2023 HEALTHTRUST UNIVERSITY CONFERENCE

PLAYING TO WIN

ALIGNED FOR SUCCESS | OPTIMIZING OUTCOMES

Time to Push for a Fibrinolytic Change From Alteplase to Tenecteplase in Acute Ischemic Stroke

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Disclosures

- The presenters have no real or perceived conflicts of interest related to this presentation

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Learning Objectives

At the end of this session, participants should be able to:

1. Recall literature supporting tenecteplase for acute ischemic stroke (AIS).
2. Identify factors to assist with conversion to tenecteplase.
3. Recognize potential implementation barriers to conversion to tenecteplase.

Acronyms

AIS = Acute ischemic stroke

FDA = Food & Drug Administration

TJC = The Joint Commission

LVO = Large vessel occlusion

mRS = Modified Rankin Score

NIHSS = National Institutes of Health Stroke Scale

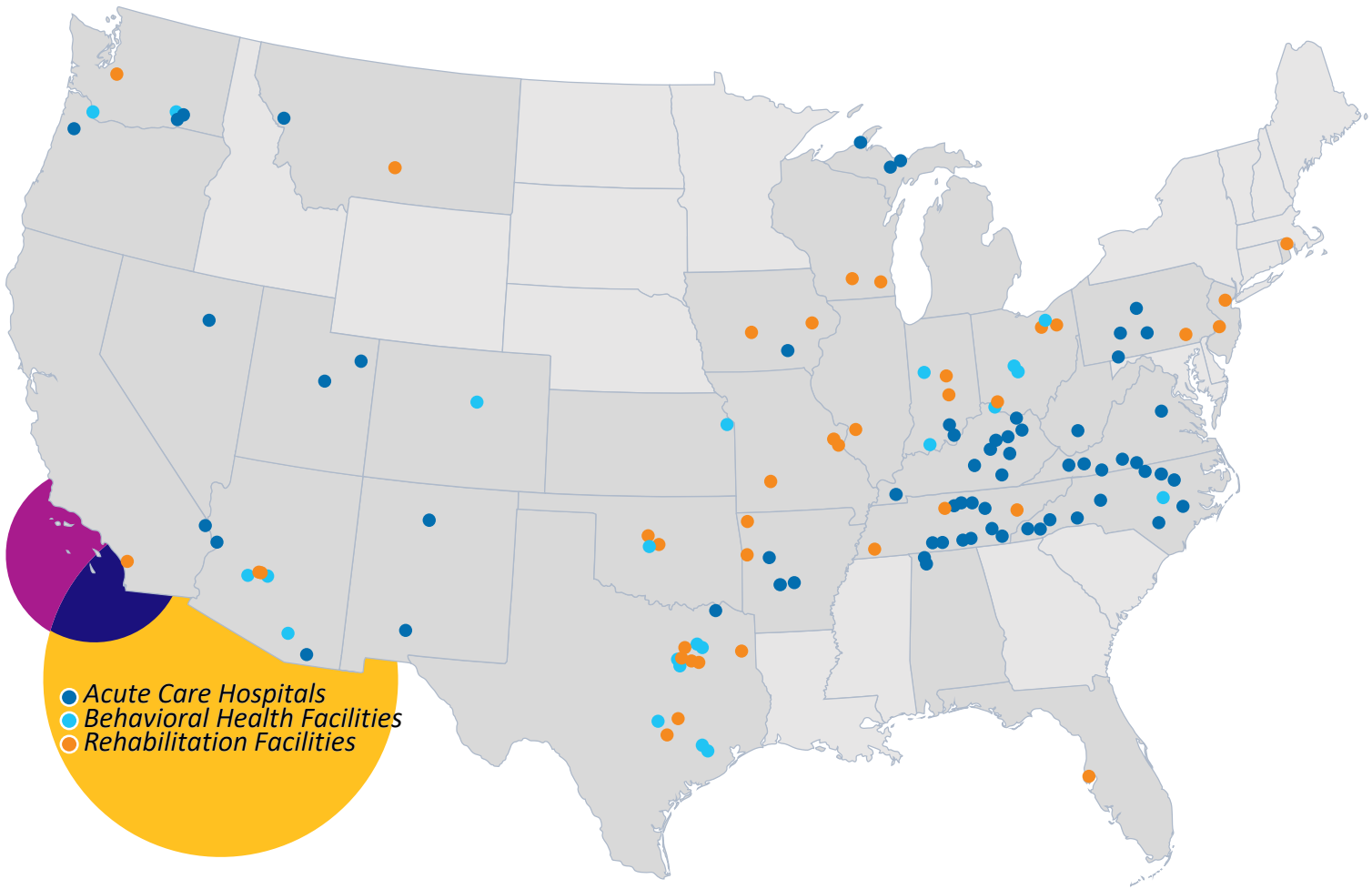
ICH = Intracerebral hemorrhage

DTN = Door-to-needle

STEMI = ST elevation myocardial infarction

PE = Pulmonary embolism

Lifepoint Health



More than 50,000	employees
3,000	Employed providers
30	States
62	Community hospital campuses
38	Rehabilitation hospitals
22	Behavioral Health hospitals
200+	Managed acute rehabilitation units, outpatient centers, post-acute care facilities and other sites of care

Lifepoint Health

Our Mission

Making communities healthier®

Our Vision

We want to create places where:

- People choose to come for healthcare
- Physicians and providers want to practice
- Employees want to work

Our Core Values

Champion patient care

Do the right thing

Embrace individuality

Act with kindness

Make a difference together

Polling Question 1

- Has your facility implemented the use of tenecteplase for acute ischemic stroke?

  a. Yes

  b. Implementation in progress

  c. No

Polling Question 2

- Has your health system implemented an initiative for the conversion of alteplase to tenecteplase for acute ischemic stroke?

  a. Yes

  b. Implementation in progress

  c. No

Background

Rationale & Benefits for Conversion

Why the Change

- Robust clinical data over the past 10 years has provided support despite a lack of FDA-approved indication
- New guidelines supporting tenecteplase in AIS
  - **2019 AHA/ASA guidelines** state it may be reasonable to administer tenecteplase 0.25 mg/kg IV over alteplase in patients also eligible for mechanical thrombectomy and that tenecteplase 0.4 mg/kg IV "might be considered as an alterative to alteplase in patients with minor neurological impairment and no major intracranial occlusion."
  - **2021 European Stroke Organization (ESO) guidelines** recommend tenecteplase 0.25 mg/kg IV over alteplase for "patients with AIS of <4.5 hours duration and with large vessel occlusion who are candidates for mechanical thrombectomy and for whom IV thrombolysis is considered before thrombectomy."

Source: Powers WJ, et al. Guidelines for the early management of patients with acute ischemic stroke: 2019 update to the 2018 guidelines for the early management of acute ischemic stroke: a guideline for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke*. 2019;50(12):e344-e418.

Source: Berge E, et al. European Stroke Organization (ESO) guidelines on intravenous thrombolysis for acute ischemic stroke. *Eur Stroke J*. 2021;6(1):I-LXII.

Why the Change, *continued*

- Over the past several years, numerous hospitals across the U.S. have made the conversion, including several health systems within HealthTrust's membership.
  - HealthTrust identified as cost-savings initiative in 2022
  - No issues reported with Stroke Accreditation or TJC
  - Provider education identified as key strategy to ensure safe and effective conversion process
  - Several Lifepoint Health facilities successfully made the change in 2022
  - LifePoint Health developed a strategy of alteplase to tenecteplase as a key target initiative for 2023

Benefits of Tenecteplase Over Alteplase for AIS

Clinical	▪ Decrease door to needle time ▪ Increase recanalization rate in LVO ▪ Increase neurological improvement ▪ Achieve similar functional outcomes
Operational	▪ Ease of preparation ▪ Simplified administration ▪ Decrease transfer time to thrombectomy capable center
Financial	▪ Reduce costs

Source: Potla N, Ganti L. Tenecteplase vs. alteplase for acute ischemic stroke: a systematic review. *Int J Emerg Med*. 2022 Jan 4;15(1):1.

