Telehealth at UW Health … and beyond

Tom Brazelton, MD, MPH, FAAP
Medical Director, Telehealth Program
Intended Audience:
Pediatric emergency care professionals

Objectives:
As a result of this educational regularly scheduled series, learners will be able to:
1. Utilize new skills and guidelines determined to be safe for children when accessing pediatric trauma.
2. Identify proper tools and standardized practices in order to improve the diagnosis and treatment of pediatric patients.
3. Define roles and responsibilities of team members who triage pediatric emergencies in order to identify communication strategies that result in effective patient care.

Policy on Disclosure
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<thead>
<tr>
<th>Name/Role</th>
<th>Financial Relationship Disclosures</th>
<th>Discussion of Unlabeled/Unapproved uses of drugs/devices in presentation?</th>
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</thead>
<tbody>
<tr>
<td>Jonathan Kohler, MD Presenter, Chair</td>
<td>No relevant financial relationships to disclose</td>
<td>No</td>
</tr>
<tr>
<td>Veronica Watson Coordinator</td>
<td>No relevant financial relationships to disclose</td>
<td>No</td>
</tr>
<tr>
<td>Randi Cartmill, Coordinator</td>
<td>No relevant financial relationships to disclose</td>
<td>No</td>
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<tr>
<td>Benjamin Ethun, MSN, RN, Coordinator</td>
<td>No relevant financial relationships to disclose</td>
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<tr>
<td>Kim Sprecker, OCPD Staff</td>
<td>No relevant financial relationships to disclose</td>
<td>No</td>
</tr>
<tr>
<td>Thomas B. Brazelton, MD, MPH, Presenter</td>
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1. Create account with the UW Interprofessional Continuing Education Partnership
   https://ce.icep.wisc.edu

2. During the live presentation, and in the follow-up email, you will be provided a code. Text that code to a number we provide you, using a cell phone associated with your account.

   Text POSWAY to 608-260-7097
   (save this number as ECHO Credit, it will never change)

3. All done!! Log onto ICEP to view or print your credit letter.
1750s Tobacco Resuscitator Kit
The Dutch Method of Resuscitation

The “Fumigator”

Maatschappy tot Redding van Drenklingen, 1767, (the Society for the Rescue of Drowned Persons)
The past has caught up

Article from February 1925
cover of Science & Invention
Not “the future” anymore

The Jetsons, ABC, 1962
Today
New technologies

- Wearable Sensors
- Bringing the lab home
- GPS tracking and communications
- Point of Care Wound Assessment Device
- Smart Clothing
- Motion Analysis and Action Detection Technologies

WWW.AMCHEALTH.COM
Health Care Reform/PPACA
Economic Downturn
Need for more Access to Care
An Aging Population/Baby Boomers
Critical Shortage of Healthcare Providers
EHR Adoption/HIE
Meaningful Use
PCMH
ACOs

A Time for Telemedicine & HIT

THE PERFECT STORM

Telemedicine & Telehealth

- The convergence of (1) high tech, (2) medical care and (3) access for patients to the system
- Disruptive
- Innovative
- Immediate
- “www.” = “Wild Wild West”
  - Few laws, little regulation, lots of money & cowboys and a few land barons
Triple Aim & Telehealth

Population Health
- Chronic disease management
- Focus on patients that need attention
- Increase geographic reach

Experience of Care
- Reduce travel for patient
- Increase access & patient satisfaction
- Online interactions

Per Capita Cost
- Use scarce resources effectively
- Avoid unnecessary transfers
- Decrease readmissions
This should be easy…
... the infrastructure is there ...
… but what about:

- State licensure
- Insurance
- Credentialing
- Registration
- Scheduling
- Information exchange
- Documentation
- Order transmittal
- Results routing
- Billing
- Reimbursement
- Security
- IT Support
Squeeze to Juice Ratio Continuum

Squeeze
Juice

High
Low
# UWH Telehealth: Current State Programmatic Review

<table>
<thead>
<tr>
<th>Inpatient &amp; ED</th>
<th>Ambulatory</th>
</tr>
</thead>
<tbody>
<tr>
<td>eICU¹ – <em>UWH &amp; Regional Presence</em></td>
<td>WI Dept. of Corrections Telemedicine Visits¹</td>
</tr>
<tr>
<td>Telestroke¹ – <em>UWH &amp; Regional Presence</em></td>
<td>On-Demand Urgent Care¹</td>
</tr>
<tr>
<td>TAC Video Consults¹</td>
<td>RNCC Scheduled Video Visits¹</td>
</tr>
<tr>
<td>SAH NICU Teleconsults¹</td>
<td>RN Health Advocate Scheduled Video Visits¹</td>
</tr>
<tr>
<td>UWH Rehab Hospital Video Consults¹</td>
<td>Teleophthalmology²</td>
</tr>
<tr>
<td></td>
<td>e-Visit: Urgent Care²</td>
</tr>
<tr>
<td></td>
<td>e-Visit: Rheumatology²</td>
</tr>
</tbody>
</table>

