



**ILLUSTRATIVE SCENARIO**

**Grand Plains Community Hospital – Tele-Intensive Care Unit (Tele-ICU)\***

**AMA Return on Health**

**STRATEGIC GOALS**

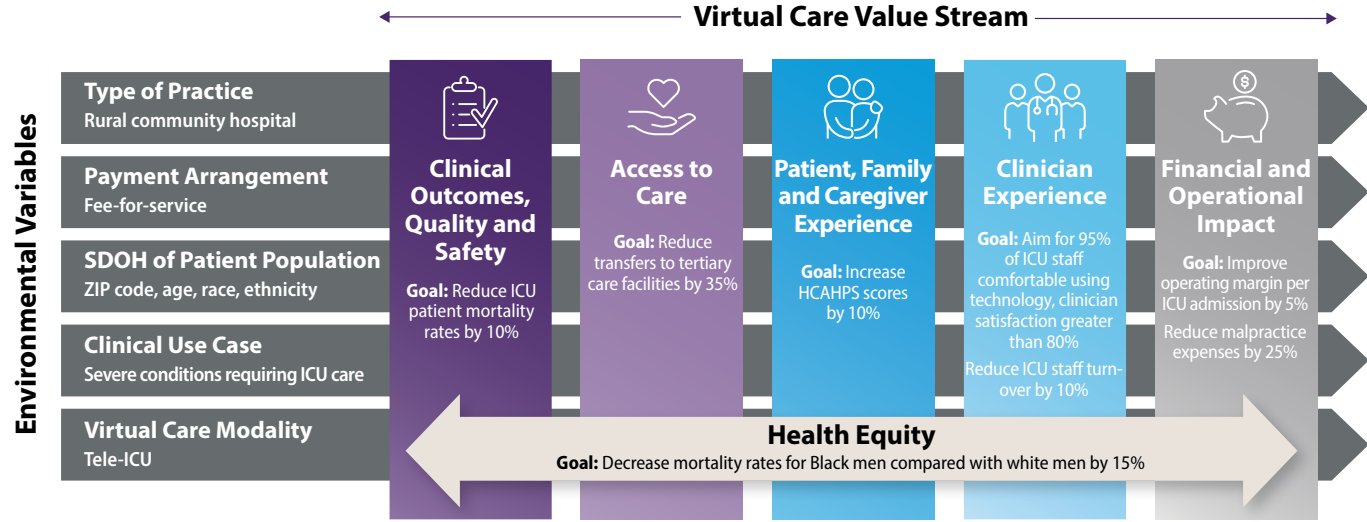
Grand Plains Community Hospital is planning to implement a tele-ICU program to:

- Retain more acute patients by reducing unnecessary transfers.
- Improve ICU patient outcomes.
- Address intensivist staffing shortages.

**DESCRIPTION**

Grand Plains Community Hospital, a small rural hospital affiliated with the Grand Plains Health System, is seeking to join a centralized tele-ICU program recently launched by the system’s academic medical center.

**FIGURE 15. GRAND PLAINS COMMUNITY HOSPITAL TELE-ICU PROGRAM AND IMPACT TARGETS**









The hospital’s 10-bed ICU serves a patient population primarily comprised of low-income, older adults. The hospital faces a shortage of intensivists and ICU nurses and often hires traveling nurses to meet demand. The system’s academic

medical center recently started offering a tele-ICU program to regional community hospitals, which would enable ICU staff at Grand Plains Community Hospital to connect via live video to a team of intensivists at Grand Plains

University Medical Center who can remotely access patient data, conduct real-time monitoring of patient vital signs, and advise Grand Plains Community Hospital’s ICU staff on clinical decision-making and evidence-based care.

## IMPACT GOALS

VALUE STREAM	PRIMARY DRIVER	RELEVANT MEASURES	IMPACT GOALS
 <b>Clinical Outcomes, Quality and Safety</b>	Clinical quality and safety outcomes	Mortality rate	Reduce mortality among ICU patients by 10%
 <b>Access to Care</b>	Availability of care	Availability of ICU-level care in the community	Reduce transfers to tertiary facilities by 35%
 <b>Patient, Family and Caregiver Experience</b>	Clinical and/or technology experience	HCAHPS	Increase HCAHPS scores by 10%
 <b>Clinician Experience</b>	Technology experience	Reported ease of using technology, obtaining clinical information, consulting with virtual ICU intensivists	Aim for greater than 95% of ICU staff reporting comfort using the technology Aim for clinician satisfaction levels greater than 80% with support provided by tele-ICU
	Work experience	ICU staff turnover	Reduce ICU staff turnover by 10%
 <b>Financial and Operational Impact</b>	Direct revenue	Operating margin per ICU admission	Improve operating margin per ICU admission by 5%
	Direct expenses	Malpractice costs	Reduce annual ICU-related malpractice costs by 25%
 <b>Health Equity</b>	Equity in clinical outcomes, quality and safety	Relative reduction in mortality by race	Decrease mortality rates for Black men compared with those of white men by 15%



## EXAMPLES OF TELE-ICU PROGRAMS

ORGANIZATION EXAMPLES	PROGRAM DESCRIPTION
<b><u>Dignity Health</u></b>	The Dignity Health Telemedicine Network provides high-speed data lines and InTouch Health wireless remote robots to support physicians to quickly evaluate, diagnose and treat patients in the ICU. The program has been operational since 2014.
<b><u>St. Luke's Health System</u></b>	Launched in 2018, the St. Luke's Virtual Care Center offers tele-ICU services throughout Idaho and Eastern Oregon.
<b><u>UMass Memorial Medical Center</u></b>	UMass Memorial Medical Center's tele-ICU program has provided tele-ICU support to all three UMass Memorial Health Care system hospitals since 2007.
<b><u>Penn Medicine</u></b>	Penn E-lert eICU is an intensive care unit that provides support for critically ill patients located at the Hospital of the University of Pennsylvania, Penn Presbyterian Medical Center and Pennsylvania Hospital.

## Relevant Literature Supporting Illustrative Impact Estimates



### CLINICAL OUTCOMES, QUALITY AND SAFETY

- A 2013 [study](#) of 56 ICU units found that ICU mortality dropped by 26% and overall hospital mortality fell by 16%.
- A literature [review](#) on tele-ICUs found numerous studies citing higher rates of ICU staff adherence to critical care best practices.



### FINANCIAL AND OPERATIONAL IMPACT

- [Studies](#) have found that tele-ICU programs reduce costs by \$2,600 to \$3,000 per patient.
- At [UC Irvine Health](#), prior to tele-ICU implementation, average annual ICU-related malpractice costs totaled \$6 million. After implementation of tele-ICU, annual malpractice costs dropped to less than \$.5 million.

\*The entity referenced in this Illustrative Case is fictional. Individuals, business, events, and scenarios referenced are influenced by interviews and review of publicly available literature. Any resemblance to actual individuals, entities, or events is purely coincidental.