Evidence-based Clinical Support

Evidence-based Clinical Data Study Criteria

Modified Rankin Score (mRS) – used to assess clinical disability outcomes in clinical trials

Score	Description
0	No symptoms or disability
1	No significant disability despite symptoms; able to carry out all usual duties and activities
2	Slight disability; unable to carry out all previous activities, but able to look after own affairs without assistance
3	Moderate disability; requiring some help, but able to walk without assistance
4	Moderate-severe disability; unable to walk without assistance and unable to attend to own bodily needs without assistance
5	Severe disability; bedridden, incontinent and requiring constant nursing care and attention
6	Dead

NIH Stroke Scale – used to assess stroke severity

NIHSS Score	Stoke Severity
0	No stroke symptoms
1 - 4	Minor stroke
5 - 15	**Moderate stoke**
16 - 20	**Moderate to severe stroke**
21 - 42	**Severe Stroke**

Source: National Institute of Neurological Disorders and Stroke: https://www.stroke.nih.gov/resources/scale.htm Date accessed 6/1/23.

Source: Specifications Manual for Joint Commission National Quality Measures: https://manual.jointcommission.org/releases/TJC2016B/DataElem0569.html Date accessed 6/1/23

Evidence-based Clinical Data Primary Literature (Summary)

- Extensive amount of clinical literature to support use of tenecteplase in AIS
- Randomized controlled trials – RCTs
  - Alteplase vs tenecteplase (n=9)
  - Subgroup analysis (n=9)
- Observational studies (n=10)
- Meta-analysis
  - RCT only; range 4–9 RCTs (n=9)
  - Observational only (n=1)
  - RCT and observational (n=4)

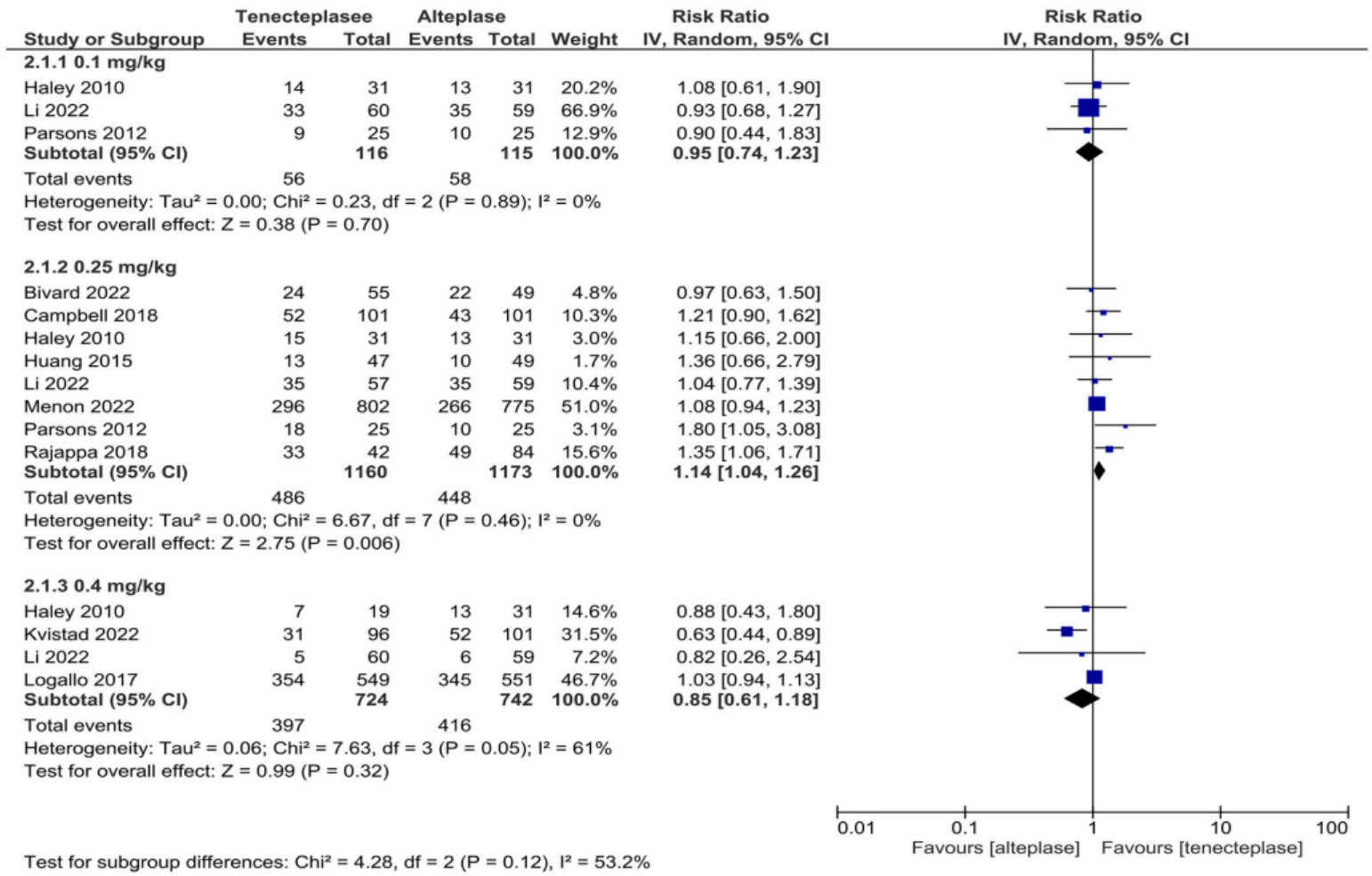
Evidence-based Clinical Data Primary Literature (Dosing)

- Search for the optimal tenecteplase dose
  - Lower doses (0.1mg/kg) associated with worse clinical outcomes compared to higher doses
    - RCTs: TRACE, Australian-TNK, TNK-S2B
  - Higher doses (0.4mg/kg) associated with increased risk of any ICH, severe adverse events and disability along with a trend toward increased mortality
    - RCT: NOR-TEST2 Part A

Source: Li S, et al. Safety and efficacy of tenecteplase versus alteplase in patients with acute ischemic stroke (TRACE): a multicentre, randomised, open label, blinded-endpoint (PROBE) controlled phase II study. *Stroke Vasc Neurol*. 2022;7(1):47-53. doi:10.1136/svn-2021-000978
Source: Parsons M, et al. A randomized trial of tenecteplase versus alteplase for acute ischemic stroke. *N Engl J Med*. 2012;366(12):1099-1107. doi:10.1056/NEJMoa1109842
Source: Haley EC Jr, et al. Phase IIB/III trial of tenecteplase in acute ischemic stroke: results of a prematurely terminated randomized clinical trial. *Stroke*. 2010;41(4):707-711. doi:10.1161/STROKEAHA.109.572040
Source: Kvistad CE, et al. Tenecteplase versus alteplase for the management of acute ischemic stroke in Norway (NOR-TEST 2, part A): a phase 3, randomised, open-label, blinded endpoint, non-inferiority trial. *Lancet Neurol*. 2022;21(6):511-519. doi:10.1016/S1474-4422(22)00124-7

Evidence-based Clinical Data Primary Literature (Dosing)

- Optimal dosing for tenecteplase of 0.25mg/kg provides best overall efficacy and safety shown in a majority of the key RCTs comparing tenecteplase to alteplase



