5 minutes. Leveraging this approach, Dignity Health currently supports 21 remote telestroke sites, 7 non-Dignity Health sites. In 2015 Dignity Health conducted a total of 4,319 assessments with an average teleneurologist response time of less than 2 minutes. In addition door to needle administration of thrombolytics occurred within the hour of admission 63% of the time.

Telemedicine Services Offered – Telestroke, TeleICU, and TeleMental Health Telestroke services are offered across 28 sites and comprises of 4,319 consultations in FY 2015. The goal of the telestroke service line is based on the concept of 555. A patient entering the emergency room with a suspected non hemorrhagic stroke shall have a rapid medical assessment with 5 minutes of entering the ER. Within 5 minutes of entering the ER the patient receives a CT scan. Also within 5 minutes the Dignity Health Telemedicine Service is activated by dialing the centralized scheduling number.

DHTN also provides decentralized teleICU rounding across 5 Dignity Health hospitals leveraging a round and respond approach. This approach again leverages the semi-autonomous robots deployed for the telestroke program. The round and respond approach allows the robot – operated by a physician- to round on patients twice a day. The ability for intensivist to visit patients, interact with physicians of record, and work with ancillary staff allows for coordinated and at times immediate response to medically manage higher acuity patients.

**Program Achievements and Goals:**
Program cost savings of $20,000 to $70,000 per patient bed monitored per year vs. “Bunker TeleICU” offerings.
Reduction in severe sepsis and shock – 45% down to 19.4% incidence Reduction in ventilator average length of stay from 2.8 days to 1.4 days
Telemental health is another focus for DHTN. Across 18 sites DHTN conducted 4,684 consults with an average response time of 3 minutes for ER departments. Attending ER physicians conduct a rapid medical assessment and classify the patient as mild, moderate, or severe with regards to current mental state. This stratification of the patient according to their level of severity assists the ER Department Team for more appropriate and often times, earlier intervention for at high risk patients.

**Program Achievements and Goals:**
Increase Holds released from 8% to 13%
Decrease LOS in the ED
Challenges
A number of hospitals lack updated hospital bylaws to accept credentialing of providers by proxy. Timely access to specialists is of critical importance to the success of the program and establishing a credentialing process for new sites and out of state sites is important. State licensing also presents an issue. The Center for Connected Health Policy tracks pending bills in state legislatures which often focus on the formation of multistate licensure compacts or reciprocal recognition between states. The Federation of State Medical Boards (FSMB) also works with local state legislatures to address issues surrounding licensure. Finally, reimbursement for most telemedicine services is lacking and constrained to certain types of telemedicine technology, namely synchronous audio visual communications.

What’s Next?
A major opportunity Dignity Health recognizes is the ability to conduct remote patient monitoring within a patients home. The emerging program is focused on addressing issues around ER utilization, hospital readmissions, and prescription adherence/management. The aim is to provide the patient with a Dignity Health labeled telehealth kit delivered to the home. Daily review and patient assessment would be completed by a Dignity Health RN performing case management and oversight.

Patient Selection Process:
Not eligible for RPM is any of the answers to the following questions are “No”
- Is the patient/caregiver willing to use the RPM Services?
- Is the patient/caregiver able to use the RPM Services?

Eligible for RPM
- Two or more related hospital admissions in the prior year
- Two or more Urgent Care/ED visits in the prior year
- 2 or more specialty providers
- 10 clinic visits in the past year
- 5 or more active prescriptions
- Difficulty complying with medications
Enrollment

• Once Patient agrees to participate, a Dignity Health branded telehealth kit is delivered to the home
• Easy set up design for non-technical seniors
  – Tech support is provided if needed
  – In Home set up is provided if needed

Daily Review

Dignity Health Telemedicine Network RN Coordinator
Provides Daily Review
Acknowledgements: Jim Roxburgh, RN, MPA – Director, Dignity Health Telemedicine Network and Dr. Alan Shatzel – Medical Director of Neurology and Medical Director Dignity Health Telemedicine Network

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