

# Wyoming Frontier Information (WYFI)

*Enhancing Telehealth Through Health Information Exchange*

June 27, 2018

# Agenda

- Overview of Wyoming Frontier Information (WYFI)
- WYFI Services
- Data Exchange (Clinical Data Available in WYFI)
- Telehealth Use Cases
- WYFI Demonstration
- Q&A



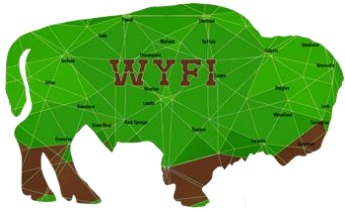
# Welcome to WYFI

*“Creating a community of health,  
improving provider workflows and  
enhancing patient care”*



## History

- WYFI was founded in 2016
- Created using federal funding to form a statewide health information exchange (HIE) for the state of Wyoming
- Funding for WYFI is being provided at 90% to design, develop and implement the technical infrastructure for three years, 2018 to 2021
- Wyoming Department of Health, selected Medicity, a leading expert in clinical data aggregation and interoperability solutions as its technology partner.
- WYFI steering committee and subcommittees were created in November of 2016



# WYFI Leadership Team

- Dr. James Bush, Medical Director
- Ruth Jo Friess, HIT Manager
- Andrea Bailey, HIT Provider Outreach Coordinator
- Tim Caswell, HMUM Data Analyst

# WYFI Solutions and Services



## What We Do and How It Helps

The Wyoming Frontier Health Information Exchange (WYFI) is a secure, electronic health information exchange (HIE) serving authorized medical providers across the State of Wyoming.

This new service allows a medical care team to share clinical information across institutions and practices, making patient information available wherever and whenever needed to provide the highest quality care.

- Community Health Record
- Referrals Management
- Clinical Event Notifications
- Electronic Results Distribution
- Direct Secure Messaging
- Analytics/Population Health Reporting

# Community Health Record

Provides access to a patient's clinical records from all WYFI data sources:

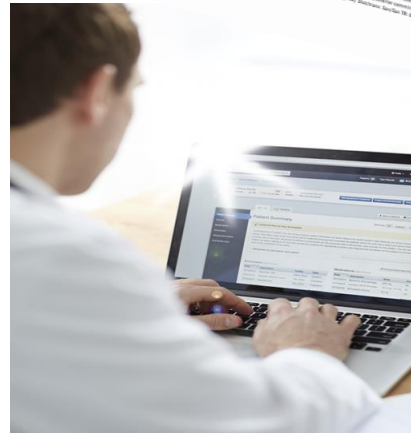
- laboratory results
- radiology reports
- transcribed reports
- Medications
- clinical care summaries

**Benefits for healthcare providers:**

- Streamlined access to the patient's clinical information
- Allows care teams treating a patient access to clinical information that may not be readily available
- Reduces the need to call providers to search for clinical information and is available at any time day or night.



The image shows a detailed medical record page, likely a patient's clinical summary or a list of services. It features multiple tables with columns for dates, times, and various medical data points. The text is dense and includes various medical codes and abbreviations. The page is tilted and overlaid on a green geometric background.

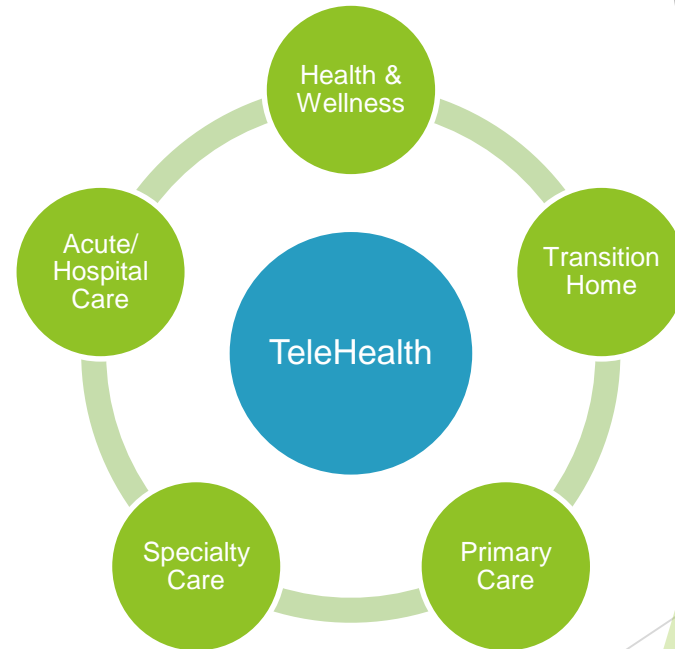


# Referrals Management

Allows providers to send, receive, and track patient referrals and patient documentation across different health care settings.