Study or Subgroup	Tenecteplasee Events	Total	Alteplase Events	Total	Weight	Risk Ratio IV, Random, 95% CI
2.1.1 0.1 mg/kg						
Haley 2010	14	31	13	31	20.2%	1.08 [0.61, 1.90]
Li 2022	33	60	35	59	66.9%	0.93 [0.68, 1.27]
Parsons 2012	9	25	10	25	12.9%	0.90 [0.44, 1.83]
Subtotal (95% CI)		**116**		**115**	**100.0%**	**0.95 [0.74, 1.23]**
Total events	56		58			
Heterogeneity: Tau² = 0.00; Chi² = 0.23, df = 2 (P = 0.89); I² = 0%						
Test for overall effect: Z = 0.38 (P = 0.70)						
2.1.2 0.25 mg/kg						
Bivard 2022	24	55	22	49	4.8%	0.97 [0.63, 1.50]
Campbell 2018	52	101	43	101	10.3%	1.21 [0.90, 1.62]
Haley 2010	15	31	13	31	3.0%	1.15 [0.66, 2.00]
Huang 2015	13	47	10	49	1.7%	1.36 [0.66, 2.79]
Li 2022	35	57	35	59	10.4%	1.04 [0.77, 1.39]
Menon 2022	296	802	266	775	51.0%	1.08 [0.94, 1.23]
Parsons 2012	18	25	10	25	3.1%	1.80 [1.05, 3.08]
Rajappa 2018	33	42	49	84	15.6%	1.35 [1.06, 1.71]
Subtotal (95% CI)		**1160**		**1173**	**100.0%**	**1.14 [1.04, 1.26]**
Total events	486		448			
Heterogeneity: Tau² = 0.00; Chi² = 6.67, df = 7 (P = 0.46); I² = 0%						
Test for overall effect: Z = 2.75 (P = 0.006)						
2.1.3 0.4 mg/kg						
Haley 2010	7	19	13	31	14.6%	0.88 [0.43, 1.80]
Kvistad 2022	31	96	52	101	31.5%	0.63 [0.44, 0.89]
Li 2022	5	60	6	59	7.2%	0.82 [0.26, 2.54]
Logallo 2017	354	549	345	551	46.7%	1.03 [0.94, 1.13]
Subtotal (95% CI)		**724**		**742**	**100.0%**	**0.85 [0.61, 1.18]**
Total events	397		416			
Heterogeneity: Tau² = 0.06; Chi² = 7.63, df = 3 (P = 0.05); I² = 61%						
Test for overall effect: Z = 0.99 (P = 0.32)						
Test for subgroup differences: Chi² = 4.28, df = 2 (P = 0.12), I² = 53.2%						

Fig. 3. Forest plot comparing tenecteplase with alteplase in terms of excellent functional outcome yielding significant results in favor of tenecteplase at 0.25 mg/kg dose.

Source: Rehman, et al. Comparative efficacy and safety of tenecteplase and alteplase in acute ischemic stroke: A pairwise and network meta-analysis of randomized controlled trials. *Journal of Neurological Sciences*. 455 (2023) 120537.

Evidence-based Clinical Data Primary Literature (Efficacy)

Subgroup population	Trials	Conclusion
Large vessel occlusion (LVO)	Katsanos 2021 (Meta-analysis of 4 RCTs)	Improved efficacy for tenecteplase
Clinical or imaging mismatch	Bivard 2020 (Subgroup analysis of ATTEST and Australian-TNK)	Improved efficacy for tenecteplase
Complete occlusion	Bivard 2017 (Subgroup analysis of ATTEST and Australian-TNK)	Improved efficacy for tenecteplase
Wake-up stroke	Ahmed 2020 (Subgroup analysis of NOR-TEST)	Improved efficacy for tenecteplase
Older adults with AIS	Thommessen 2021 (Subgroup analysis of NOR-TEST)	Comparable efficacy for tenecteplase
Older adults with LVO	Yogendrakumar 2022 (Subgroup analysis of EXTEND-IA TNK, EXTEND-IA TNK Part 2)	Improved mRS scores and mortality rate for tenecteplase (0.25 mg/kg)

Source: HealthTrust website. *Tenecteplase versus Alteplase Literature Review*. https://members.healthtrustpg.com/. Date accessed 6/1/2023.

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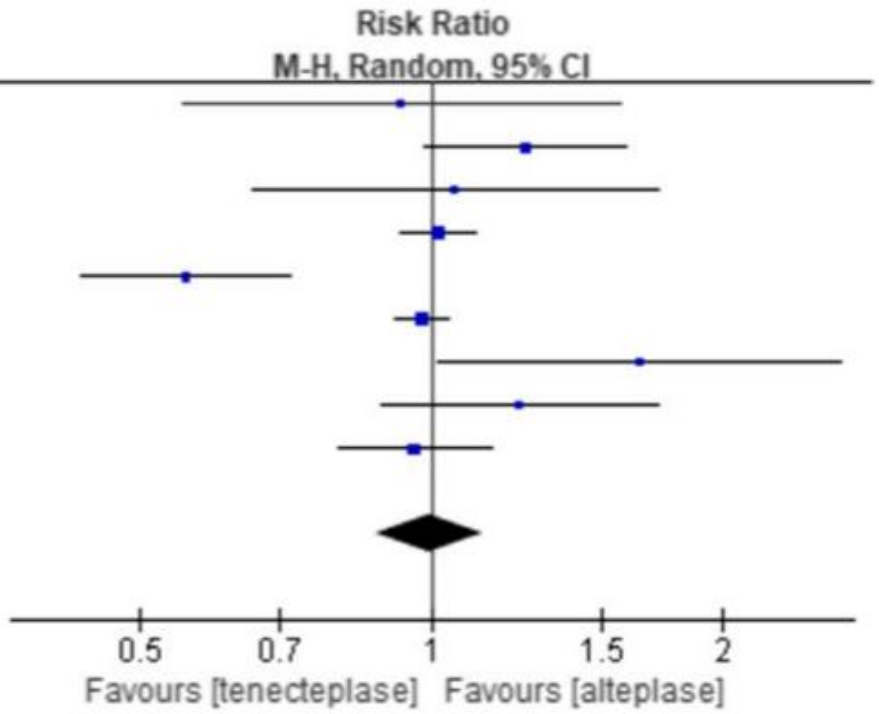
Comparative Meta-analysis 2023 (Efficacy)

Good Functional Outcome at 90 days (mRS score 0-2)

	tenecteplase		alteplase			Risk Ratio
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Random, 95% CI
ATTEST 2015	17	47	19	49	4.6%	0.93 [0.56, 1.57]
EXTEND-IA 2018	65	101	52	101	11.9%	1.25 [0.98, 1.59]
Haley 2010	36	81	13	31	5.2%	1.06 [0.66, 1.71]
Menon 2022	452	802	425	765	18.8%	1.01 [0.93, 1.11]
NOR-TEST 2 2022	42	96	79	101	11.5%	0.56 [0.44, 0.72]
NOR-TEST 2017	421	549	432	551	19.6%	0.98 [0.92, 1.04]
Parsons 2012	36	50	11	25	5.3%	1.64 [1.02, 2.63]
TASTE-A 2022	36	55	26	49	8.7%	1.23 [0.89, 1.71]
TRACE 2021	124	177	43	59	14.4%	0.96 [0.80, 1.15]
Total (95% CI)		**1958**		**1731**	**100.0%**	**1.00 [0.88, 1.13]**
Total events	1229		1100			

Heterogeneity: Tau² = 0.02; Chi² = 30.58, df = 8 (P = 0.0002); I² = 74%

Test for overall effect: Z = 0.05 (P = 0.96)



Source: Wei, H., et al. The efficacy and safety of intravenous thrombolysis with tenecteplase versus alteplase for acute ischemic stroke: a systematic review and meta-analysis. *Neurol Sci* (2023). https://doi.org/10.1007/s10072-023-06801-0