**Types of Communication:**

- **¹Synchronous** — A real-time video interaction between a remote patient and a provider who is located at an office, clinic, or other qualifying location
- **²Asynchronous** — An online interaction between a patient and a health care provider using a system that supports the secure exchange of health care information (i.e. ‘store and forward’ functionality)

*Full list of programs with description included within the PDF document: UW Health Telehealth Current Services – April 2019*
Inpatient and ED
Purpose: Provide continuous, 24/7 observation and care to patients in regional and UWH inpatient units. eICU monitoring supports early identification of health complications (extubations, falls, etc.) and overall increases local hospital capacity to care for higher acuity patients (reduce transfers to University Hospital). Current sites include:

- FHN Memorial Hospital - Freeport
- Monroe Clinic Hospital
- Aspirus Medford Hospital
- The Richland Hospital - Richland Medical Center
- SwedishAmerican Medical Center - Rockford
- UW Health University Hospital – Neuro ICU (B4/4)
- UW Health University Hospital – TLC
- UW Health at the American Center

96 total beds monitored
**Purpose:** Provide expert stroke care to patients located at Emergency Departments throughout the region and TAC; support regional hospitals in caring for stroke patients and reduce patient transfers to UH and Meriter hospitals.

**Technology:** American Well (Avizia) Telemedicine Cart

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**Program Data (Calendar Year 2018)**

<table>
<thead>
<tr>
<th>Total Telestroke Consults</th>
<th>530</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Patients Transferred to UWH or Meriter</td>
<td>36%</td>
</tr>
</tbody>
</table>

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**Current Sites:**

- Aspirus Riverview - Wisconsin Rapids (4/1/2017)
- Beaver Dam Community Hospital (8/1/2011)
- Beloit Health System (9/15/2014)
- Grant Regional Health Center - Lancaster (8/13/2012)
- Southwest Health Center - Platteville (6/20/2013)
- UW Health at the American Center (8/1/2015)
- Watertown Regional Medical Center (3/1/2009)
TAC Video Consults
Current State

**Purpose:** Allow UW Health specialists to provide non-urgent consults to UW Health patients at TAC

**Technology:** American Well (Avizia) Telemedicine Cart

<table>
<thead>
<tr>
<th>Specialties Available –</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Care for Elders (ACE)</td>
<td>Neurology Critical Care</td>
</tr>
<tr>
<td>Anesthesia Pain</td>
<td>Neurosurgery</td>
</tr>
<tr>
<td>Clinical Nutrition</td>
<td>Nursing – Coordinated Care</td>
</tr>
<tr>
<td>Dermatology</td>
<td>Nursing – Patient Education</td>
</tr>
<tr>
<td>Endocrinology &amp; Diabetes</td>
<td>Nursing – Transitional Care</td>
</tr>
<tr>
<td>Gastroenterology</td>
<td>Pain Anesthesia</td>
</tr>
<tr>
<td>Hepatology</td>
<td>Pediatric Critical Care</td>
</tr>
<tr>
<td>Infectious Disease</td>
<td>Psychiatry</td>
</tr>
<tr>
<td>Integrative Medicine</td>
<td>Pulmonary/Medicine Critical Care</td>
</tr>
<tr>
<td>Internal Medicine</td>
<td>Transplant Medicine</td>
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<tr>
<td>Learning Center</td>
<td></td>
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</tbody>
</table>

**Program Volumes (Calendar Year)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Volume</th>
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<tbody>
<tr>
<td>2018</td>
<td>584</td>
</tr>
<tr>
<td>2017</td>
<td>369</td>
</tr>
<tr>
<td>2016</td>
<td>260</td>
</tr>
</tbody>
</table>
**Purpose:** Utilize telemedicine to support the new Level 3 NICU operations at SAH Rockford and provide timely access to pediatric medical and surgical specialties

**Technology:** American Well (Avizia) Telemedicine Cart

<table>
<thead>
<tr>
<th>Scope of Services</th>
<th>Non-Urgent (Scheduled) Only</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Urgent (24/7) &amp; Non-Urgent (Scheduled)</strong></td>
<td>• Gastroenterology</td>
</tr>
<tr>
<td></td>
<td>• Genetics</td>
</tr>
<tr>
<td></td>
<td>• Pulmonary</td>
</tr>
<tr>
<td></td>
<td>• Urology</td>
</tr>
<tr>
<td>• Cardiology</td>
<td></td>
</tr>
<tr>
<td>• General Surgery</td>
<td></td>
</tr>
<tr>
<td>• Neonatology</td>
<td></td>
</tr>
<tr>
<td>• Neurology</td>
<td></td>
</tr>
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</table>

*Anticipated Go Live week of April 15, 2019*
eICU – Hardwired inpatient rooms or telemedicine carts to support swing space

**Video Consults** – American Well (Avizia) Telemedicine Cart with Vidyo video conferencing
- Built in Wifi
- FDA Class I Registered Medical Device
- Interoperable with telemedicine peripherals including examination camera and stethoscope

*Used for Telestroke at all sites and Video Consults to TAC, SAH NICU & UWH Rehab Hospital*