## Benefits for healthcare providers:

- Allows providers to easily track and monitor patient referrals from beginning to end
- Eliminates the need to chase down information via phone calls or fax





# Clinical Event Notifications

Creates alerts for patients who have been admitted, discharged or transferred from community healthcare facilities.

## Benefits for healthcare providers:

- Providers can be made aware of a patient admission/discharge/transfer events to coordinate transitions of care from hospital to primary care setting



# Electronic Results Distribution

Results from WYFI data sources including laboratory results and radiology reports can be routed directly into the provider of record certified EHR.

Provides a local platform that enables sending and viewing of clinical results data for providers who do not have a certified EHR.

## Benefits for healthcare providers:

- Eliminates the need for faxes, manual scanning, and attaching clinical records to the patient's electronic medical record

CHEST X-RAY, PA AND LATERAL		Collected: 09/16/2014 2:39PM	Status: Final	Source: Sonoma Health System			
Study: Chest X-ray, PA & Lateral [30995] Service Code: CR-06-2014 14-30-00. Indication: COPD L HIP Technique: PA and lateral views of the chest.							
Comparison: CR PA views at 09/16/2014 Findings: Lines/Tubes: None Lungs: clear and well inflated, no evidence of pneumonia Pleura: No pleural effusion or pneumothorax Heart and mediastinum: Moderate cardiomegaly and evidence of pulmonary redistribution with prominent upper lobe vessels. Impression: Chest film consistent with chronic, stable COP. No acute processes seen. REVIEW RAY, MD [Electronically Signed] DocID: SanTan TR-09-05-2014 14-30-00							
CBC WITH DIFF		Collected: 09/16/2014 12:59PM	Status: Final	Source: City Center Hospital Laboratory			
Test Type / Code	Test	Result	Out of Range	Reference	Units	Status	Source
lab	2000210	WBC	36.5	Normal	4.5-12.5	K/U/L	F City Center Hospital
lab	2000240	RBC	4.1	Normal	4.8-6.0	/uL	F City Center Hospital
lab	2000210	HGB	14.0	Normal	11.7-15.7	g/dL	F City Center Hospital
lab	2000220	HCT	42	Normal	35.0-47.0	%	F City Center Hospital
lab	2000230	WBC	89.9	Normal	60.0-80.0	%	F City Center Hospital
lab	2000210	WBC	36.5	Normal	35.5-54.0	/uL	F City Center Hospital
lab	2000240	WBC	38.4	Normal	31.5-56.3	%	F City Center Hospital
lab	2000250	RDW	12.5	Normal	11.5-14.5	%	F City Center Hospital
lab	2000260	PLATELET	208	Normal	130-400	/uL	F City Center Hospital
lab	2000464	MPV	9.6	Normal	6.5-12.0	fL	F City Center Hospital
lab	DIFFTYPE (RANDOM)	DIFF TYPES	AUTO	Normal			F City Center Hospital
lab	200041111	NEUTROPHIL	61.5	Normal	41.9-81.5	%	F City Center Hospital
lab	2000010	LYMPHOCYTE	44.9	Normal	18.0-46.0	%	F City Center Hospital
lab	2000070	MONOCYTE	5.7	Normal	4.9-12.0	%	F City Center Hospital
lab	2000090	EOSINOPHIL	1.5	Normal	1.0-5.0	%	F City Center Hospital
lab	2000420	BASOPHIL	0.7	Normal	0.0-1.0	%	F City Center Hospital
Comprehensive Metabolic Panel		Collected: 09/16/2014 12:59PM	Status: Final				
Test Type / Code	Test	Result	Out of Range	Reference	Units	Status	Source
lab	3000000	ALBUMIN	5.4	Normal	3.4-5.4	g/dL	F City Center Hospital
lab	100001011	ALP	118	Normal	44-147	U/L	F City Center Hospital
lab	3001000	ALT (SGPT)	18	Normal	10-40	U/L	F City Center Hospital
lab	3001000	AST (SGOT)	22	Normal	7-46	U/L	F City Center Hospital
lab	3001020	BUN	15	Normal	9-22	mg/dL	F City Center Hospital
lab	3001060	CALCIUM	10.2	Normal	8.4-10.3	mg/dL	F City Center Hospital
lab	3001080	CHLORIDE	100	Normal	96-106	mmol/L	F City Center Hospital
lab	3001040	TOTAL CO2	27	Normal	24-32	mmol/L	F City Center Hospital
lab	3001764	CREATININE	0.7	Normal	0.50-1.3	mg/dL	F City Center Hospital
lab	3001030	GLUCOSE	80	Normal	70-100	mg/dL	F City Center Hospital
lab	3001210	POTASSIUM	4.5	Normal	3.5-5.2	mmol/L	F City Center Hospital
lab	3001200	SODIUM	138	Normal	130-146	mmol/L	F City Center Hospital
lab	3001270	BILIRUBIN TOTAL	0.7	Normal	0.2-1.0	mg/dL	F City Center Hospital
lab	3001020	TOTAL PROTEIN	7.0	Normal	6.1-8.1	g/dL	F City Center Hospital
Encounters							
Date	Primary / Secondary (Signals)	Patient Class	Problem	Status	Provider		
10/02/2013 4:21:05 PM	79.35 (ICD-10)	Impatient	Open reduction of fracture with internal fixation, femur; Fracture of head and neck of humer	Acute	Stewart, Michael, MD, City Surgeons		
10/02/2013 1:53:15 PM	572.00 (ICD-10)	Emergency	Fracture of head and neck of humer	Acute	Stewart, Michael, MD, City Surgeons		
10/28/2013 0:54:40 AM	156.9 (ICD-10)	Emergency	Diabetes	Resolved	Manning, Sue, MD, Sonoma Health System		