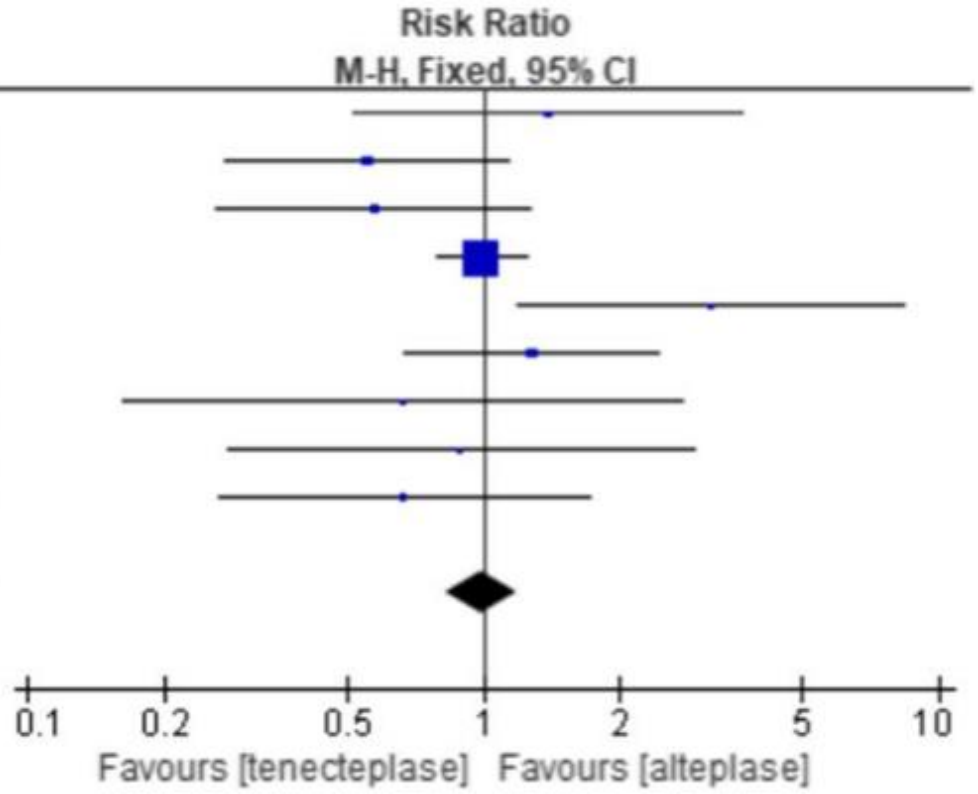
Comparative Meta-analysis 2023 (Efficacy)

Mortality at 90 days

Study or Subgroup	tenecteplase Events	Total	alteplase Events	Total	Weight	Risk Ratio M-H, Fixed, 95% CI
ATTEST 2015	8	47	6	49	3.0%	1.39 [0.52, 3.70]
EXTEND-IA 2018	10	101	18	101	9.3%	0.56 [0.27, 1.14]
Haley 2010	12	81	8	31	6.0%	0.57 [0.26, 1.27]
Menon 2022	122	796	117	758	61.7%	0.99 [0.79, 1.25]
NOR-TEST 2 2022	15	96	5	101	2.5%	3.16 [1.19, 8.35]
NOR-TEST 2017	20	382	16	391	8.1%	1.28 [0.67, 2.43]
Parsons 2012	4	50	3	25	2.1%	0.67 [0.16, 2.75]
TASTE-A 2022	5	55	5	49	2.7%	0.89 [0.27, 2.89]
TRACE 2021	12	177	6	59	4.6%	0.67 [0.26, 1.70]
Total (95% CI)		**1785**		**1564**	**100.0%**	**0.99 [0.83, 1.19]**
Total events	208		184			

Heterogeneity: Chi² = 11.83, df = 8 (P = 0.16); I² = 32%

Test for overall effect: Z = 0.08 (P = 0.94)



Source: Wei, H., et al. The efficacy and safety of intravenous thrombolysis with tenecteplase versus alteplase for acute ischemic stroke: a systematic review and meta-analysis. *Neurol Sci* (2023). https://doi.org/10.1007/s10072-023-06801-0

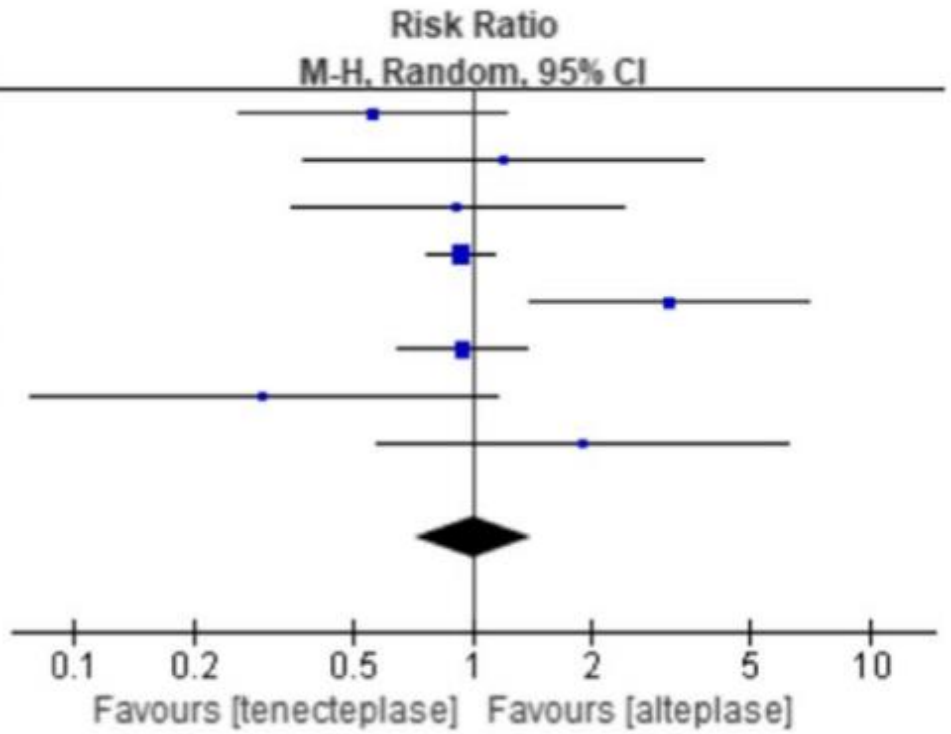
Comparative Meta-analysis 2023 (Safety)

Comparison for any ICH

Study or Subgroup	tenecteplase Events	Total	alteplase Events	Total	Weight	Risk Ratio M-H, Random, 95% CI
ATTEST 2015	8	52	14	51	11.6%	0.56 [0.26, 1.22]
EXTEND-IA 2018	6	101	5	101	6.6%	1.20 [0.38, 3.81]
Haley 2010	12	81	5	31	8.8%	0.92 [0.35, 2.39]
Menon 2022	154	800	157	763	28.1%	0.94 [0.77, 1.14]
NOR-TEST 2 2022	21	100	7	104	11.1%	3.12 [1.39, 7.01]
NOR-TEST 2017	47	549	50	551	22.3%	0.94 [0.65, 1.38]
Parsons 2012	3	50	5	25	5.2%	0.30 [0.08, 1.16]
TRACE 2021	17	177	3	59	6.3%	1.89 [0.57, 6.22]
Total (95% CI)		**1910**		**1685**	**100.0%**	**1.01 [0.72, 1.41]**
Total events	268		246			

Heterogeneity: $Tau^2 = 0.09$; $Chi^2 = 14.34$, $df = 7$ ($P = 0.05$); $I^2 = 51\%$

Test for overall effect: $Z = 0.05$ ($P = 0.96$)



Source: Wei, H., et al. The efficacy and safety of intravenous thrombolysis with tenecteplase versus alteplase for acute ischemic stroke: a systematic review and meta-analysis. *Neurol Sci* (2023). https://doi.org/10.1007/s10072-023-06801-0