Patient Testimonial Video: [https://youtu.be/7vF7RHeipdc](https://youtu.be/7vF7RHeipdc)
Ambulatory
**Purpose:** Reduce transportation of secure patients to UW Health facilities through use of video for outpatient care

**Technology:** American Well (Avizia) Telemedicine Cart or Polycom Video Conferencing equipment within DOC facilities
Purpose: Provide 24/7 urgent care to patients through video using their computer, tablet or smartphone devices

Technology: UW Health Care Anywhere and Health Link

CY 2018 Data

Total Visits: 1,294
**Purpose:** Provide increased access to RN Health Advocate for patients served through the Employer Services program using scheduled video visits instead of drop-in office hours at various facilities

**Technology:** UW Health Care Anywhere and Health Link; MyChart self scheduling is enabled

**Eligibility:** Services are available to employees at participating organizations who have Quartz insurance coverage and a UWH PCP

**Participating Organizations:**
- Deforest School District
- Oregon School District
- Middleton Cross Plains School District (go live 5/1/19)
RNCC Scheduled Video Visits
Current State

Purpose: Provide RN Care Coordinators (RNCC) the opportunity to connect to their assigned patients using video. Key benefits identified by the RNCCs include but are not limited to:

- Eliminate transportation barriers for patients and informal caregivers
- Observe and assess the patient’s home environment
- Visualize patient concerns such as wound or mobility
- Complete medication reconciliation

Technology: UW Health Care Anywhere and Health Link; MyChart self scheduling is enabled for patients once the initial video visit is completed

<table>
<thead>
<tr>
<th>Sites Currently Live</th>
<th>Wave 3 – April 30</th>
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<tbody>
<tr>
<td>Arboretum</td>
<td>20 S. Park</td>
</tr>
<tr>
<td>Cross Plains</td>
<td>Beaver Dam</td>
</tr>
<tr>
<td>East</td>
<td>Cottage Grove</td>
</tr>
<tr>
<td>Fort Atkinson</td>
<td>Deforest Windsor</td>
</tr>
<tr>
<td>Mount Horeb</td>
<td>Fitchburg</td>
</tr>
<tr>
<td>Northeast</td>
<td>Portage</td>
</tr>
<tr>
<td>Odana Atrium</td>
<td>Stoughton</td>
</tr>
<tr>
<td>Oregon</td>
<td>Sun Prairie</td>
</tr>
<tr>
<td>Verona</td>
<td>Union Corners</td>
</tr>
<tr>
<td>West</td>
<td>University Station</td>
</tr>
<tr>
<td>West Towne</td>
<td></td>
</tr>
<tr>
<td>Wingra</td>
<td></td>
</tr>
<tr>
<td>Yahara</td>
<td></td>
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</tbody>
</table>
Purpose: Offer same-day access diabetic retinopathy screening to UWH Primary Care patients with a diagnosis of Type 1 or Type 2 diabetes and without severe diabetic retinopathy (with and without macular edema)

- Service began August 2018 and is available to patients with PCPs at East & Yahara Primary Care

Technology: Retinal Cameras in Radiology departments co-located with East & Yahara Primary Care Clinics

<table>
<thead>
<tr>
<th>Lifetime Program Data (8/28/18 – 3/31/19)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Patients Screened</td>
</tr>
<tr>
<td>% Patients with Identified Diabetic Retinopathy</td>
</tr>
<tr>
<td>% Patients Recommended for Follow-up with Ophthalmology (8/28/18 – 3/31/19)</td>
</tr>
<tr>
<td>Urgent (1-2 months)</td>
</tr>
<tr>
<td>Non-Urgent (4-6 months)</td>
</tr>
</tbody>
</table>
Purpose: Avoid unnecessary urgent care visits and provide an asynchronous, convenient option for patients to receive care

Technology: Patients submit condition-specific e-Visit questionnaires through MyChart

Patient must meet the following eligibility criteria:
- Be at least 18 years old
- Have Quartz insurance coverage
- Must have a UWH PCP and been seen within the last 3 years

e-Visits available for:
- Low Back Pain
- Red Eye
- Cough
- Sinus Infection
- Diarrhea
- Painful/Frequent Urination
- Vaginal Discharge
UWH Telehealth Roadmap
UW Health Care Anywhere:
Roadmap

1. Urgent Care On-Demand
   - 24/7 service launched September 2017

2. Scheduled Visits – Care Coordination
   - Connect to our medically-homed patients to provide chronic care management
   - Use video visits to improve outcomes and reduce cost of care
   - Launch use cases 2018 and beyond

3. Scheduled Visits – Primary & Specialty Care
   - Offer additional access and enhance patient entry point
   - Expand regional presence and reduce drive time for patients and providers
   - Launch use cases 2019 and beyond
What else to consider for the future?
A Patient-Centric Digital Ecosystem

In addition to video visits, many technologies under consideration for East Campus are relevant to our Primary Care clinicians, staff and patients.
References

- http://www.americantelemed.org
- http://ctel.org/
- http://cchpca.org/
- http://www.telehealthresourcecenter.org/
- The Advisory Board Service Line Strategy Advisor: 2018 Telehealth Industry Trends