# Direct Secure Messaging

Allows providers to electronically send and receive clinical information quickly and securely from one healthcare provider to another.

## Benefits for healthcare providers:

- Eliminates the need to request, fax, and scan patient clinical information



Primary	Social <span>1 new</span>	Promotions <span>33 new</span>
<input type="checkbox"/> ☆ Emmett, George, Tracy	LinkedIn	Think Geek, Randy Joersmanson, Ja...
<input type="checkbox"/> ☆ Mark Duoser	Partner content for November - Hi guys, I spoke with Bronto and Yotpo and they're both on board for creating join	
<input type="checkbox"/> ☆ Edward Victors	Need email promo ASAP - Hi Emily, we decided to promote our holiday whitepaper early. Please draft up the em	
<input type="checkbox"/> ☆ Zavier	New internal presenter for SMX East? - Hi Emily, due to a scheduling conflict, Doug won't be able to speak in	
<input type="checkbox"/> ☆ IR Advertising	3 Reasons You're Not Getting More Done - If you struggle with getting as much done during the day as you'd l	
<input type="checkbox"/> ☆ Ania Reed	November 2016: Marketplaces, Marketing and You - Amazon.com is actively recruiting and making it easier for o	
<input type="checkbox"/> ☆ Mark Duoser	Proposal Status Notification - Hi Emily, this is to let you know that your speaking proposal to SMX East has been	
<input type="checkbox"/> ☆ WordPress	Update featured content on website ASAP - Hi Emily, I notice that the latest webinar is not featured on our hom	
<input type="checkbox"/> ☆ Scott Keish	Please moderate: "5 Surefire Strategies to Get More Visibility on Instagram" - A new comment on the post	
<input type="checkbox"/> ☆ Time Warner Cable	October Invoice - Hi Emily, My invoice is attached. All posts are in pending status. I've left a message on your	