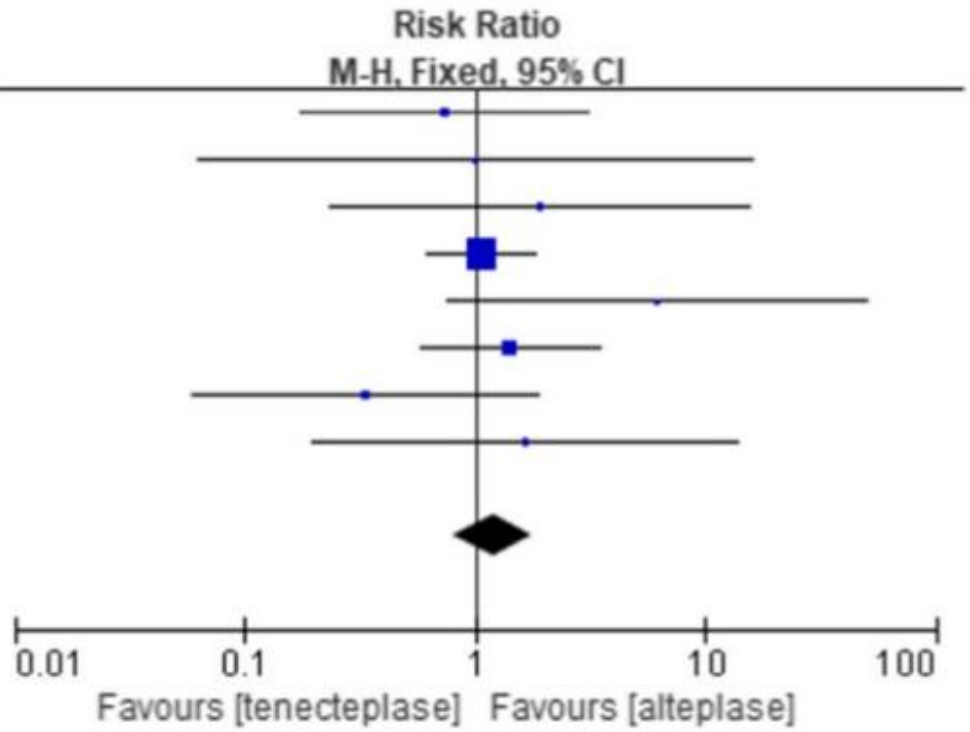
Comparative Meta-analysis 2023 (Safety)

Comparison for symptomatic ICH

Study or Subgroup	tenecteplase Events	Total	alteplase Events	Total	Weight	Risk Ratio M-H, Fixed, 95% CI
ATTEST 2015	3	52	4	51	8.9%	0.74 [0.17, 3.12]
EXTEND-IA 2018	1	101	1	101	2.2%	1.00 [0.06, 15.77]
Haley 2010	5	81	1	31	3.2%	1.91 [0.23, 15.73]
Menon 2022	27	800	24	763	54.1%	1.07 [0.62, 1.84]
NOR-TEST 2 2022	6	100	1	104	2.2%	6.24 [0.76, 50.91]
NOR-TEST 2017	11	389	8	400	17.4%	1.41 [0.57, 3.48]
Parsons 2012	2	50	3	25	8.8%	0.33 [0.06, 1.87]
TRACE 2021	5	177	1	59	3.3%	1.67 [0.20, 13.98]
Total (95% CI)		**1750**		**1534**	**100.0%**	**1.19 [0.81, 1.76]**
Total events	60		43			

Heterogeneity: $Chi^2 = 5.51$, $df = 7$ ($P = 0.60$); $I^2 = 0\%$

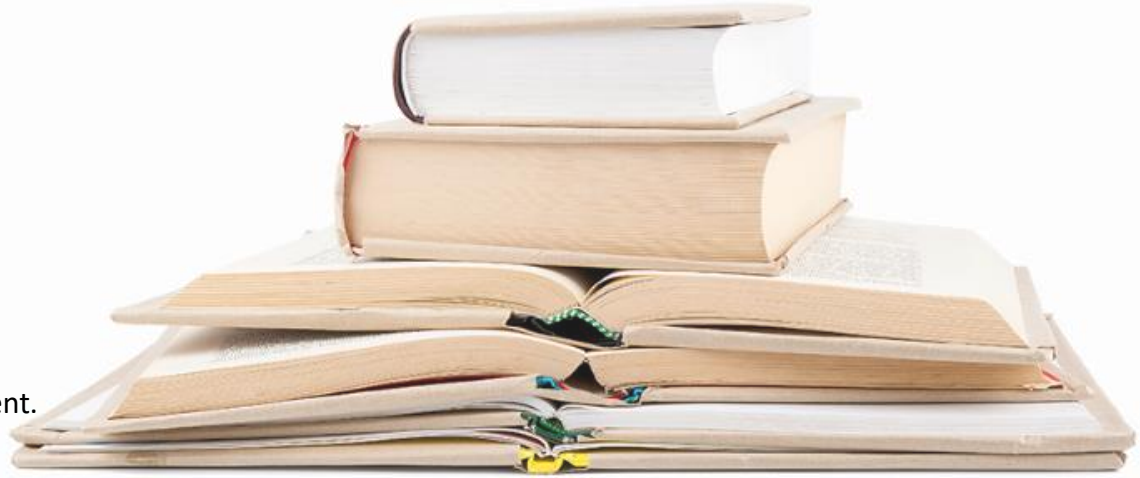
Test for overall effect: $Z = 0.89$ ($P = 0.37$)



Source: Wei, H., et al. The efficacy and safety of intravenous thrombolysis with tenecteplase versus alteplase for acute ischemic stroke: a systematic review and meta-analysis. *Neurol Sci* (2023). https://doi.org/10.1007/s10072-023-06801-0

Evidence-based Clinical Data (DTN Outcome)

- **Improved door-to-needle time vs. Alteplase in AIS**
  - Prospective, observational pre- and post-tenecteplase implementation analysis
  - N = 113 patients
    - Tenecteplase (47%); Alteplase (53%)
  - Door-to-needle time significantly lower in tenecteplase group ($p < 0.01$)
    - Tenecteplase = 41 min
    - Alteplase = 58 min
  - No difference in ICH



Source: Hall J., et al. Tenecteplase improves door-to-needle time in real-world acute stroke treatment. *Stroke Vasc Interv Neurol*. 2021;1:e000102

Evidence Based Clinical Data (Real World Experience)

- **Study evaluated switching to tenecteplase in AIS**
- Evaluated population-based outcomes in regional stroke network
  - Pre-implementation – Alteplase (n=555)
  - Post-implementation – Tenecteplase (n=283)
- Outcomes
  - Shorter door-to-needle time
    - 53 vs 61 min ($p < 0.0002$)
  - Greater odds of favorable mRS
    - aOR 1.6 (CI 1.2 – 2.2)
  - Reduced trend of symptomatic ICH
    - 1.8% vs 3.4% [aOR 0.46 (CI 0.1 – 1.6)]

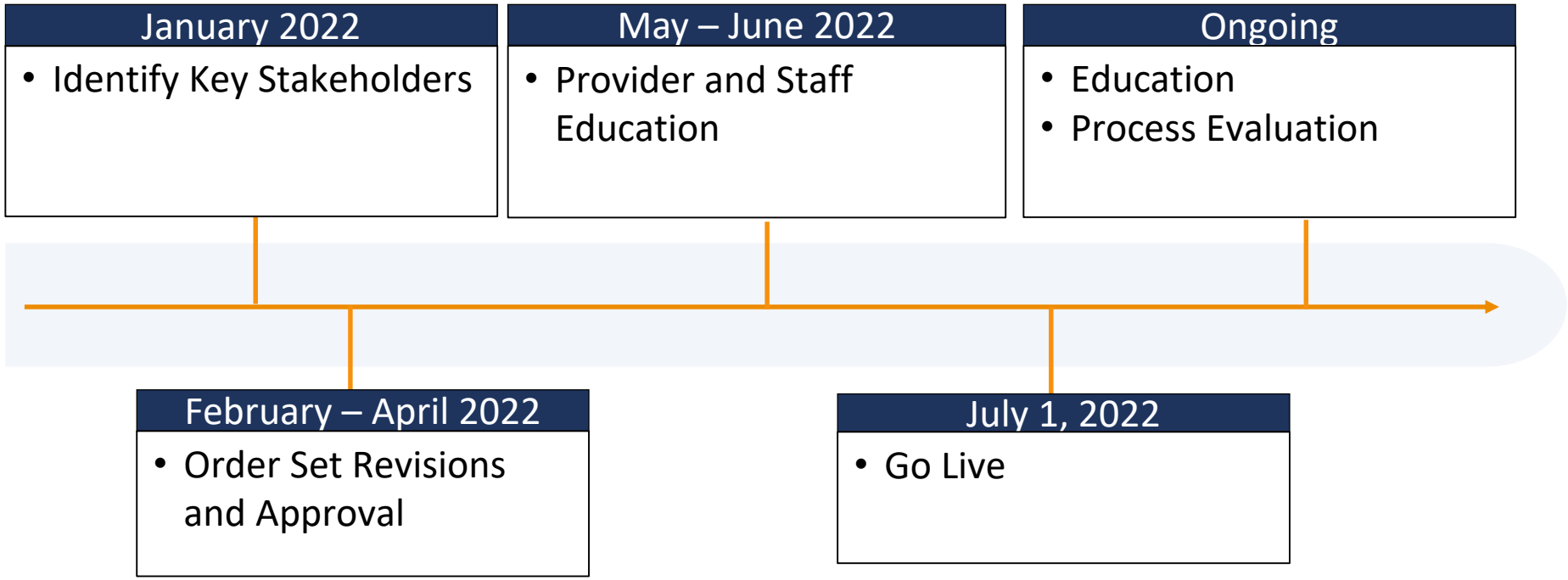
Source: Mahawish K., et al. Switching to tenecteplase for stroke thrombolysis: real-world experience and outcomes in a regional stroke network. *Stroke*. 2021;52(10):e590-e593.

Process for Successful Facility Conversion

Sumner Regional Medical Center (SRMC)

- Gallatin, Tennessee
- Bed size: 167
- Services:
  - Primary Stoke Center
  - Accredited Chest Pain Center
  - Level III Trauma Center
- AIS patient volume:
  - 2020 – 89
  - 2021 – 115
  - 2022 – 196

Tenecteplase Implementation Timeline



Polling Question 3

- For those facilities that have recently implemented the use of tenecteplase for acute ischemic stroke, were HealthTrust clinical resources utilized to support the conversion?

    a. Yes

    b. No

    c. Did not convert to tenecteplase

HealthTrust Conversion Resources

- Tenecteplase Conversion Toolkit
  - Helps to ensure no gaps in conversion process

- Tenecteplase vs. Alteplase Literature Review
  - Great evidence-based document useful for provider education

- Thrombolytics – Class Review
  - Thorough review of each thrombolytic

Source: HealthTrust website. https://members.healthtrustpg.com/. Accessed 6/1/2023.

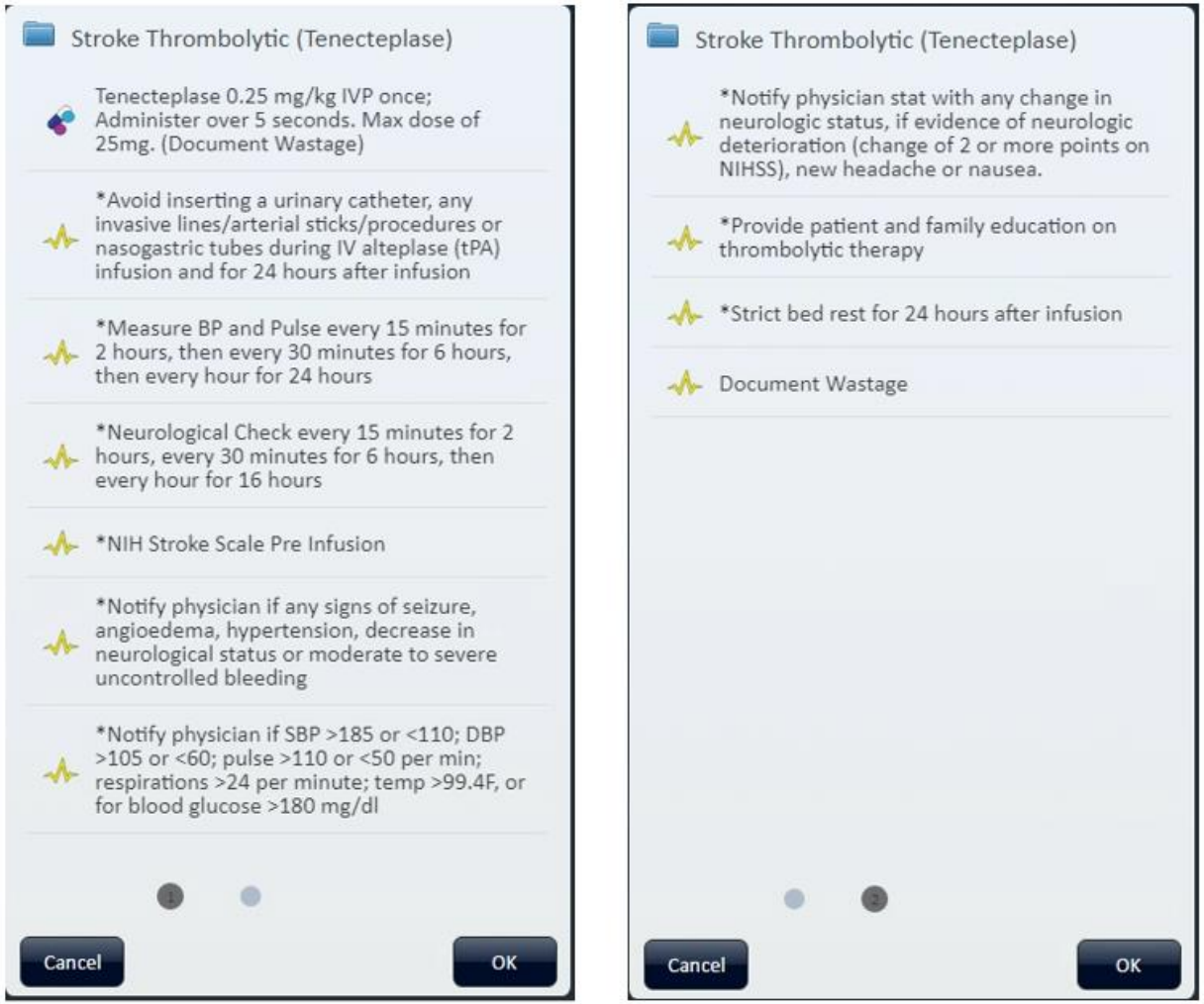
Key Stakeholder Support

- Key Stakeholders
  - Neurology
  - Emergency medicine practitioners
  - ED nurses
  - Hospitalists / Intensivists
  - Pharmacy

- Know your ‘why’
  - Evidence
  - Ease of administration
  - Align with tertiary referral center
  - Cost savings

Elizabeth Franco, M.D.
Stroke Director
Sumner Regional Medical Center

Order Set Revisions



Source: Screenshot of LifePoint MedHost EDIS order set

Order Set Revisions

- Pre-implementation

Medications

Alteplase (tPA)

Step 1 Bolus – 10%: 0.09mg/kg IV once over 1 minute **(Max dose: 9mg)**

Step 2 Infusion – 90%: 0.81mg/kg IV once over 60 minutes **(Max dose INCLUDING bolus is 90mg)**

Weight _____

Bolus _____mg = _____ml

Infusion _____mg = _____ml

Amount wasted:_____ ******Withdraw and waste excess prior to administration******

Step 3 Infuse 50ml NS IV in the same line and at the same rate of the Alteplase, to ensure full delivery of the medication.