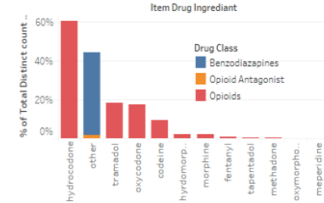
# Analytics/Population Health Reporting

## Benefits for healthcare providers:

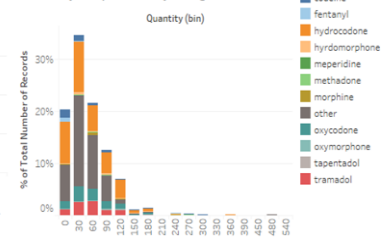
- Aggregates and normalizes patient data for Population Health Management and surveillance
- Supports data extracts to provide information to healthcare providers who lack their own data analytics tool

## Community Pharmacy Management

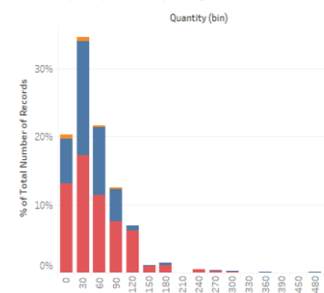
Most Frequently Prescribed Controlled Substances



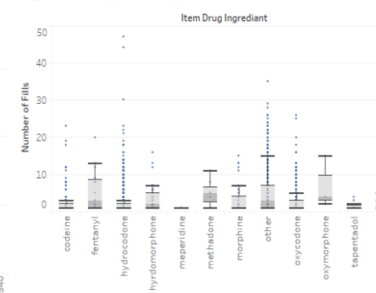
Quantity Dispensed by Drug Name



Quantity Dispensed by Drug Class



High Risk Polypharmacy



# Telehealth Use Cases

# Telehealth Use Case: Reducing barriers to Electronic Health Information



Telehealth services depend, in part, on the ability of physicians to access the electronic health records of their patients and share these records with other health care providers

Timely access to clinical data from community providers can be a challenge because of the different systems used across organizations . HIE enables the sharing, normalization and de-duplication of clinical information from various different EMR data sources.

Details	Impact
<ul style="list-style-type: none"><li>• On-demand access to clinical data from multiples data sources</li><li>• Provides access to clinical data to support patient intake and assessments</li><li>• Improves communication with community providers</li><li>• Provides access to clinical data for poor historians, patients with language barriers and patients unable to provide an accurate medical history</li></ul>	<ul style="list-style-type: none"><li>• Enhance telehealth workflows and clinical work-ups</li><li>• Through HIE telehealth providers can obtain information such as height, weight, blood pressure, heart rate, encounters, medical problems, allergies, lab and radiology results</li><li>• Allows telehealth providers to communicate and share clinical information for patients securely</li><li>• Reduces medical errors due to incomplete or inaccurate information</li></ul>

# Telehealth Use Case: Supports follow-up care via telemedicine



Sometimes patients end up back in the hospital because they didn't have access to appropriate follow-up care. Telemedicine can bridge this gap and reduce unnecessary readmissions.

Support virtual follow-up appointments with patients simply to monitor their progress, note any reported symptoms, talk through medications, review lab results, and generally check-in

## Details

- On-demand access through HIE to encounter histories and results from inpatient and emergency department encounters
- Provide access to clinical data for poor historians and patients unable to provide an accurate medical history
- Improves communication with community providers for patients requiring face to face visits
- Better care coordination and improve overall patient outcomes
- Reduce avoidable readmissions

## Impact

- Enhanced telehealth workflows and clinical work-ups
- Through HIE telehealth providers and can view encounter information and discharge summaries from acute care admissions
- Reduce medical errors, medication misadventures due to incomplete or inaccurate information
- Allows telehealth providers to communicate and share clinical information for patients with community providers, specialist and referral agencies securely

# WYFI Demo





# Ready to Connect?

## **Step 1: WYFI Business Agreements**

[https://health.wyo.gov/healthcarefin/wyoming\\_frontier\\_information\\_wyfi/](https://health.wyo.gov/healthcarefin/wyoming_frontier_information_wyfi/)

## **Step 2: End-User Onboarding and Training**

Thank you!