- Post-implementation

Medications

☐ Tenecteplase 0.25mg/kg IV over 5 seconds; max dose 25mg

Weight _____

Dose _____mg = _____ml

Amount wasted:_____ ******Withdraw and waste excess prior to administration******

Provider Education

- Attended Emergency Medicine Staff Meetings
  - Briefly explained evidence for conversion
  - Outlined process for emergency department
  - Answered questions

- Attended Hospitalist / Intensivist Staff Meetings
  - Briefly explained evidence for conversion
  - Outlined process for inpatient services
  - Answered questions

Nurse Education

- Face-to-face with check-off
  - Emergency department nurses
  - Critical care nurses

Photo: Sumner Regional Marketing, permission to use

- Practice Alert
  - All nurses

Switching from Alteplase to Tenecteplase

Terminology to Avoid

- tPa when referring to Alteplase (Activase)
- TNK when referring to Tenecteplase

Dosing of Tenecteplase - DO NOT USE IF CONFIRMED PULMONARY EMBOLISM

- **Acute Ischemic Stroke: 0.25 mg/kg (max dose: 25 mg) once**
- Cardiac Arrest: weight-based dosing
  - < 60 kg: 30 mg
  - ≥ 60 to < 70 kg: 35 mg
  - ≥ 70 to <80 kg: 40 mg
  - ≥ 80 to <90 kg: 45 mg
  - ≥ 90 kg: 50 mg

Administration:

- INCOMPATIBLE with dextrose solutions
- Single IV bolus over 5-10 seconds
- Notify physician before administration if SBP >185 or DBP >110
- **Tenecteplase will not be reimbursed by Genetech; do not mix prior to administration**

Monitoring After Administration of fibrinolytic remains unchanged:

Potential Implementation Barriers

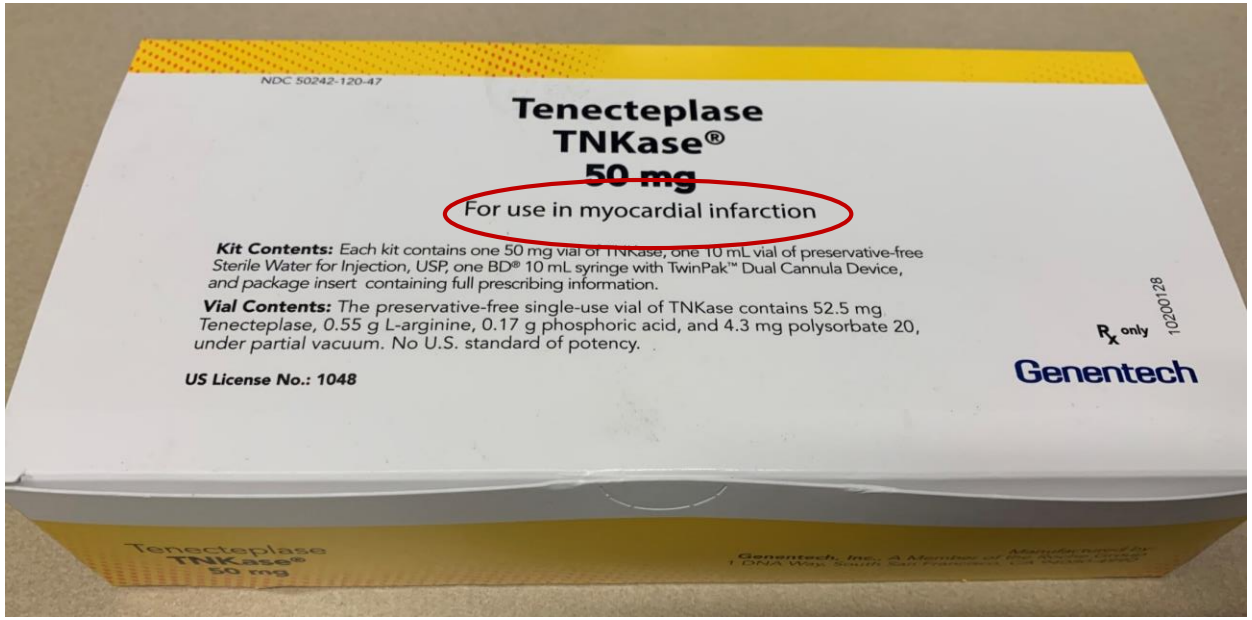
Implementation Barriers

- Partial Conversion vs. Universal Tenecteplase
  - SRMC = Partial Conversion
    - STEMI: Cath lab
    - AIS: Tenecteplase
    - PE: Alteplase
    - Cardiac Arrest: Tenecteplase
  - No Manufacturer Replacement
    - Tenecteplase is off-label for AIS
    - Critical education point for frontline staff
    - IV push administration lessens the need for early preparation

Implementation Barriers

- Tenecteplase packaging conundrum
  - Labeled for myocardial infarction (MI) use
  - Dosing chart inside of box for MI differs from AIS

- Potential solutions
  - Create AIS-specific kits
  - Alter packaging
  - Add additional AIS dosing information



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Implementation Barriers

- SRMC solution = add additional dosing information
  - Badge buddies
  - Automated dispensing cabinet pocket

TENECTEPLASE ISCHEMIC STROKE DOSING*			
Patient Weight (lb)	Patient Weight (kg)	Tenecteplase Dose (mg)	Reconstituted (5mg/ml) Tenecteplase (mL)
90-99	40-45	10	2
100-119	46-54	12.5	2.5
120-139	55-63	15	3
140-165	64-74	17.5	3.5
166-189	75-85	20	4
190-219	86-99	22.5	4.5
≥220	≥100	25	5
*for use during cardiac arrest follow dosing on box			

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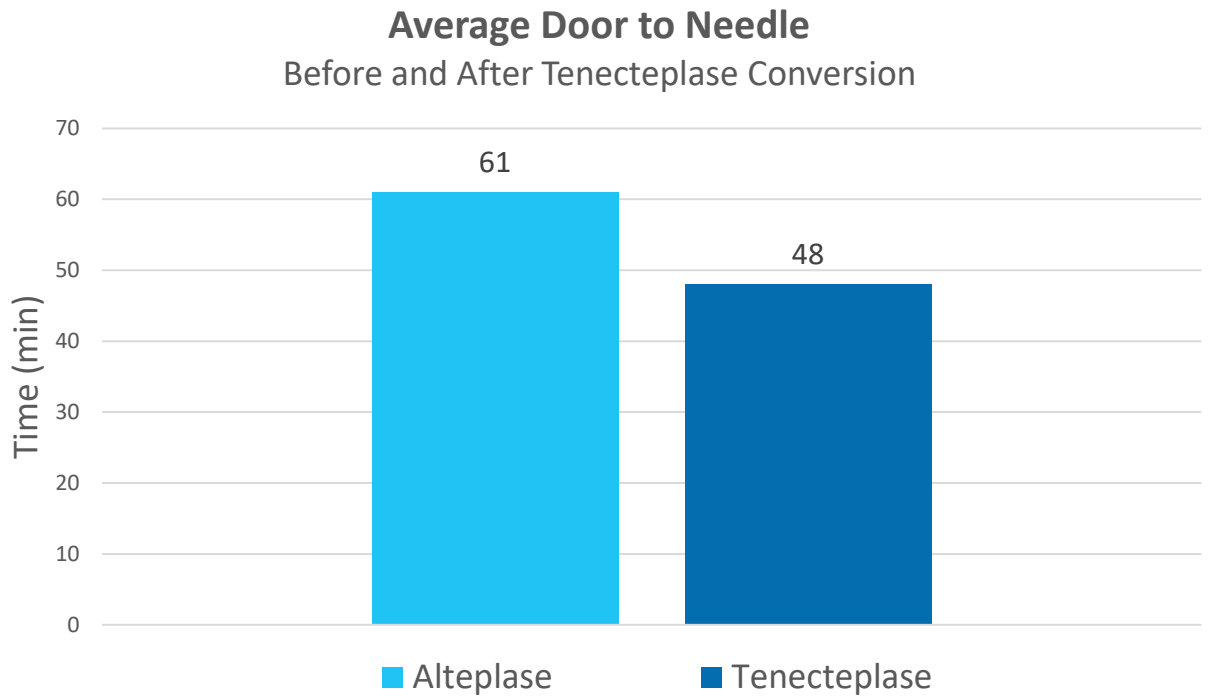
Facility Outcomes

Sumner Regional Medical Center Outcomes

- Pre-implementation (Alteplase)
  - January – June 2022
  - N = 18
  - Fastest DTN – 21 minutes
- Post-implementation (Tenecteplase)
  - July 2022 – May 2023
  - N = 36
  - Fastest DTN – 8 minutes!
  - **Cost savings since implementation: $67,876.85**



Keys to Successful Implementation

- Use available resources
  - HealthTrust conversion toolkit
  - Facilities that have completed implementation
- Buy-in from key stakeholders
  - Frontline ED & nursing support
- Create workflow that works for your facility
- Coordinated education for staff
- Develop ongoing process improvement

Health System Conversion

Lifepoint Health

- Implementation phase
  - Vetted through Lifepoint Health Clinical Advisory Group (10/19/22)
  - Conversion resources provided to hospitals
    - ASHP Webinar – *Safe Transition from Alteplase to Tenecteplase for Acute Ischemic Stroke* (10/26/22)
    - HealthTrust Conversion Toolkit/Literature Review (12/22/23)
    - Various clinical/operational/educational documents provided by Sumner Regional (12/22/23)
    - Lifepoint Health conversion educational presentation = (2/22/23)
  - Implementation date deadline for P&T approval = 3/1/23
  - Target conversion rate = 50%
    - Tenecteplase 50mg, Alteplase 100mg
    - Not recommending tenecteplase for PE indication at this point
  - Target 2023 savings = $790,000

Lifepoint Health

- Conversion status
  - Total facilities utilizing thrombolytics for AIS = 52
  - Conversion prior to implementation n=6 (note 3 of 6 facilities part of Sumner legacy hospitals)
  - Conversion post implementations n=41 (as of 6/1/23)
    - 6 additional facilities approved and pending implementation, using up alteplase stock
    - 4 facilities pending P&T/MEC approval
    - 1 facility rationale for not switching (very small volumes, use for PE only)
    - Conversion rate = 90% (including approved sites)
  - Total cost savings through 6/1/23 = $332,480
  - Updated projected savings for 2023 = $800,000–$950,000
    - Note: Many facilities using up existing stock before purchasing Tenecteplase
    - Most impact after 3/1/23 implementation deadline

Benefits of Conversion

Tenecteplase Benefits Summary

- Clinical
  - Improved door-to-needle time
  - Increased reperfusion rate
  - Increased early neurological improvement
  - Non-inferior functional outcomes
- Operational
  - Ease of preparation
  - Simplified administration
  - Reduced transfer time to stroke center
- Financial
  - Reduced cost
  - Facility savings – $68,000 (Sumner Regional Medical Center)
  - Health System savings – $800,000+ (Lifepoint Health)

Assessment Question 1

- What are the benefits of tenecteplase over alteplase for AIS?
  A. Simplified administration
  B. Decreased door-to-needle time
  C. Reduced costs
  D. All of the above

Assessment Question 1 | Answer…

- What are the benefits of tenecteplase over alteplase for AIS?
  A. Simplified administration
  B. Decreased door-to-needle time
  C. Reduced costs
  D. All of the above

Assessment Question 2

- Which of the following factors can be used to assist conversion from alteplase to tenecteplase for AIS?
  A. Identify key stakeholders
  B. Provider education
  C. Order set revisions
  D. All of the above

Assessment Question 2 | Answer…

- Which of the following factors can be used to assist conversion from alteplase to tenecteplase for AIS?
  A. Identify key stakeholders
  B. Provider education
  C. Order set revisions
  D. All of the above

Assessment Question 3

- Which of the following is not a potential implementation barrier to conversion to tenecteplase?
  A. Packaging label
  B. Manufacturer product replacement
  C. Increased door-to-needle time
  D. Partial vs. universal conversion based on indication

Assessment Question 3 | Answer…

- Which of the following is <u>not</u> a potential implementation barrier to conversion to tenecteplase?
  A. Packaging label
  B. Manufacturer product replacement
  C. Increased door-to-needle time
  D. Partial vs. universal conversion based on indication

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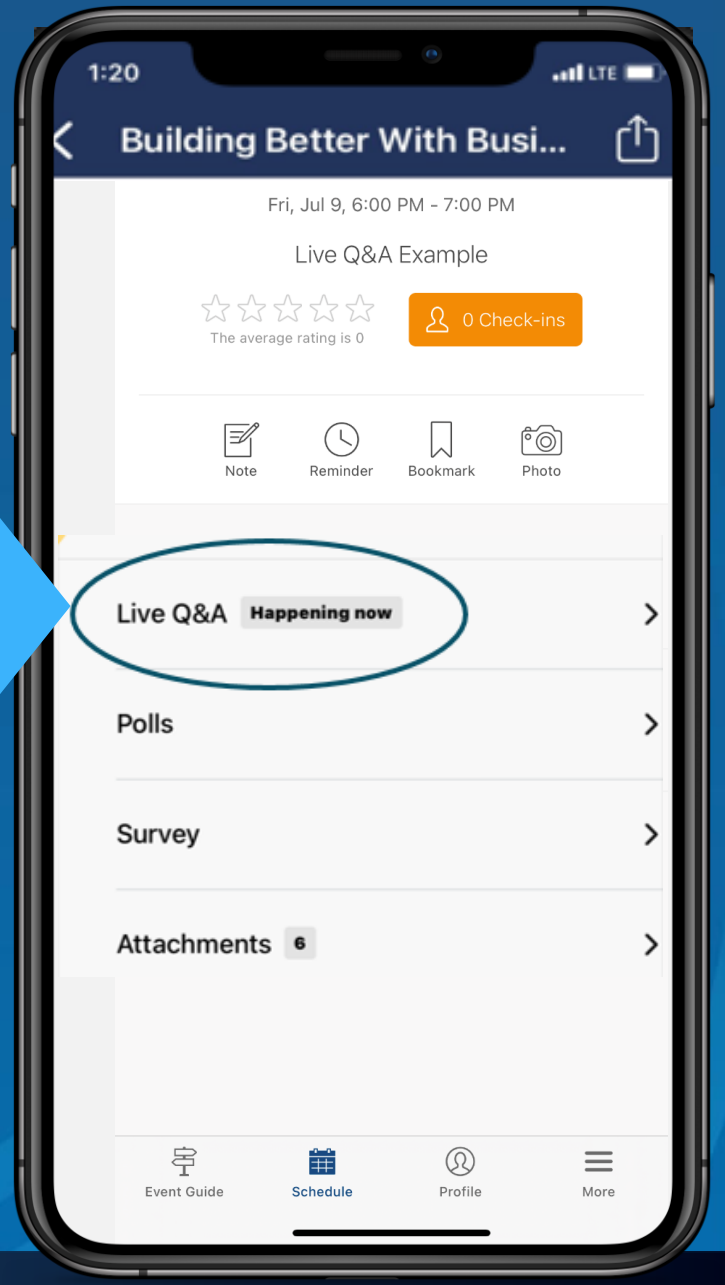

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Thank you...

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